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# CONFERENCE PROCEEDINGS

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G200 Youth Forum 2015 Conference  
April 29 - May 3, Garmisch-Partenkirchen, Germany

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## INTRODUCTION

The G200 Youth Forum (Garmisch-Partenkirchen, Germany, 29 April - 3 May 2015) was one of the largest international events organized for young leaders from around 200 countries in 2015, and over 500 young leaders, students and academics, representatives of the business world and governments were participating in it.

This was the 10th year of the Forum. Previous events were held in:

- 2006 – G8 Youth Summit – Russia (Saint-Petersburg);
- 2007 – G8 Youth Summit – Germany (Berlin);
- 2008 – G8 Youth Summit – Japan (Tokyo);
- 2009 – G8 Youth Summit – Italy (Milano);
- 2010 – G20 Youth Summit – Canada (Vancouver);
- 2011 – G20 Youth Summit – France (Paris);
- 2012 – G20 Youth Summit – USA (Washington D.C.);
- 2013 – G20 Youth Forum – Russia (Saint-Petersburg);
- 2014 – G20 Youth Forum – Germany (Garmisch-Partenkirchen, Bavaria); and
- 2015 – G200 Youth Forum – Germany (Garmisch-Partenkirchen, Bavaria).

The G200 Youth Forum 2015 had 4 main events which run in tandem with each other:

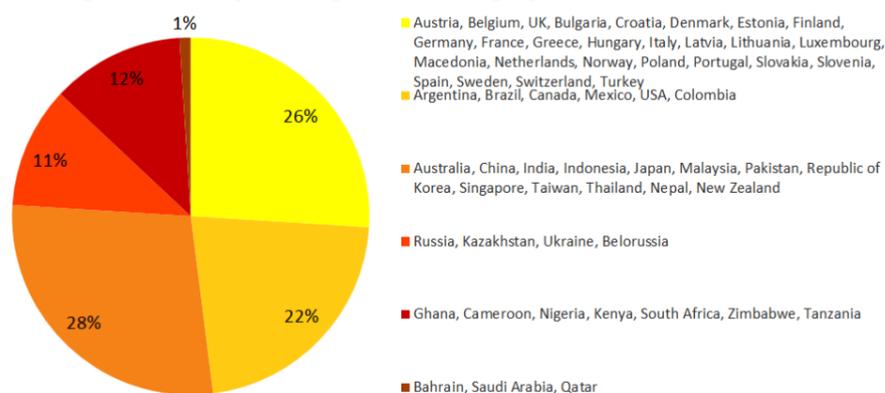
- G20 Youth Summit – Communiqué
- Conference – Publication of academic articles in the Conference Proceedings
- International Young Parliamentarians' Debate – Joint Statement
- Joint Sessions – Results

Conference 2015 was an international Conference for representatives from the best Universities in the world who were experts in international relations, law, economics, finance, technology, medicine, education and humanities. During the Conference around 300 participants discussed global problems which were on the agenda of the academic communities of different countries in the format of 8 round tables working in parallel.

1. Economy and Finance
2. Law and Human Rights
3. World Politics and International relations
4. Social Affairs and Medicine
5. Ecology, Environment and Energy
6. Design, Technology and Innovations
7. Education and Youth
8. Humanities: history, philosophy, linguistics, arts and journalism

In total: more than 4500 attendants in 10 years from around 200 countries.

### NATIONAL REPRESENTATION AT THE FORUM



The participants of the Conference were representing about 60 best Universities of their countries:

- |   |  |
|---|--|
| Al Yamamah University                       | Punjab Technical University  |
| Australian Catholic University              | St. Josephs College  |
| Beijing Normal University                   | St-Petersburg Polytechnic University                                   |
| Dalian University of Technology             | Swinburne University of Technology                                     |
| Deakin University                           | Tamkung University   |
| Durban University of Technology             | The Academy of Public Administration under the President of Azerbaijan |
| East China Normal University                | The Ohio State University  |
| Eidgenössische Technische Hochschule Zürich | Tianjin University of Finance and Economics                            |
| Eszterhazy Karoly College                   | Thompson Rivers University   |
| Far Eastern Federal University              | Universitas Airlangga  |
| Gateway College (College of Telemark)       | Universidad Autónoma del Estado de Morelos                             |
| Griffith University                         | Universal Group of Institutions  |
| HEC Montreal                                | University of Alberta  |
| Higher School of Economics                  | University of Bath   |
| Hokkaido University                         | University of Birmingham   |
| ITMO University                             | University of Cyprus   |
| ISCTE Business School (IBS)                 | University of Essex  |
| Keio University                             | University of Granada  |
| Korea University                            | University of Hertfordshire  |
| Leiden University                           | University of Macau  |
| Metropolitan Autonomous University (UAM)    | University of Melbourne  |
| Nankai University                           | University of Pennsylvania   |
| National Autonomous University of Mexico    | University of Portsmouth Students Union                                |
| National University of Singapore            | University of Pretoria   |
| Nikosax A/S                                 | University of Queensland   |
| Nkumba University                           | University of New South Wales  |
| North-Eastern Federal University            | University of South Australia  |
| Osaka University                            | University of South Bohemia  |
| Pontificia Universidad Javeriana            |  |

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In the Conference Proceedings 2015 the spelling and punctuation of the authors are kept. The opinions expressed in the articles are those of the authors and do not necessarily reflect the position of the G200 Association.

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## Economics and Finance

### *Session I: New Approaches in the New Economy*

# The Application of Big Data Technology to Finance

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## 1. INTRODUCTION

The concept of Big Data completely changes the mechanism people recognize the world and discover the rule of nature, for the Big Data technology provides people with a new outlook to understand the data and to explore values in the data. Still in its infancy, the application of Big Data technology has the potential to provide new methods and useful solutions to many financial issues such as continuous risk management, instant response to market information, customizable product design and effective operation and management. Many companies, financial or nonfinancial have taken advantage of the Big Data technology to help them redesign the strategies, offer better services and dominate the market. It is the time for all financial institutions to take action to embrace the revolution of Big Data. This article explores how the Big Data technology can create value to benefit the financial institutions, the requirements and challenges that are faced, and how government and financial institutions can make joint effort to establish good data environment for the application of Big Data to Finance.

## 2. WHAT ARE BIG DATA AND BIG DATA TECHNOLOGY?

### 2.1 Big Data

Big Data is a vague concept without a common definition. From a philosophy perspective, Big Data can be understood as the information being created for the existence of being. Technically, Big Data is the data set of huge samples and high dimensional variables which are mostly unstructured such as text, videos, and charts, and cannot be handled by standard database management systems.

Generally speaking, Big Data is the mixture covering different subjects' data, such as natural science, humanities, economy, telecommunication, web, business and multimedia. For example, companies churn out a burgeoning volume of transactional data, capturing trillions of bytes of information about their customers, suppliers, and operations. As for scientific subjects, the Large Hadron Collider (LHC) in European Organization for Nuclear Research (CERN) is producing data at approximately

25 petabytes per year. Even a single person can create tons of thousands of data by communicating online, browsing, searching, buying on credit, and consumption records. All of these massive scale, complex and accumulating data can be recognized as concrete appearance of Big Data.

With rapid development of science and technology, millions of networked sensors are being embedded in the physical world in devices such as mobile phones, smart energy meters, automobiles, and industrial machines that sense, create, and communicate data in the age of the Internet of Things. These ubiquitous sensors offer the source for people to detect dynamic data that form the concrete appearance of Big Data. Since Big Data is not the common small sized, static data we ever familiar with, the methods we use to process them change a lot.

The concept of Big Data is raised with two aims. One is to convert Big Data to Knowledge (BD2K), the other is to explore the mechanism of how data come into being and make prediction or design the policies. What we are going to talk about in this article belongs to the second aim, i.e. to make better prediction for financial analysis.

### 2.2 Big Data Technology

For the characteristics of Big Data mentioned above, it requires special technology to store and process data, such as distributed storage system, data mining, cloud computing and so on. These technologies can offer automatic classification, automatic clustering, natural language processing, effective storage solution and parallel computing for massive amount of data. All of these technologies useful for Big Data are regarded as Big Data technology, but it doesn't mean these technologies are derived from Big Data. Meanwhile, with the improvement in computing and emergence of new questions, new technologies are sure to be created.

## 3. THE OVERVIEW OF THE APPLICATION OF BIG DATA TO FINANCE

For the nature of finance, massive amount of data will be created every day, such as prices, transactions, credit record, financial sheets and so on. On the

other hand, people working in finance also have to care about a lot of data like news, company notices, microeconomic index, customer information and many other potential variables. Consequently, Big Data technology can get wide application in many financial issues, such as continuous risk management, Inclusive Finance, instant response to market information, customizable product design and effective operation and management. At present, many companies, financial or nonfinancial have taken advantage of the Big Data technology to help them redesign the strategies, offer better services and dominate the market.

### 3.1 Continuous Risk Management

While arranging risk management, we used to call for risk compensation to cover risk loss, and inspect mostly on companies' financial sheets. In the traditional credit theory, the possibility whether the enterprise can get the credit and the amount of credit facility, is in proportion to the amount of collateral and the quality of asset. Unfortunately, due to lack of continuous post loan management and the difficulty to liquidate the collateral, traditional risk management cannot protect financial institution from loss once risk erupts.

In time of Big Data, the transformation in data structure provokes changes in the idea of risk management. With Big Data and its technology, however, risk management transfers from risk compensation and sheet supervision to continuously inspecting and monitoring the enterprise on its all kinds of running data and transaction data in real time. That is to say, financial institutions can detect and analyze the massive data stream relative to enterprises' running situation to predict the performance of the enterprise and take positive risk management accordingly. That provides financial institutions with enough flexibility in post loan management. As for enterprises, they do not need to prepare enough collateral and standard financial sheets when applying for the loan, as long as they have good running situation. In essence, the Big Data technology has solved the problem of asymmetric information, it reduce the cost for both financial institutions and the counterpart enterprises, which makes the whole risk management more efficiently.

### 3.2 Instant Response

Big Data provides financial institutions with all kinds of dynamic market information. The Big Data technology is able to processes the massive amount of

data and unstructured data in a second, which can help financial institutions monitor transaction behavior, process news and predict market trends in real time and make instant response. For example, the hedge fund analysts in Citi Group take advantage of Big Data technology to process SEC (the U.S. Securities and Exchange Commission) documents, companies' prospectus, credit records, news and website data to measure public emotion and confidence and then come up with investment suggestions in terms of possibilities.

### 3.3 Accurate Marketing

Traditionally, Banks' analysis on their customers is mainly based on their own internal database. However, the Big Data environment and its technology allow the financial institutions to collect and process all kinds of information about their customers, such as consumption records, location data, credit records, Facebook logs or Weibo and so on. That means financial can depict customers' consumption habits and predict their potential demands by Big Data technology so that some customizable products can be designed to meet the customers' personal demands, which are also called accurate marketing.

### 3.4 Effective Operation and Management

In the traditional management, the criteria to judge the performance of one new policy or one new financial service is mainly just whether its outcome meet the original expectation or whether it can be carried out successfully and accepted by the market. The reason why a new policy or service is successful or not has not received enough investigation.

However, in the era of Big Data, financial institutions can easily analyze the underlying logistic of one new policy's market response from several aspects. That is, when the new policy and new service comes into effect, the financial institutions could launch the supervision on the target market. Then by Big Data technology, the financial institutions could find the variable of interest to reveal the correlation and dependency relationship so as to find out why the new policy or the new service got popular or refused by the target market. Furthermore, by revealing the underlying relationship, financial institutions could carry out further investigation so that they may find new opportunities to make profit.

#### 4. SPOTLIGHT: A GOOD NEWS FOR CHINESE MICRO ENTERPRISES

It is a common phenomenon in China that not many financial institutions are willing to give credit to micro enterprises. One of two main reasons for the financing predicament faced by micro enterprises is asymmetric information between suppliers and demanders. The other is that the incentive mechanism of risk management for micro enterprises is not matched to the service. However in the era of Big Data, these two problems may get solved.

Unlike big enterprises that can provide standard qualified financial sheets and regular information disclosure, most microenterprises don't have qualified and credible financial sheets, so financial institutions are faced with asymmetric information. As a result, traditional credit authorization based on financial sheets and collateral quality is not suitable for microenterprises. And it will cost a lot of human labor and money to gather the information and auditing the qualification of microenterprises. If the structure of information cannot be improved, the main methods to cover the risk only have raising the interest rate and asking for collateral which are also difficult for microenterprises to accept.

Good news is that the application of Big Data can reduce the cost of information collection to an endurable level. The advantage of Big Data lies in remolding the information structure.

With the development of E-commerce and Social Network Site, there have accumulated enormous amount of data, in which useful and credible information can be explored by the technology of Big Data. The combination of Big Data and finance cultivate a new industry, say the Internet Finance, which are totally different from traditional financial institutions. Take aliloan for example, the Big Data of the taobao.com trade platform not only include internal data like the historical transaction data, credit records, consumer comment, but also contain the external data like records of tax payment and customs' records which completely change the situation of asymmetric information between aliloan and the commercial tenants on the trade platform. Quantitative models will do all the credit grading and the post loan management automatically and dynamically.

On the online trade platform, because of the excellent database, the Big Data technology could eliminate the asymmetric information and reduce the

cost of risk management into the lowest level. When it comes to the offline trade environment, whether the Big Data technology could work effectively depend on the completeness of social credit system, which play a similar role like the database of online trade platform.

As for the other problem, with the development of Chinese bank industry, most of the commercial banks strengthen the restraint mechanism of credit risk, such as 'zero risk' for new loan and lifelong accountability system, while the corresponding incentive mechanism has not been established. As a result, the trend not to give out too much loan gets popular among account managers. Besides, the large cost on post loan management without enough incentive also prevents customer managers from operating risk management. As a result, some high-risk projects are not terminated in time which leads to high overall default rate and cause banks to limit the credit supply for microenterprises.

However, with the application of Big Data, risk management will rely more on electronic system instead of human labor. Thus, the nonmatching incentive system is no longer the problem that restrains the development of microenterprises finance.

Furthermore, thanks to the Big Data's instant operation and dynamic controlling, the whole credit business has more efficiency and flexibility in accordance to the characteristics of microenterprise loan to be 'short, frequent and instant'.

#### 5. CHALLENGES

There are two main kinds of challenges faced by the application of Big Data technology to Finance. One is for the Big Data analysis technique; the other is for the establishment of 'eco-system' for Big Data.

Since the Big Data is totally different from the common data we are familiar with, the traditional statistical process methods and inference methods are not suitable anymore. In traditional statistics, regression model is used to make statistical inference and predictions by the historical data. Unfortunately, the rapid changing world always makes these predictions and inference based on static historical data invalid. However, since we can now use Big Data that offers a massive and continuous data stream depicting the real life for analysis, we can theoretically make more accurate prediction for the near future. Zhi Geng (2014) noted that 'models are no longer important, and the regression model, the

brightest star in statistics will fall down at last'. We require a revolution on all respects of data analysis methodology to catch the development of Big Data.

As for the second kind of challenge, the key problem is about data integration and data collection. If data from different sources cannot be used together, there is no basis for the Big Data, let alone the application of Big Data technology mentioned above. For example, different departments in Bank industry always monopolize the specific part of the business data so that it is formidable to get the data completely describing the whole business, which is important for Big Data analysis.

Likewise, if there are some important data lacking collection, the entire Big Data environment will not be sufficient and effective enough for analyst to get valid inference. For example, in the risk management for offline microenterprises, if the social credit system is not established, it is very hard for financial institutions to get useful and authentic data that can provide effective prediction about the quality of the microenterprises.

#### 6. RECOMMENDATION

In the sense of the challenge for Big Data processing technique, financial institutions should apply techniques from different fields including statistics, computer science, econometrics and applied mathematics. That means the financial institutions should broaden the selection range of talents to employ, and arrange a new technique framework under the background of Big Data. New problems and growing computing power will spur the development of new analytical techniques. Only owning all kinds of talents can help financial institutions successfully cope with the new competition emerging from using Big Data.

To create effective environment for the application of Big Data to Finance requires joint efforts from many parts. Firstly, different departments in financial industry should work together to clear out the barriers that prevent analysts from integrating the data to discover valuable information. Secondly, due to the complexity of gathering and networking the social information, the government should take leadership to launch the mission and coordinate different units to make data information flow freely.

#### 7. CONCLUSION

The effective application of Big Data will transform the entire financial industry, raising the efficiency and promote the economy growth. Leaders of financial institutions should recognize the potential opportunity, redesign the strategies and employ valuable talents to capture the benefit.

However, all of the benefits derived from the Big Data rely on a healthy eco-system for the data. Policy makers should also recognize the benefit from the Big Data to the whole society and the growth of economy. They should provide basic framework for the application of Big Data, breaking the data barriers between industries, filling the blank of data collection, and ensuring the quality and liquidity of data.

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# The Evaluation of Data Quality Based on Adjusted Benford's Law

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## ABSTRACT

Benford's Law is one of the widely used methods for assessing data quality that has been applied in many fields such as economy, finance and audit. However, Benford's Law also has some limitations in practical application. In this paper we propose a new method through weighted and adjusted the Benford's Law. The simulation studies show that the new method is more effective than the traditional Benford's Law in aspect of assessing the data quality.

**Key words:** Benford's Law; Data quality; Weighted adjusted method.

## 1. INTRODUCTION

The quality of Statistical data will decide whether the decisions are scientific or not. Government departments need the high quality of statistical data as a foundation for making national macro policy. As a result, the quality of statistical data not only affects the value of statistical information, but also affects the state's macroeconomic decisions. The National Bureau of Statistics repeatedly stressed the importance of government data quality, and take improving the quality of the data as an important task.

Many studies have tried to use various statistical analysis methods to test the accuracy of macroeconomic data. Prior distribution screening method is the one of the important methods for testing the accuracy of data quality, namely if we know the data that wants to assess should obey a certain distribution in advance, then we can compare the assessing data with specific distribution. As a kind of commonly used data distributions, Benford's Law has been widely used in assessing the quality of data. Benford's Law was firstly found By Simon in 1881, then physicists F. Benford found the same digit rule; he collected and verified the various types of digital [1]. Hill (1996) gives the theoretically strict mathematical proof about Benford's Law.

In recent years, scholars have widely used Benford's Law in many fields, such as financial, taxation and macro economy, in order to judge whether the data had been modified, and fraud etc. X.Chen, Y.F.Wan and Lu Li (2012) used Benford's Law to analyse the first digital statistical distribution of the relevant financial data of Chinese listed companies, test whether its theoretical value conform to Benford's Law and verified the effectiveness of using Benford's Law to identify corporate fraud. Y.Zhao, L.Y.Han and H.M.Li (2007) used Benford's Law to inspect whether the report profit of the ST companies and non-ST companies in the A-share market has been manipulated. Through the analysis of a large number of fraud data, A.Diekman (2007) showed that the evaluation of tax data, not only to test the first figure is to test the second digit. D.L.Xu, Ying Jin (2010) using Benford's Law examined the accuracy of the broad money supply data, this paper respectively on the data of the first digital, the second and the third digit Benford test, the results show that the data quality is good. G.Stefan and T.K.Heinz (2007) surveyed Benford's Law in economic research and the applicability of the forecast. This paper analyzes the massive economic paper regression coefficient and the standard deviation and the first number in the GDP and CPI data, the results show that the first and second digits conform to Benford's Law. Muller and H.Christian (2011) used Benford's Law in the inspection report before the economic crisis in Greece to the EU's data, the results show that there it is fraud.

Benford's Law, there are some limitations in practical applications, and often it is considered to be the law of 'mysterious'. As a result, many scholars have discussed the statistical properties of Benford's Law, and to improve the limitations in application. R.M.Fewster (2009), simple and visually expounds Benford's Law. F.Lu and E.Boritz (2006) proposed a new method of Benford's Law, Benford's Law inspection of incomplete data, in order to solve problems, improve the effectiveness of the test. Formann, A.K. and Ames, R.J. et al. (2010) discussed the Benford's Law with the exponential distribution,

normal distribution, uniform distribution, distribution and lognormal distribution of the commonly used statistical distribution, the relationship between the analysis results show that the exponential distribution and lognormal distribution is accord with the Benford's Law. Yunxia Liu, Ximing Wu and Wuyi Zeng(2012) Benford's Law and panel data model is put forward to use a combination of methods, in order to solve using Benford's Law alone cannot determine the specific abnormal sample points of the problem, but also to make up for a single use of panel data model diagnosis accuracy method. The deficiency of Yunxia Liu and Wuyi Zeng (2013) was to choose Benford's Law and outlier detection, data mining technology, such as a combination of methods to identify possible regularity of concrete samples and data quality issues.

The above study, based on the data quality of Benford's Law accuracy evaluation method is simple and easy to operate, has wide application prospect. However, application of Benford's Law evaluation quality of macroeconomic data, there are still some problems. Yunxia Liu and Wuyi Zeng (2013) had argued that using Benford's Law inspection data cannot excessive concentration in a certain range; there is no more points or jumps interval. But usually, the macroeconomic statistics are often in a certain specific range. In addition, due to the influence of the regional difference, its distribution is often uneven, some interval data set, and some relatively sparse interval data. These problems to Benford's Law inspection will cause great influence, the inspection results are generally do not conform to Benford's Law, but that may not be caused by the data quality issues. In order to overcome this limitation, this paper (Lu, F. & Boritz, E. 2006) proposes an adaptive Benford's Law based on weighted adjustment, this method through the treatment of assessment data grouping appropriately, and according to the weighted combination of sample size, the new is suitable for the raw data is obtained Benford's Law. Described in this paper, the second part details the basic principle of this new method and algorithm steps, the third part of the simulation study on the new method to verify that the new method of statistical properties of the optimal benign, the fourth part is the use of new methods for empirical analysis.

## 2. THE AJUSTED BENFORD'S LAW

### 2.1 The Traditional Benford's Law and Its Limitations

Benford's Law refers to the data of the digital frequency as a subject to a certain probability distribution. Under Benford's Law, the emergence of the first digital probability and probability of the emergence of the second digit is respectively:

$$P(D_1=d_1)=\log_{10}(1+(1/d_1)) \quad d_1=1,2,\dots,9 \quad (1)$$

$$P(D_2=d_2)=\sum_{d_1=1}^9 \log_{10}(1+(1/d_1 \cdot d_2)) \quad d_1=0,1,2,\dots,9 \quad (2)$$

More generally, it can also be calculated before joint probability of two digits:

$$P(D_1D_2=d_1d_2)=\log_{10}(1+(1/d_1d_2)) \quad d_1d_2=10,11,\dots,99 \quad (3)$$

According to the formula (1) can be calculated first number is the probability of 1 ~ 9 respectively, as referred to Table 1.

The probability distribution of test data, the first digital whether to obey the Benford's Law there are four common methods, respectively is: test of goodness of fit, the correction of Kolmogorov-Smironv test of goodness of fit and distance detection and Pearson correlation coefficient. Among them, the test of goodness of fit is the most commonly used inspection method, statistic calculation formula is:

$$\chi^2=N \cdot \sum (f_i-b_i)^2/b_i \quad (4)$$

Among them,  $f_i$  is the actual frequency of the first digital of statistical data,  $b_i$  is the expected frequency of digital  $i$  under Benford's Law. Statistics  $\chi^2$  in the significant level of 10%, 5% and 1% respectively, the critical value is 13.36, 15.51 and 20.09, respectively. If the  $\chi^2$  statistic value is greater than the critical value, reject the null hypothesis, suggests that statistics do not conform to the Benford's Law first digital frequency distribution, data quality there may be a problem.

Table 1. The First Digit Probability Distribution of Benford's Law

First digit	1	2	3	4	5	6	7	8	9
probability	0.3010	0.1761	0.1249	0.0969	0.0792	0.0670	0.0580	0.0512	0.0458

Hill (1996) and Yunxia Liu, Wuyi Zeng (2012) pointed out that Benford's Law in the application, not all data is subject to Benford's Law. Data should be subject to several conditions: first, the data is not excessive concentration within a certain range. Second, the data does not exist on the floor. Third, the data should be in a wide range of continuous change, there is no point or jumps interval. But a lot of macroeconomic data does not obey the above these conditions. Data are influenced by factors such as economic level and the regional difference, the interval distribution is not uniform. Under the 2010 sixth census data show that China's total population of 1332810869. According to the county's population statistics, minimum and maximum of the total population is large. If to differentiate different digits interval, such as a double-digit range, three digits, an interval, the data in different range of distribution is not uniform. In addition, some macroeconomic data and times of maximum, minimum and maximum of minimum sometimes large difference. Is common and the maximum and the minimum, maximum and minimum values will make the data in the corresponding interval exists 'truncated data.' In 2013, for example, a maximum of 6.216397 trillion yuan GDP among regions. When Benford's Law inspection and application, in five digits, the first number is 7,8,9 missing. This will make the area between the uneven distribution of data, and could make the data on the frequency of the first number is 1-6, higher than the expected frequency of the traditional Benford's Law.

Therefore, using Benford's Law inspection some macroeconomic statistics data quality, the conclusions often don't meet Benford's Law. But this does not mean that the data quality problems, but due to causes data miscalculation. Fewster, R.M. (2009) and Formann, A.K. (2010) think the test result of the uneven distribution of the data affect the Benford's Law.

## 2.2 Benford's Law Based on Weighted and Adjustment

In view of the uneven distribution of macroeconomic data, the maximum and minimum problems, this paper puts forward a kind of based on weighted adjustment of Benford's Law, to improve traditional Benford's Law, make it suitable for macro data inspection, expand the scope of Benford's Law. The main steps of the new approach can be summarized as the following steps:

First, the treatment of analysis data descriptive statistical analysis, determine the maximum  $\chi_{max}$ .

Secondly, according to the maximum  $\chi_{max}$  number of bits could be divided into two interval  $I_1$  and  $I_2$  set into the interval of two sample size  $n_1$  and  $n_2$ , respectively, then the weight of two interval  $w_1=n_1/(n_1+n_2)$  and  $w_2=n_2/(n_1+n_2)$  respectively.

Thirdly, the uneven distribution of interval, to reset Benford probability distribution value. Assume that interval is uniform distribution, the first Numbers 1 to 9, can think of in the area between the Benford's Law's first digital probability distribution is applicable, namely:

$$f_{Benford,i} = (0.3010, 0.1761, 0.1249, 0.0969, 0.0792, 0.0669, 0.0580, 0.0512, 0.0458) \quad i=1,2,\dots,9$$

And range is uneven distribution, that is, the first digital not 1-9, all you need to Adjusted Benford's Law of the area in between. Set the area between the Benford distribution is:

$$f_{adjusted,i} = (q_1, q_2, q_3, q_4, q_5, q_6, q_7, q_8, q_9) \text{ among,}$$

$$q_i = \begin{cases} f_{Benford,i}, & i \text{ is occurred} \\ 0, & i \text{ is not occurred} \end{cases} \quad i=1,2,\dots,9$$

For example, a maximum of a set of data for 53420, and then the data is divided into two intervals  $x < 10000$  and  $x \geq 10000$ . For interval  $x < 10000$ , its distribution is uniform, the first number is 1 to 9 are appeared, the data in the area between should comply with  $f_{Benford,i}$ . For the range  $x \geq 10000$ , set within the area between the first digit appears from 1 to 5, the area between the first digital distribution  $f_{adjusted,i}$  should comply with the

$$f_{adjusted,i} = (0.3010, 0.1761, 0.1249, 0.0969, 0.0792, 0.0669, 0.0580, 0.0512, 0.0458)$$

Fourthly, according to the weight of each interval Benford's Law weighted adjustment, Adjusted Benford's Law of probability distribution value. The expected frequency  $f_{Benford}$  and interval  $I_2$  according to the weight  $w_1$  and  $w_2$  weighted to adjust:

$$f_{adaptive,i} = w_1 \times f_{Benford,i} + w_2 \times f_{adjusted,i}, \quad i=1,2,\dots,9 \quad (5)$$

Again to normalize Adjusted Benford's Law the first digital shall conform to the distribution of value, namely Benford probability distribution value after adjustment is presented. It is important to note that if the first data set a maximum number of 9, then the uneven distribution of interval vector with the traditional Benford's Law is consistent, the resulting Adjusted Benford's Law is consistent with traditional Benford's Law. This suggests that Adjusted Benford's

Law applies to traditional Benford's Law can test the basic situation.

## 2.3 The Basic Ideas of Adjusted Benford's Law

Can be seen from the above adjustment process, Adjusted Benford's Law according to the range of the original data is the major concept of grouping, the uneven distribution of the data of the probability distribution of interval to adjust its Benford's Law value, then according to the sample size for the weighted sum of each interval to determine the suitable for the data set, the first digital Benford's Law. Adjustment process can also be regarded as compensation adjustment interval contains the first digital frequency, lower other digital frequency process. Adjusted to evaluate data first digital frequency and interval weight will affect the value of the actual calculation. Adjustment range of heavy, the adjustment range first digital frequency increased. At the same time, due to the uneven distribution of the data, which significantly greater than the frequency of the first few digits traditional Benford's Law, then adjusted will raise the first few digits of the theory of frequency, the Adjusted Benford's Law closer to the actual frequency, and thus the adjusted value.

## 3. SIMULATION STUDY

This section will through the simulation analysis, the Adjusted Benford's Law inspection result, and comparing with traditional Benford's Law. Using Benford's Law random number generator to generate a maximum of 99999. Its first digital actual frequent distributions are referred to Table 2. By comparison of table 2 and table 1, the number of randomly generated in line with Benford's Law probability distribution of the first number. On this basis, the data, to simulate the uneven distribution and the data sets in different interval first digital frequency of the actual experience as a standard, comparing Benford's Law adjustment and test results of traditional Benford's Law.

Will be divided into random data according to the maximum of 5000 intervals [1,15000), [1,20000), [1,25000)... [1,90000), a total of 16 sets of data. Among them, the smallest interval [1,15000) sample size of 234711, the data quantity is enough big, can be used to Benford's Law. For general, closer to the actual situation and do not break out from each group

data of 600 sample data, and the sampling process simulation of 1000 times, each statistic symbol in the process of simulation, respectively, to remember:

$f_{actual}$  – interception of each interval data overall in the first number of the actual frequency;

$f_{sample}$  – respectively extracted from 16 interval of 1000 sample size of 600 data, get the average frequency of the sample data of the first digital actual;

$f_{Adaptive}$  – respectively extracted from 16 interval of 1000 sample size of 600 data, the adjustment of Benford's Law's first digital frequency average;

$f_{Benford}$  – the first digital frequency of Benford's Law.

Simulation is mainly divided into two parts: the first, is to Adjusted Benford's Law and traditional Benford's Law in different range of frequency and degree of close to the actual frequency distribution, as well as on the first number 1 ~ 9 with the frequency of the sample data first digital degree; Second, compared with Benford's Law adjustment and traditional Benford's Law as standard value. In this paper, the simulation by R software implementation.

## 3.1 The Comparison of Frequency about Adjusted Benford's Law and Traditional Benford's Law

This part focuses on new method comparing with the traditional method in different interval first digital frequency distribution and degree of close to the actual frequency distribution. First of all, from each group data of random sample size of 600 data, and according to the method mentioned above, and within each group of data is divided into  $x < 10000$  and  $x \geq 10000$  two range. Of which the former is distributed evenly, there is a maximum, uneven distribution of the latter. Then according to the formula (5) and calculate the data  $f_{Adjusted}$  and  $f_{Benford}$  in each group, with each group of the actual frequency  $f_{actual}$

Because of the limited space, only in this [1, 20000), [1, 30000)... [1, 90000) the eight sets of data above four indicators of frequency chart, as referd in figure 1. As you can see from figure 1,  $f_{actual}$  and  $f_{sample}$  – respectively extracted from 16 interval of 1000 basically the same, that sampling data to better

Table 2. The First Digit Frequency of 1 Million Random Data

First digit	1	2	3	4	5	6	7	8	9
probability	0.3003	0.1769	0.1251	0.0965	0.0796	0.0671	0.0579	0.0507	0.0459

reflect the overall characteristics,  $f_{Adjusted}$  is closer to the sample data than  $f_{Benford}$  about the first digital frequency. Also can be seen from the table, the other than  $f_{Benford}$ ?  $f_{Adaptive}$  closer to  $f_{actual}$  and  $f_{sample}$ . And when the range is small, the interval data is uneven, as shown in figure 1 a - d, the proximity of  $f_{Adaptive}$  the better. When interval data is relatively uniform, the g and h as shown in figure 1,  $f_{Adaptive}$  is also the basic and overlap  $f_{Benford}$ , suggests Adjusted Benford's Law can also apply to the inspection interval censored data uniform, the new method has good universality.

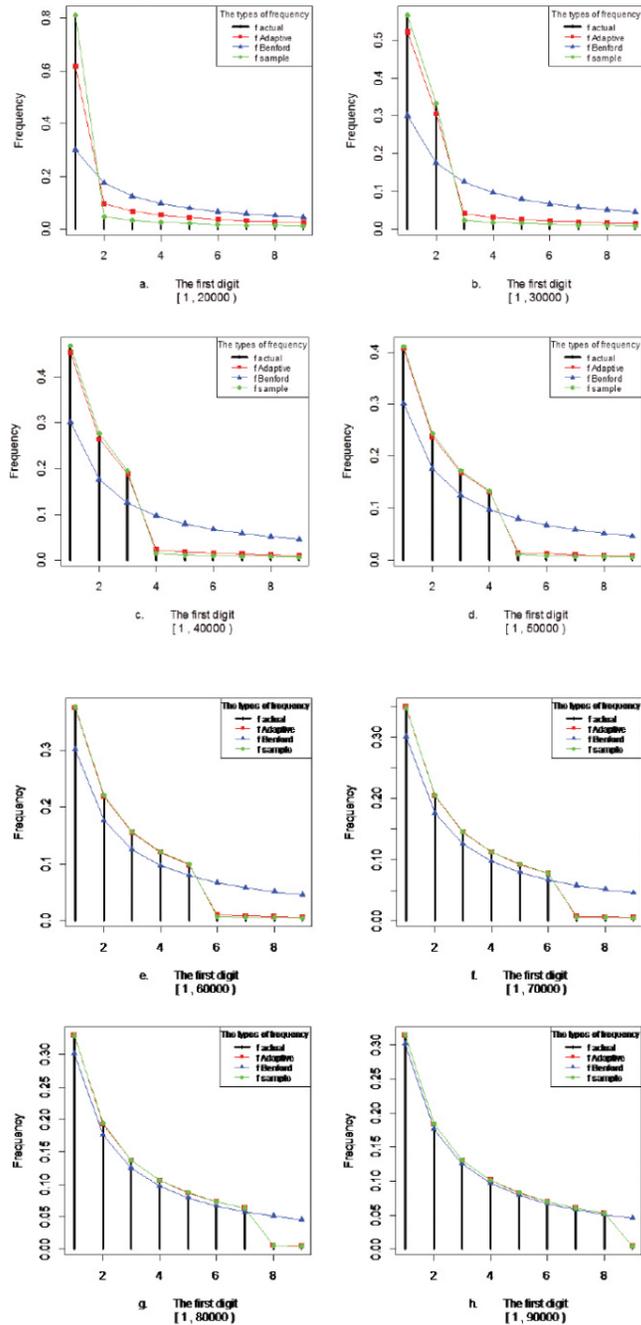


Figure 1. The Comparison of Frequency

### 3.2 The Difference of First Digital Frequency under Different Standards

The next Adjusted Benford's Law and traditional Benford's Law the emergence of the first digital frequency and degree of close to the actual data, reflect the extent to which by calculation, the formula  $|f_{sample} - f^*|$  is the foundation of the follow-up  $\chi^2$  inspection. Which  $f^*$  refers to the first digital frequency under different criteria,  $f_{actual}$ ,  $f_{Benford}$  and  $f_{Adaptive}$  respectively, as a standard. Presented in table 3, [1, 30000), [1, 50000), [1, 70000) and [1, 90000) the four interval data.

As referred to table 3, the sampling data  $f_{sample}$  and  $f_{actual}$  the closest, also suggests that each group data of the sample data reflects the basic characteristics of each array overall. In the first set of [1, 30000) data, the frequency of the number 1 and number 2 is bigger, because in the interval [10000, 30000) this part of the first figure is only 1 and 2, which results in the sample data, the first number is 1 and 2 of the digital frequency increased. Therefore, if still use the traditional Benford's Law, are likely to reject the null hypothesis. Also, you can see that  $|f_{sample} - f_{Adaptive}|$  than  $|f_{sample} - f_{Benford}|$  smaller, that after the adjustment is closer to real rule of data range, suitable for heterogeneous data interval test. For example, or for [1, 30000) this set of data, in figures 1 and 2, the difference value decreased from 0.2664 and 0.1576, respectively 0.0445 and 0.0289, on the other digital fitting values which are obtained by Adjusted Benford's Law is always smaller than traditional Benford's Law differences in values.

### 3.3 Adjusted Benford's Law Compared with Traditional Benford's Law in Inspection

Statistics  $\chi^2$  is a test for assessment data conform to Benford's Law when the most commonly used test. This part use  $\chi^2$  test and analysis based on traditional Benford's Law and Adjusted Benford's Law standard test results respectively. Statistic  $\chi^2$  calculation formula and related symbol as follows:

$$\chi^2_{actual} = n \times \sum_{i=1}^9 \left[ \frac{(f_{sample} - f_{actual})^2}{f_{actual}} \right]$$

— to the overall data first digital frequency as inspection standard of  $\chi^2$  values;

$$\chi^2_{Benford} = n \times \sum_{i=1}^9 \left[ \frac{(f_{sample} - f_{Benford})^2}{f_{Benford}} \right]$$

— in the traditional Benford's Law first digital frequency as inspection standard of  $\chi^2$  values;

Table 3. The First Digit Frequency of Each Method

First digit	interval [1, 30000)			interval [1, 50000)		
	$f_{actual}$	$f_{Benford}$	$f_{Adaptive}$	$f_{actual}$	$f_{Benford}$	$f_{Adaptive}$
1	0.0156	0.2664	0.0445	0.0162	0.1100	0.0166
2	0.0147	0.1576	0.0289	0.0136	0.0672	0.0144
3	0.0051	0.1013	0.0173	0.0117	0.0471	0.0119
4	0.0044	0.0788	0.0136	0.0114	0.0356	0.0114
5	0.0040	0.0642	0.0110	0.0034	0.0682	0.0046
6	0.0036	0.0539	0.0090	0.0030	0.0577	0.0041
7	0.0034	0.0471	0.0082	0.0029	0.0501	0.0037
8	0.0032	0.0412	0.0070	0.0027	0.0441	0.0034
9	0.0030	0.0374	0.0068	0.0025	0.0397	0.0032
First digit	interval [1, 70000)			interval [1, 90000)		
	$f_{actual}$	$f_{Benford}$	$f_{Adaptive}$	$f_{actual}$	$f_{Benford}$	$f_{Adaptive}$
1	0.0160	0.0467	0.0160	0.0151	0.0186	0.0150
2	0.0133	0.0294	0.0133	0.0128	0.0143	0.0128
3	0.0113	0.0218	0.0113	0.0108	0.0115	0.0108
4	0.0103	0.0168	0.0103	0.0096	0.0101	0.0096
5	0.0098	0.0151	0.0098	0.0092	0.0098	0.0093
6	0.0089	0.0128	0.0089	0.0080	0.0084	0.0080
7	0.0025	0.0514	0.0028	0.0077	0.0080	0.0077
8	0.0025	0.0452	0.0026	0.0072	0.0073	0.0073
9	0.0024	0.0404	0.0025	0.0022	0.0410	0.0022

$$\chi^2_{Adaptive} = n \times \sum_{i=1}^9 \left[ \frac{(f_{sample} - f_{Adaptive})^2}{f_{Adaptive}} \right]$$

— to adjust the Benford's Law first digital frequency as standard  $\chi^2$  values.

In this paper, [1, 15000), [1, 20000), [1, 25000), ..... [1, 90000) the 16 sets of data, the sample size of 300, 600 and 1000 of these three cases, chi-square test, respectively. The significance level  $\alpha=0.05$ , the critical value of the corresponding test is 15.51, the test results as referred to Table 4.

According to the test results in table 4, the next will be to, and the three statistical analysis from different angles. Statistical value under different sample sizes and each group of basic remains the same, numerical only minor fluctuations. To illustrate the effectiveness of the statistics, even in the case of uneven data can accurately test data is in line with the Benford's Law, can be used as a follow-up analysis and comparison of the standard. Statistics within the same sample size, the different group, and its value is declining gradually. Because the raw data is in conformity with the Benford's Law, this shows that when the data distribution is not uniform, the inefficiency of

the inspection. Especially in group 1, group 2 and group 3 under the condition of uneven distribution is serious, is more likely to cause misjudgment. And, under different sample sizes within the same group, its value is increasing. This shows that when the data distribution is not uniform, the statistics are greatly influenced by sample size. Statistics in the same sample size, the different values between groups, also presents the law of diminishing, but its value smaller than statistics. And in different sample sizes, the same group, increasing statistics also present law, but the variations than statistics, shows that the statistics are relatively stable and less susceptible to the influence of sample size.

In conclusion, through the simulation analysis shows that Adjusted Benford's Law frequency close to the actual frequency, and the first digital also with the actual frequency difference is small, statistic inspection effect is superior to statistic. Adjusted Benford's Law can better overcome the application Benford's Law inspection data quality, data distribution is not uniform, improve the accuracy and reliability of the test results. Next we will use the Adjusted Benford's Law to analyze macroeconomic statistics.

Table 4. The Result of Test

sample	statistics	group1	group 2	group 3	group 4	group 5	group 6	group 7	group 8
300	$\chi^2_{actual}$	8.25	8.01	7.97	7.85	7.99	7.98	8.18	7.91
	$\chi^2_{Benford}$	232.58	373.83	235.15	219.17	157.26	145.35	109.28	101.43
	$\chi^2_{Adaptive}$	51.59	51.90	36.15	15.59	20.94	9.28	15.60	7.74
600	$\chi^2_{actual}$	7.62	7.97	7.78	8.01	7.98	7.96	7.93	7.77
	$\chi^2_{Benford}$	460.30	744.90	465.27	435.05	311.27	287.50	214.78	197.29
	$\chi^2_{Adaptive}$	98.51	100.30	66.95	26.77	36.37	12.70	24.92	8.76
1000	$\chi^2_{actual}$	7.99	8.16	8.11	7.95	8.24	7.81	7.78	8.04
	$\chi^2_{Benford}$	768.46	1239.73	774.97	721.17	514.87	473.85	354.25	325.66
	$\chi^2_{Adaptive}$	161.84	165.24	108.76	40.79	55.73	16.97	37.01	10.58
sample	statistics	group9	group 10	group 11	group 12	group 13	group 14	group 15	group 16
300	$\chi^2_{actual}$	7.93	8.04	8.12	7.93	8.13	8.03	8.02	8.13
	$\chi^2_{Benford}$	76.99	70.83	53.86	49.14	36.04	32.16	22.20	19.10
	$\chi^2_{Adaptive}$	13.04	7.46	12.10	7.56	11.40	7.77	11.04	8.06
600	$\chi^2_{actual}$	7.90	7.86	7.84	7.98	8.05	8.08	7.86	7.75
	$\chi^2_{Benford}$	149.14	136.64	101.25	92.17	65.85	58.12	37.17	30.24
	$\chi^2_{Adaptive}$	19.27	7.87	16.44	7.76	15.41	7.92	14.41	7.69
1000	$\chi^2_{actual}$	7.98	8.01	7.97	8.09	8.05	7.92	8.04	8.12
	$\chi^2_{Benford}$	244.07	224.20	165.11	149.55	104.96	91.81	56.81	46.22
	$\chi^2_{Adaptive}$	27.41	8.50	22.82	8.01	20.48	7.83	18.78	8.07

#### 4. SUMMARY

Benford's Law in practice, the author of this paper, when the test data in a certain range, the uneven distribution of the maximum and minimum values, the likely cause misjudgment limitation, this paper proposes a partition between the adjustment of the weighted Benford's law. Adjusted Benford's Law broadens the application scope of Benford's Law, significantly improved the Benford's Law to assess the accuracy of the data quality and reliability. Through simulation research shows that the Adjusted Benford's Law than traditional Benford's Law in the uneven distribution of data, inspection is better. And apply this principle to evaluate the statistical yearbook of China city part of the quality of data, test results show that the data quality is good.

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## Challenges and Opportunities for Saudi Sovereign Wealth Fund

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### 1. INTRODUCTION

The birth of Sovereign Wealth Funds (SWFs) coincided with the surpluses in revenues of exporting and selling natural resources of states. These surpluses created awareness with governors and people about the importance of managing and maintaining public wealth. So, the main objective of SWFs is to reach maximum utility of the surpluses in balance of payments regardless to managing approach of the funds. SWF is a financial tool to be used in specific situations with low risk investments for long-term targets to serve the local economy and provide direct or indirect benefits to the citizens. The efficiency of any SWF is based on the internal structure, authority and policies of investment decisions and its source of money. Kuwait was the first Arabic country that created SWF in 1976, and the biggest challenge was during the war against Iraq in 1990 when they withdraw some amounts to finance the war and harmed the families of that war (Smith 1999). After the war, the Kuwait sovereign wealth fund went back to work to recover the losses and achieved successful performance lastly with returns up to 15% in 2007/08 fiscal year (IPF 2008). The importance of SWF concentrated on how the fund will be financed and what choices of investments are available locally and worldwide.

Statistics in January 2015 show that the total assets of international sovereign wealth funds reached \$7,109.5 billion although funds are competing and increasing in different financial markets and investment opportunities. Since 2005 more than 40 new sovereign wealth funds have been issued. The need of diversification boosted the promotion of different categories and specification of SWFs. Such as: Stabilization Funds, Saving/Future Generations Funds, Pension Funds, Reserve Investment Funds and Strategic Development SWFs (SWFI 2015).

The expansion and spread of SWFs make them one of the principal organs in shaping the economy of states especially who combine lack of diversification and high returns at same time. So, Saudi Arabia as an economic country and major player in the Middle East and globally must avail this financial tool within investments and fair distribution of wealth among current and future generations. This paper aims to

spotlight the expected benefits for the current people and next generations of issuing Saudi sovereign wealth fund with both accountability and transparency at top levels. In addition it aims to reveal the role of the fund by supporting and protecting local economy.

### 2. OVERVIEW

In 1990, the Norway petroleum fund was established with a main objective to manage oil revenue of state, shielding the fluctuation of oil prices, protecting the local economy and achieving economic growth. Then its name changed in 2006 to The Government Pension Fund Global, which highlighted the main role of it in investing on behalf of citizens by mandate of the Ministry of Finance besides receiving advices and discussions from the Norwegian parliament. The petroleum revenue is the key source of financing the fund by transferring it through the Ministry of Finance plus the net financial transactions related to petroleum activities. However, the investments decisions diversified into different forms such as real estate, international equity and fixed-income markets (NBIM 2015).

The Future Generation Fund of Kuwait was founded in 1976 as the first sovereign fund in the region. It aimed to capitalize the revenue of state which depends on oil products by investing it to provide maximum utility for the future generation whilst they have the right of natural resources specially those which are non-renewable resources. The state allocates 10% annually of the general revenues into the fund, 50% of the general reserve fund at the first fiscal year of issuing the Future Generation Fund and the returns of the fund investments. Also, an explanation note had been declared to insure the prohibition of reducing the 10% due to any reason beside illegality of issuing any new law against this declaration. The investments portfolio contains diverse industries such as real estate, private equity, hedge funds and local investments (KIA 2015).

In second position of having the top funds is Abu Dhabi Investment Authority (ADIA) with total assets up to \$773 billion. It was founded in 1976 to make investment on behalf of Abu Dhabi government with concentration on creating value for the long term. The surplus of Abu Dhabi is transferred into the fund to be

invested and utilized. The policy of investment relies on diversification and long-term objectives. The fund contains more than 24 types of asset classes and sub-categories such as government bonds, real estate, private equity and emerging market equities among different regions with a specific portion of each type (ADIA 2013).

In January 2015, the performance of above funds was uneven based on its returns and transparency. The Norway fund is the top fund with total assets of \$893 billion and the highest ranking of the Linaburg-Maduell Transparency Index by 10 points. While Abu Dhabi Investment fund owns \$773 billion and has the second highest total assets with 6 points of transparency. Whereas, the Kuwait Investment fund has \$548 billion of total assets with also 6 points of transparency (SWFI). The principle standards of measuring sovereign funds are the level of accountability and transparency in all transactions and investment decisions (Ruth Rios 2011). Table 1 shows the top ten sovereign funds based on the highest assets at US dollar.

### 3. DIMENSIONS OF FRUITFUL SOVEREIGN FUND

The establishment of Saudi sovereign wealth fund financed by specified percentage of the oil revenues and identified amount of the state's surplus supported by legislation allows investments in particular industries to achieve maximize benefits of state's revenue which advocate local economy and fair distribution of wealth among current and future generations. Saudi Arabia has a fund called Sanabil created and managed by the Ministry of Finance through the Saudi Arabian Monetary Agency with capital less than \$6 billion. Sanabil is classified as a sovereign wealth fund while its investment decisions are based on individual and corporate opportunities rather than intensive and strategic investment (Gulf States 2009). Clarifying Sanabil as a non-sovereign wealth fund is more accurate due to the type of investments relative to high annual returns during last 10 years. The investments must be diversified more globally with long-term high returns. The annual surplus may not occur during the near future due to the fluctuating oil prices which is the main exported product. So, efficient actions to utilize the high oil revenues must be done through creating Saudi sovereign fund with

Table 1. Sovereign Wealth Funds Rankings

Rank	Country	SWF Name	Assets \$ Billion	Inception	Origin	Linaburg-Maduell Transparency Index
1	Norway	Government Pension Fund - Global	\$893	1990	Oil	10
2	UAE – Abu Dhabi	Abu Dhabi Investment Authority	\$773	1976	Oil	6
3	Saudi Arabia	SAMA Foreign Holdings	\$757.2	n/a	Oil	4
4	China	China Investment Corporation	\$652.7	2007	Non-Commodity	8
5	China	SAFE Investment Company	\$567.9	1997	Non-Commodity	4
6	Kuwait	Kuwait Investment Authority	\$548	1953	Oil	6
7	China – Hong Kong	Hong Kong Monetary Authority Investment Portfolio	\$400.2	1993	Non-Commodity	8
8	Singapore	Government of Singapore Investment Corporation	\$320	1981	Non-Commodity	6
9	Qatar	Qatar Investment Authority	\$256	2005	Oil & Gas	5
10	China	National Social Security Fund	\$240	2000	Non-Commodity	5

Source: SWF Institute, February, 2015.

independency, accountability and transparency in addition to design specified objectives supported by clear policies and professional management.

#### 3.1 Protect Local Economy

One key benefit of creating Saudi sovereign fund is to inject cash in the local economy at low levels of the economic cycle. Therefore, the fund must be greater than local majority blocs to support the market without losing the sovereignty of the fund or losing control of long term performance. Backing up the local economy became a principal need in most international markets and it is not against the non-intervention of governments. It has become an attractive tool for investors to ensure that markets will not be affected easily through external factors. Thus, the new Saudi sovereign wealth fund must boost the local economy by diversifying the investments and enhancing primer industries of the state. Associate clusters of any industry within precise strategies and decisions will generate new markets and industries which accelerate the economic cycle.

#### 3.2 Smart Partnerships

Increasing the ownership of foreign assets is an indicator that shows efficiency of any sovereign wealth fund. Sanabil fund did not reach high levels of investments in countries with growing economies. The quality of investments must be achieved through investing in developed countries to reach high returns and stability on a long-term basis. Lately, the sovereign wealth fund of Qatar acquired 20% of British Airports Authority, the owner of Heathrow Airport (Clark 2015). This kind of smart investment decision is encouraging these funds to grow and supporting their local economies with a stable and positive future outlook besides attracting further investments. The new Saudi sovereign wealth fund must act professionally in acquiring foreign assets and cooperate with international expertise if needed to achieve this target.

#### 3.3 Last Resort

The period of deficits or recessions would confirm the urgent need of independent Saudi sovereign wealth fund beside existing funds. Issuing this fund with high quality and diversified assets will protect and support the general reserve account against unfavorable changes over the local economy for the short-terms and the need of withdrawing. The creation of sovereign fund will surely create a new financial reserve pool to avoid overheating local economy plus

boosting the economy in case of deficits or recessions. These characteristics do not exist in the current Saudi funds because of the fact that the Ministry of Finance in Saudi projected a deficit in 2015 and will be financed directly by withdrawing more than \$50 billion from its fiscal reserves. Also, 'withdraws estimated to be at \$750 billion in just two years' Alwaleed bin Talal said in a letter addressed to the finance minister (AFP 2015). The financial markets are renewed and improving sharply. Hence, the Ministry of Finance must own various tools to ensure stability of economy and keen development which is the predictable challenge for the next decades.

### 4. RECOMMENDATIONS

Saudi Arabia severely needs to create a sovereign wealth fund with features that lead to high accountability and transparency or restructuring Sanabil Fund which has less than \$6 billion as a capital which is neither compatible with the volume of Saudi economy nor with its long-term challenges. The current situation of the oil market faces intensive fluctuation in petroleum prices while oil of course is the essential product of the state. These fluctuated prices need immediate interventions to be restrained and minimize its consequences over both short and long terms. Uncertainty and ambiguity over the current states of local economy will create a fragile relationship between young generations and the government organs. The current young generation over various platforms, highly demand that the decision makers to work now to reveal a new article law that consists of transferring specified amounts of any surpluses in oil revenues to the new Saudi sovereign wealth fund. The fund must be binding to invest in high quality assets with professional strategies by both national and global expertise to reach maximum utility for people and future generation. The fair distribution of wealth requires a proactive response to the changes of different markets and its tools by realizing the accountability towards state's wealth.

### 5. CONCLUSION

Utilizing the huge surpluses over several countries would be done efficiently through creating a sovereign wealth fund and acting to protect the current economy and looking to the far future of the country. Development over many aspects encourages the financial decision makers to expand into new solutions to maximize the wealth of shareholders. However, lack of knowledge or inaccurate projections lead to unfavorable decisions. Therefore, the Saudi government must intervene for the good of nation

and encourage the Council of Ministers to create an independent sovereign wealth fund to invest some of these surpluses for the years of deficits. Tri dimensions need to be smartly accomplished through the new Saudi sovereign wealth fund as follows increasing the ownership of high quality foreign assets, creating a new pool for withdrawing besides from the general reserve account and maximizing shareholder wealth. Many young Saudis share the same universal vision for their country, which is creating new industries that are not existing nowadays, completely independent and needed over the globe. The mission would be attained by issuing rules to identify responsibilities, deeply focusing on how to diversify our resources and create new critical resources through believing in academic and science researches. The objective is to create a competitive local industry which can compete globally by 2050.

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## How Can Development Banks Finance Projects through a Collective Financing Platform?

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### 1. INTRODUCTION

Development banks cannot cover by themselves all the projects that need financing in the regions, among other reasons, because of limits in budget, credit rating, and struggles to create a catalytic role. To help solve this challenge, I propose development banks to create their own global collective financing platform as a tool for co-financing projects.

Collective financing offer 'the possibility of a direct connection between the supply of and demand for credit, from person to person, generally through and Internet platform'.<sup>1</sup>

### 2.BACKGROUND

#### 2.1 Co-Finance in the World

The Asian Development Bank (ADB) defined as a corporate goal that in 2020<sup>2</sup> the co-financing of the bank must be equal to the investment done by the banks ordinary capital. This goal specifically refers to co-financing where there has been a minimum catalytic role, which makes it far more challenging to accomplish. The bank is well on its way to reach its target, having obtained in 2013 USD 6.6 billion in co-financing, which represents more than 60% of the investment coming from ordinary resources, USD 10.3 billion.<sup>3</sup>

The Inter-American Development Bank (IADB) also mobilized from financial partners in 2013 USD 3.1 billion, through 148 operations and 104 financial partners, composed of 55 private entities and 49 public organizations.<sup>4</sup>

Conversations with the people from the co-financing departments of other development banks as the Latin American Development Bank (CAF) and the European Investment Bank (EIB), have also shown

<sup>1</sup> R.J. Cuñat Gimenez, *New challenges in Entrepreneurship and Finance*, 2015, p. 132.

<sup>2</sup> ADB, *Development Effectiveness Report 2013 Private Sector Operations*, 2013, Pg. VIII.

<sup>3</sup> Richard Sisson, Hideo Fukushima, Gaudencio Hernandez, Jr., René Legrand, Michael Strauss, Guoqi Wu, *ADB Annual Report*, 2013, p. 6.

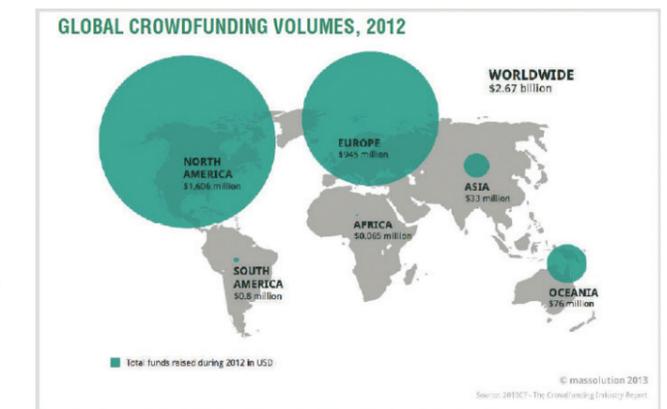
<sup>4</sup> IADB official website, <http://www.iadb.org/en/topics/partnerships/what-are-we-up-to,9666.html>.

co-financing is crucial for their success in financing the development of regions.

### 2.2 Collective Finance Platforms

During 2012, collective financing platforms around the world financed USD 2.7 billion.<sup>5</sup> For a closer look at global collective financing volumes per region refer to figure 1.

Figure 1. Global Collective Financing Volumes per Region<sup>6</sup>



The same report explains the five basic crowdfunding (synonym for collective financing) models that exist, as follows:<sup>7</sup>

- 'Donations: Crowdfunders donate money to campaign owners and do not expect to receive a tangible benefit from the transaction.
- Rewards: Crowdfunders support campaign owners and receive some kind of reward in return for their contribution.
- Equity: Crowdfunders invest in campaign owners and receive equity or equity-like shares in return for their investment.

<sup>5</sup> Carl Esposti, *Crowdsourcing and Crowdfunding. Global Industry Perspective 2013*, Presentation Digital Malaysia: National Crowdsourcing Conference 10 June, Kuala Lumpur, Malaysia, 2013, p. 4.

<sup>6</sup> Carl Esposti, *Crowdsourcing and Crowdfunding. Global Industry Perspective 2013*. Presentation Digital Malaysia: National Crowdsourcing Conference 10 June, Kuala Lumpur, Malaysia, 2013, p. 19.

<sup>7</sup> Carl Esposti, *Crowdsourcing and Crowdfunding. Global Industry Perspective, Presentation Digital Malaysia: National Crowdsourcing Conference 10 June, Kuala Lumpur, Malaysia, 2013, p. 17.*

- Lending: Crowdfunders lend money to campaign owners and expect the future repayment of a principal with or without interest.

- Royalty: Crowdfunders invest in campaign owners and receive a share of revenue earned in return for their investment.’

The operations of development banks with their clients are generally loans or donations. That is why the platform would allow to upload operations that are either repayable or non-refundable.

### 2.3 Why the World Needs More Resources

Even though there is a clear intention from development banks to push and support co-financing activities, the regional demand for financial resources is still much greater than the offer. Lakshmi Venkatachalam, ADB’s, Vice-President of Private Sector and Cofinancing Operations, states that ‘while Asia and the Pacific is on the way to eradicating absolute poverty by the mid-2020s, more than 1.6 billion people continue to live on less than \$2 a day’. She continues to explain that, ‘ADB and other international financial institutions are acutely aware that our joint internal resources are far from adequate to meet the daunting infrastructure financing gap in Asia and the Pacific. Leveraging resources in a coordinated effort among international financial institutions and other development partners is therefore critical.’<sup>8</sup>

In addition to this, according to a recent report published by the UN Economic Commission for Latin America and the Caribbean (ECLAC), Latin American countries are not investing enough in infrastructure, creating an urge for more resources. The report was summarized in the online newspaper Mercopress in October 2014, as follows:

*‘ECLAC estimated every country should spend 6.2% of its GDP on infrastructure by steering investment towards expected infrastructure needs and assuming that the historic pattern of country investments will be repeated. (...) In the last decade, the region has spent 2.7% of its GDP on infrastructure, a figure which shows “the region isn’t investing enough.”’<sup>9</sup>*

The study of ECLAC suggests that the region needs high injections of resources to be competitive

<sup>8</sup> ADB, *Development Effectiveness Report, Private Sector Operations, 2013, Pg. VIII.*

<sup>9</sup> Mercopress (Online Newspaper), 15/10/2014, <http://en.mercopress.com/2014/10/15/latin-america-with-a-huge-deficit-in-infrastructure-investment-says-eclac>.

in the global economy and for people to maintain the best welfare state possible.

### 3. COLLECTIVE FINANCING PLATFORM

In the following lines is explained the main points of how can development banks finance projects through a collective financing platform.

#### 3.1 How Does It Work?

A group of development banks join together to create their own collective financing platform. This platform would be used by the institutions to upload projects in need of co-financing. The platform would show, via Internet, the uploaded projects to other development banks or financial institutions around the world looking to co-finance projects. These institutions would see real-time information about the projects, for example: (i) basic client information; (ii) amount financed and amount in need of finance; (iii) terms and conditions; and, (iv) any other information relevant to the operation. If a financial partner is interested in investing in the project, it could do it directly through the platform. The institution that uploads the project in the platform would generally be responsible for the process of originating the operation and administrating the resources received from the other financial institutions.

#### 3.2 Objectives

The objectives of the platform are:

- Give access to new business opportunities in new markets and sectors to financial institutions;
- Reinforce the catalytic role of financial institutions to increase the offer of resources in developing countries;
  - Capture resources in the international markets to complete the limited resources of financial institutions;
  - Minimize the credit exposure and operational risks of financial institutions;
  - Offer clients a global financial package with better terms and conditions.

#### 3.3 Strong Relations between Members of Platform

Strong institutional relations must be created between the participants of the platform in order to build trust and efficiency in the operability. A good example of how development banks can work closely together for a common cause is the International

Development Finance Club (IDFC). This is a summary of the IDFC’s vision and mission as stated in their website:

*‘The Members of the International Development Finance Club (IDFC) share a similar background and a similar view of their role in the world. (...) We are like-minded development banks of national and sub-regional origin. We operate within the framework of development policies of our respective countries, assisting our respective governments in fulfilling their national and international commitments and within the framework set forth by our constitutive documents. We do so by acting inter alia as financier, advisor, partner and implementer to mobilize finance and expertise for development projects in emerging and developing countries. (...) We believe that in our changing world there is an increasing role for national and sub-regional development banks. We assert that like-minded development banks should collaborate to face global challenges. By joining our forces (funding capacities, local and international experience, market and product know-how), we aim to complement each other’s needs and objectives.’<sup>10</sup>*

The collective financing platform could be implemented easier in an association of development banks already created like the IDFC, which already share a long history of collaboration and where the platform could be used to further enhance their relations.

#### 3.4 Risks and Mitigations

The main risks and mitigations of the platform are:

- Every operation can be participated by different financial institutions, and therefore the documentation needed to co-finance an operation must be standardized. This is not an easy task due to the fact every financial institution will require its own documentation to be fulfilled. As a mitigation of this risk, it is proposed to create a Memorandum of Understanding (MOU) with the participants where a common standard documentation is agreed upon beforehand.
  - Confidentiality issues. It is important that the information shared in the platform stays confidential. As a mitigation of this risk, all participants will sign a confidentiality agreement before having access to the platform.

<sup>10</sup> IDFC website, <https://www.idfc.org/Who-We-Are/who-we-are.aspx>.

- Necessary exclusivity of clients for a period of time. Projects that are uploaded in the platform must be given a minimum period of time in the platform to be co-financed. The time period left there is up to the financial institution pushing the project, and it must be announced in the platform. During this time, the participants of the platform should have exclusivity of financing the operation. To mitigate this risk, all clients will have to sign an exclusivity document.

### 4. IMPLEMENTATION

The collective financing platform proposed requires of a roll-out plan composed of the following three parts:

#### 4.1 Pilot



The objective of the pilot is to test the platform with a few first financial institutions which can compromise with time and human resources to the initial launch. It will be important to study what is the best geographical area to launch the pilot. This is a crucial phase because it is a period where mistakes are going to happen, and it is important to learn fast from them. Therefore, at the end of the pilot a strong evaluation of the results must be done. This phase should last no more than 1 year.

#### 4.2 Expansion

Once the pilot has been tested and evaluated, it is time to expand the platform to other regions and financial institutions. One more time, it is important to study what are the best regions and institutions to work with.

#### 4.3 Consolidation

During this phase, the platform is consolidated by having the financial institutions coming back to the platform to upload or finance new operations. New geographical areas and financial institutions can be studied too during this phase to be included in the platform.

### 5. CONCLUSIONS

This paper leaves the following question unanswered: ‘who will develop and promote this platform?’ Time and financial resources must be dedicated for it to grow and consolidate. The easiest

and fastest option would be for an association of financial institutions like the IDFC to adopt it and launch it among its members. All members could upload or finance a project. Another option would be for one single development bank to create the platform and use it only to upload and share its projects with the financial institutions that have access to it. Both options can be successful.

As far as could be investigated, this would be the first collective financing platform of a development bank or group of development banks in the world. This first experience would allow exploring a path of unlimited funding of loan and technical assistance operations via collective financing possibilities.

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# The Innovative Role of Information Technology in the Modern Corporation Operations: A Case Study from British Airways

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## 1. INTRODUCTION

Nowadays we are living in an information age, an age of communication and connection. Due to the revolution in information technology, the face of the contemporary corporation operations management has changed and systems have been made more effective by introducing new technologies. Majority of the organization have now understood the importance of use Information Systems in their business.

### 1.1 The Purpose of the Project

The British Airway in order to continuously improve its customer service and business operations, it is facing a fundamental challenge when integrating Information Communications Technology (ICT) or Information Systems (IS) with their day to day operations especially for the customer service as quickly as possible. Indeed, Information systems are an integral part of British Airways (BA), without the information systems there would be no business. For BA, IS improves the firm's competitiveness and makes them flexible, more responsible and more profitable through decreasing the cost and creating possibilities for accessing new markets and customers.

Therefore, in order to find out how to use Information Systems to achieve competitive advantage and better serve their customers, the purpose of this project is to critically evaluate the current use of Information Systems (IS) in British Airways Plc (BA), to find out the impact of IS usage for BA's business, analyse how IS help BA to achieve the business objectives and strategic advantages over competitors, and also provide the recommendations for the further development.

### 1.2 The Rationale of Conducting the Project

British Airways Plc, is the largest internationally scheduled airline in the United Kingdom. Apart from scheduled services, the British Airways is also engaged in the operation of international and domestic carriage of freight and mail, and the ancillary services (Datamonitor 2008). British Airways strategic goal is to become the world's leading global airline, to achieve this, the management sets objectives,

which are accomplished through rigorous decision-making, planning, controlling and the use/support of information systems, to show its presence in key global cities, improve employee relationship and to deliver outstanding customer services, invest on training and development, performance, opportunities, excellence and partnership.

Information systems (IS) are computer systems that support business operations, management, and decision making in organisations. IS are an integral part of virtually every work environment and play a critical role in running organisations. They are the heart of the internet-based economy. IS enable people to access the information they need, to collaborate, make informed decisions, and perform their jobs and personal activities effectively. Therefore, IS is a means by which people and organisations, who use technologies, can gather, store, process, use and broadcast information. Airlines were early adopters of IS and have a long history of technological innovation, compared to other transportation industries. The increased competition in the airline industry is stimulating the development of new applications of information technology and new strategic focus on electronic commerce for airline companies.

Therefore, ICT/IS play a key role in passenger airline companies such as British Airways, by helping to acquire process, transport and deliver well-defined quality service for various airlines helping them attain competitive advantages in decision-making, customer care relations, and react in a timely manner to changes within their environment (Buhalis 2004).

The airline industry has many distinct challenges. Competition, regulation, and fuel prices are examples of the uncontrollable external pressures in aviation. Many of these variables have the potential to impact the passenger experience. Yet in the airline business, like most consumer-oriented businesses, service quality is the main brand differentiator. Understanding this reality and desiring to differentiate the BA passenger experience, BA needs to preserve its slender operating margins against both a new wave of no-frills competitors and increasing pressure from customers who demand more for their travel dollar.

For British Airways, in order to meet the above challenges and pressures, and develop the potential market, BA needs to understand and respond accurately to the needs and expectations of its customers, by creating and maintaining customer loyalty, providing a range of information systems integrated and well-targeted service offerings.

Therefore, the rationale for this project is present: through the analysis of IS usage in British Airways of airline industry, this study explores the value and impact of various aspects IS use in BA and provides the recommendation for possibly further development of IS in this company in order to fulfil the better implementation of technologies and information systems, improve the effectiveness of business management and enhance the customer services at the heart of British Airways.

The rest of the report covers the following sections: Section 2 explores the problems and issues of IS usage in BA; Section 3 explains the specific research method of this project to find out the solutions to the problems of IS usage in BA; and Section 4 discusses the literature of ICT/IS usage in airline industry, to analyse the potential solutions for the problems and issues of IS in BA; Section 5 explains how IS helps British Airways to develop various aspects of business process of this company, which addresses one of research problems; Section 6 discusses the possibly further recommendation of IS for BA, which provides the research solution to answer the aim and objectives of this project study; Section 7 concludes the report.

## **2. RESEARCH CONTEXT: INFORMATION SYSTEMS AND PROBLEMS OF IS USAGE IN BRITISH AIRWAYS**

Facing the challenge of globalisation and new economic environment, all the enterprises of aviation industry expect to get the largest advantage of third industrial revolution caused by the rapid development of information science and technology. Information Systems based on new technologies and online transaction rolled out and changed the whole structure of the passenger airline industry (Ma et al. 2003, Buhails 2004). The information systems tend to be much more popular since it has proved most of them are really 'relatively inexpensive, relatively easy to use and reasonably reliable' (Firoiu 2005, pp.108-20).

The development of the internet has made information easily accessible to consumers, and has therefore established a direct link between consumers and suppliers. To integrate successfully into the

international market, the airline industry will be forced to adopt IS/ICT to participate in such fields as airline networks, travel product marketing in order to reach prospective customers, as well as to improve operational efficiency.

Basically, all those modern Information Systems can help all organisations in this area gain more competitive advantage by reducing operational costs, providing better products and services to customers, getting acceleration of information collection, transmission, and improve enterprise group, and gaining faster response to the market (Buhails 2004, pp.805-25). The application of new technologies and modern information systems in the fields of airline passenger industry varies, and all corporations in the airline passenger industry are now undertaking the task that systematically improves the statistics information collection and analysis measures, and enhance the modernization of the statistics information system (Mason 2005, pp.19-25).

Increasingly, IT has also been used to add value and to improve British Airways overall service and effectiveness in a very competitive industry. A number of the applications provided by many of BA's supplies were used. However, according to the practical experience during the time period of working in British Airways, some specific problems and issues related to IS usage in British Airways are identified.

Firstly, British Airways has over 60 information systems provided by various software solution vendors and suppliers that are becoming increasing difficult to update and maintain. BA's executive management team recognises that the large set of data is truly essential to the company's competitiveness. Carrying more than 33 million passengers a year, BA is careful to make certain that it captures commercial data such as customer reservation and passenger information effectively. There is an urgent need to review the current IS/ICT usage and summarise the key significant aspects of information systems adoption in British Airways, such as some key aspects of sales and marketing, operation management and business resource management of this company.

Secondly, in order to fulfil the better implementation of technologies and information systems, improve the effectiveness of business management and provider better customer services at the heart of British Airways, some possible potential IS adoption and further recommendation of IS usage in this company are needed. For instance, Business intelligence and decision making are increasing used for commercial

planning, some related functions such as demand forecasting, pricing and route and capacity planning could deal with the arising problems of internal management and future business operating issues.

Recognising that the proposed solution of the above problems and issues would benefit for a more strategic and centralised approach to directing better ICT/IS adoption in this company, this project chooses to critically evaluate the literature of a number of ICT/IS solutions from leading vendors in the entire passenger airline industry and explore the solution and developing trend of IS adoption within British Airways.

Therefore, the following discusses are focus on the above problems and issues within British Airways, specific analysis reflected in the following aspects.

## **3. RESEARCH METHOD OF CONDUCTING THIS PROJECT**

According to the above discussion of the IS usage in aviation industry, several aspects mentioned in the literature that IS help improve the efficiency of business process, enhance the effectiveness of marketing and customer service and keep the competitive advantage of airline companies. In order to fulfil the aim and objectives of this study, to explore the IS usage in British Airways and give the recommendation for future development of IS in this company, the secondary research was used to identify previous research and the published articles. As technology is moving fast here, only articles, reports, and books specialised in the ICT/IS in British Airways within in the last few years were used.

Though the secondary data analysis, this study focus on British Airways Plc, to give an insight into the IS usage in this company, and also look at the possibly further use and development of information systems within British Airways.

## **4. LITERATURE REVIEW: INFORMATION SYSTEM USAGE IN AIRLINE INDUSTRY**

### **4.1 Sales and Marketing System**

Airplane Corporation is increasingly aware of the modern information system based on information communication technologies and the Internet are playing an increasingly important role which runs through within the whole industry, including gaining information, customer support and management of customer relationships, especially in the field

of sales promoting and marketing. Previously, the Computer Reservation Systems (CRS) were 'long-term' used by airplane corporations and they were often combined with the implementation of Global Distribution Systems (GDS) so as to gain worldwide distribution of inventory (Buhails 2004, pp.805-25). These systems were connected with the Internet and were used to support Automatic electronic ticket system and exchange e-tickets with other airline organisations in the world. With the help of information communication technology to promote the online sales, each organisation's website provides their collective supplier, customer or terminal consumer, an individualized application with separate interface. Surfing the home page of organisation, all customers of organisation can log on, search the preferred services and order their own needs through a customised interface. An increasing number of airline organisations distribute their services and sales promotion plans through their own websites or sales network system in accordance with their different characteristics to cater for different buying habits and needs of different types of consumers. The service of disintermediation is increasing; reducing agency commissions has been one technique by which the network carriers have sought to cut costs. Here in the UK, the online sales mix is still heavily air dominated by the strong presence of the low cost carriers which now sell about 95% of their tickets online (Pels 2008, pp.83-9). Increasingly, e-ticketing improves paperless transactions, which plays a great role in the process of saving cost of passenger aviation industry in the UK.

### **4.2 Operational Management System**

The operational management system of the airline industry is the most important and essential component of the whole process, it is so crucial that IS is used in dealing with the required maintenance; such as route profitable selection, check-in, flight seat allocation, weather forecasts, the airport customs and airport-related inspection, security checks and so on (Buhails 2004, pp.805-25). A lot of professional information systems are built to resolve large ranges of requests in this area such as some designs for monitoring the environment, analysing the annual performance, storing historical data and forecasting the demands. Airplanes have their own unique feature which is based on global distribution and serving worldwide destinations. Therefore, they are eager to enhance their co-ordination and communicating abilities with all alliances, suppliers, branches, distributors and final consumers in every region of the world.

An airline routes profitability selecting system and in-flight entertainment system are examples of IS which relies on operations. In recent years, the problem of hub-airport sitting and flight route network design has been of extensive concern to the civil aviation industry (Mason 2005, pp.19-25). Normally, reliable air routes are wide choices in airline companies, and as a result, the selecting and decision supported by information system tend to be precious and critical for authorities of airplane corporations. Some real time route profitability solution information system or software has been put into services, which are built as a multi-tier architecture; provide a web-based user interface. They are able to help decision makers primarily in evaluating existing routes, planning and budgeting the profitability of routes for future, understanding the effect of one route over another within the airplane network, and evaluating the profitability of new routes as an estimate based on existing route structures, all of the above is going to know the profit margins and help airplane organisations make a correct decision (Pandit & Nagumalli 2009). The route profitability application can generate a range of management information reports including route profitability and break-even analysis.

Another obvious aspect of ICT/IS implementation in recent years which most of the airline organisations have placed their emphasis on is the improvement of in-flight entertainment systems. There is no doubt that airlines have been investing heavily in this particular information system of the plane. In order to maximise the customers continuous demands of entertainments during their trip, to out-perform the competitors through product differentiation, they raise the investment on that specific information system application (Papatheodourou 2002, pp.381-8). Meanwhile, the technological revolution in in-flight entertainment system has taken place in many aspects during recent years. From the basic screen-based products including video systems which provide some entertaining programs like movies, sport games, electronic game, and so on, to the current comprehensive information system which includes Film speling, video appreciating, computer playing, air map display, news broadcasting, gambling, financial services, shopping catalogues, destination information and instant messaging (Alamdari 1999, pp.203-9).

#### 4.3 Resource Management System

From the view of airplanes, the most precious and expensive assets are human resources and fleet. Airlines should learn how to make the most use of the

limited resource and maximize the utilization of them. Technically, they should ensure that their equipment and aircraft are all in a good state and better utilization of its capacity. For the purpose of maintaining regular service of commercial maintenance and operational requirements, the airplane organisations need various information systems such as maintenance control system, e-Procurement information system, engineering system and technical documentation management system, etc. Among them, the inspection & training information system and crew management system are two typical applications of ICT/IS (Buhails 2004, pp.805-25).

Training has been identified as a principal intervention strategy to improve the quality and reliability of aircraft inspection and reducing errors (Walter 2000, pp.249-59). The computer-based inspection training for the commercial aviation system has gained a great popularity in the last decades due to the inspection and maintenance system which is a complex one with a lot of uncertain factors including 'human beings' as the vital component. As a result, a computer-based inspection training program titled GAITS (General Aviation Inspection Training System) was introduced to this area, expecting to analyze the inspection process based on developing an error controlled records, in order to identify training requirements and avoid making the same mistakes (Sadasivan & Gramopadhye 2009, 608-20). On the other hand, training has been proved to be an effective way to improve the performance of the inspection in general aviation industry. Currently, the existing training for these inspectors tends to be primarily on-the-job (OJT). As an important implementation of ICTs, modern digital photographic skills have been used widely in the field of visual inspection and training process. This use of realistic photographs can give real time feedback to the superior who is training the employees at the real workplace (Walter 2000, pp.249-59). Another application in the passenger airline industry in the UK is the computer-based training (CBT) which offers more efficient long distanced learning and standard training program (Sadasivan & Gramopadhye 2009, pp.608-20). The use of computers for off-line inspection training has shown significant improvements in inspection performance in this area. Facing an urgent demand of much more utilization of advanced technology and efficient information system in training for inspection work, plenty of up-to-date technologies have been first explored in this field, such as virtual reality skills and Wireless Communication System (WCS) (Sadasivan & Gramopadhye 2009, pp.608-20). A modern technology-based training and inspection

support tools would be much more suitable for the development of passenger airline industry.

Airplanes also depend on their crew management systems to make plans and control their continuous conventional watches and muster rolls, which often need a complex process to prevent all sorts of constrictions and conflicts between crews, customs and crews, crews skills and the ability of equipments, costs of airplanes, etc (Buhails 2004, pp.805-25). At present, the crew management software or information system is in an intergraded and comprehensive solution that supports the end-to-end crew management needs for any airplane organisation. It enables an efficient, paper-less workflow with real time electronic reporting and aids in quicker decision making through informative database (Abeyratne et al. 2004, pp.523-30).

The most important and maybe also the vital application of ICT/IS are in the field of customer relationship management programs.

Thomas Davenport (2000, p.24) writes that *'Processes at the customer interface are perhaps the most critical to an organisation's success, they are essential to a firm's cash flow, customer satisfaction, and process efficiency.'*

The construction of customer relationship management system is an important means of competition between airlines (Gogg et al. 1995). In order to improve the communication between enterprises and final customers and to get loyal relationship with consumers, airlines have been investing a lot of money to build much more effective and efficient Customer relationship management (CRM) information systems. Meanwhile, the age of knowledge economy approaches customers with the trend of individualization. Every customer is unique but can be segmented by value, pattern, and buying criteria. Since the final product should be put in the hands of consumers, the key driver of the change of international market is the change in market needs or customers tastes. As a result, the focus of work for enterprise marketing should take consumers as the centre, and maximally meet consumer's demands; respect the wishes of consumers, and enhance the company's ability to change methods and models in response to changing market needs or tastes (Holt et al. 2001). Customer relationship management (CRM) is the basis of building modern marketing system for the new economy, which is also a huge information resource of modern business activity, and almost all the information required in business activity comes from

CRM. Using the fundamental knowledge of CRM and data mining, it can provide the airline corporations with real time data analysis and the decision-making reliance. 'Its ultimate objective is to improve customer profitability, satisfaction and loyalty, to get new customers and to forage the opportunity of commerce' (Yang & Rhee 2009, pp.571-9). For instance, with the help of computer technology and the Internet, by means of customer calls, visit on a daily basis and network communications, airline organisations have been able to learn new information about the customer and realize what kind of new products customers will appreciate. With the development of the technique of network and communication, the call centre technique is now tightly integrated in today's aviation CRM software, through this way, they built a modern call centre with the combination of network and database so that customers are able to talk to company staff via free phone or chatting room on line. All of them supply national and place policy information for airline enterprise's operating decisions, it also provides solution for the affairs of service processing and information of more accurate cost of flying lines and voyages for passenger airline companies to make accurate policies.

#### 5. THE SOLUTION OF IS USAGE IN BRITISH AIRWAYS

According to the research conducted within this study, British Airway's product development involves technological advancement. Introduction of internet access on flights along with improved integration of mobile computing peripherals such as tablet PCs, Smartphones and laptops would be a value increasing service offering. Complementary services such as concierge services, car rental, hotel booking and even smaller services such as appointment scheduling and mapping of routes for foreign tourists would be value added bonuses in the product offering.

At present, online booking services and check-ins are becoming among the industry standards where most competitors are using it. Computerized reservation systems now link travel agencies directly with the airlines and provide instantaneous information on availability, followed by reservations and tickets. A recent survey revealed that 34% of online consumers are planning on using price-comparison sites more with Interned savvies seeing an increase since the late 2009. It is no more a novelty boasted by British Airways alone. According to Simon Parks Smith, who is the Head of Product Management at British Airways, Bookings made on ba.com now account for 54 per cent of our short-haul; non-premium

business in the UK and this figure will keep rising. The information systems of sales and marketing plays a vital role in helping British Airways to achieve the business objectives and also address concern with reliability and trust.

Another aspect of challenge that BA encountered in its business process is the communications within operation management process, including the communication within BA's working staff and the communication with customers. To help all the staff in BA work better together to serve customers, BA needed to improve its messaging and collaboration tools. For instance, BA corporate announcements are sent through a large number of communication channels, including the postal service, to reach the entire workforce. BA also wants to streamline communications among the different brands operating under IAG. 'To build common business strategies as a forward-thinking group, we need common messaging and collaboration tools' according to Julie Boddy, who is the Business and Technology Improvement Manager Service Transformation Department at British Airways. In order to meet the requirements of corporation development in British Airways, and get the better access and tools to provide service for their customers. In 2003, BA launched a global internal operation process management and customer relations initiative aimed at overhauling its technology infrastructure and service processes (internal communication, baggage, compensation, etc.). For instance, by capturing customer issues across all communication methods, ePowerCenter provided BA with a global view of all customer interactions and service issues at a granular level. In addition, ePowerCenter enabled BA to work with external and existing legacy information systems. Through a web-services interface, ePowerCenter was integrated with reservation systems, baggage tracking and operational customer databases, giving service representatives a complete view of customer information in real time. In aircraft and airport operation within British Airways, ACARS (Aircraft Communications Addressing and Reporting System) is used to allow fast transfer of information by radio waves between computers on the ground and computers on board aircraft. Data transmitted during a flight can help to plan routine and extra ground maintenance and boarding delays can be reduced. Some of the ground time between flights is spent analysing and responding to information on load and balance.

## 6. RECOMMENDATION OF THE FURTHER IS USAGE IN BRITISH AIRWAYS

Apart from the above IS solutions adopted in British Airways, to meet the requirements of increasing competitions in the airline industry, this study also explores the further possible way of developing various ICT/IS application in this company.

Firstly, the Introduction of Kiosks like Common User Self-Service (CUSS) being used in most United State airports, it can be very effective in British Airway's UK airports which will enable various airlines to administer passenger facilities at a shared kiosk helping beat down the cost of running this machines. CUSS will help in reducing heavy traffic times at various terminal entrances and help to enhance the free flow of passengers more evenly in airports.

Secondly, in terms of baggage handling issues, some new technological innovations like Service Oriented Architecture (SOA) can assist in tackling these problems. SOA can improve share of information between baggage and other systems. Another technique is the introduction of Radio Frequency Identification (RFID) which can assist in collaboration with the old barcode techniques, 100% tracking and trace of baggage to improve irregularities and decrease the loss of baggage retrieval. RFID can also assist to enhance speed processes and automation, baggage security improvement, enhance the ease of tracing the baggage, reduce baggage reconciliation times, etc (IBM solution 2009).

Thirdly, in order to have a competitive advantage over rivals, tools like the Decision Support System (DSS) has used in British Airways, which can be defined as a model based set of procedures used to process data and make judgments and assist in decision making. DSS is a system made to support managerial decision makers in semi-structured decision situations. It assists decision makers in extending their potentials but not replacing their decisions. An example of how airlines use DSS, in its analytical Information Management System is a decision support system used in the airline industry. It was developed by American Airlines but is used by other airlines now like the British airways and Virgin Atlantic and even airline financial analysts (Greg et al. 2000). It supports a variety of airline decisions by studying factors such as aircraft utilization seating capacity and utilization, traffic statistics, market share, revenue and profitability results. In the future, some other Information system tools that will be

potentially used such as the Event derivation engine (EDE), operational data store (ODS), Initial state service (IIS) and even the legacy OLTP systems. Those IS applications have different key functions and will be used in the future to be achieve better information, improve bottom-line costs and maximise market effectiveness in the business process of British Airways.

## 7. CONCLUSION

This report has shown that Information Systems plays an important role in the functional, strategic and operational management of British Airways Plc within the Airline industry.

According to the working practice within British Airways, the problems and issues regarding the information systems usage in this company are identified, which requires the research work to review the current usage of ICT/IS and explore the possible potential adoption of IS in British Airways.

Though the critical review of literature that IS help business organisation within airline companies to deal with their sales and marketing, business operation management and resource management including customer service and human resource management issues, this study reveals the value and impact of IS for airline industry businesses in practice.

Focus on British Airways, which is the largest internationally scheduled airline in the United Kingdom, this study conducted the secondary research to investigate the several aspects of IS use in the business process of British Airways and also provides some recommendation for the further development and implementation of IS in this company.

This report has demonstrated that IS has always been critical for the strategic and operational management of British Airways as an airline company in aviation industry and will directly affect the future competitiveness of the business process of this company.

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#### **Support Video Links**

- [https://www.youtube.com/watch?v=R7uERKcMC\\_U](https://www.youtube.com/watch?v=R7uERKcMC_U)
- <http://bringitonni.info/inspirational-companies/company-profiles/british-airways-ba/>

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## *Session II: New Challenges for Regional and National Economies*

# Cost of Well-Being: Suburban New Citizen Group Well-Being Study: A Research Based on Yangtze River Delta

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## ABSTRACT

With the accelerating of the urbanization in our country, city areas are expanding more and more fast. As a result, more and more suburbs transform to the urban, and the outskirts and the edge of the city are firstly involved in the rapid transformation. To meet the needs of urban developing, continuous expropriating of farmland makes a large group of farmers be forced to transform into city residents through 'withdrawal of the village and restructuring', 'withdrawal of the village and home', 'withdrawal of the village to town' policies. The 'dream' of Chinese farmers then turned out a New Citizen Group. However, will the transformation bring well-being to them, and what will they lose while seeking urban and well-being life? Our research defined these questions as our starting points and major problems.

Based on the thoughts above, I generalized the practical dilemma and existed conditions which affect the development of the New Citizen Group's well-being, and I investigated the well-being theory, launched empirical investigation in six cities in Yangtze River Delta to study the actual state of them. Combined the influential factors in macro, medium and micro dimensions, I try to find probable approaches to enhance their well-being. In conclusion, I got the information from our investigations that the well-being index of the new citizens is lower than other major social groups. There are five major factors influencing the promotion of well-being. No.1 is that the distance between a high expectation and low reality leads to relative deprivation. No.2 is that the economic contradiction of 'cut down income and more expense' impedes the promotion of the group's well-being. No.3 is that change in life style comes with poor adaptation. No.4 is that the deficiency of social support impedes the promotion of well-being.

**Key word:** Well-being, suburban new citizen group, peasant transforming into townspeople.

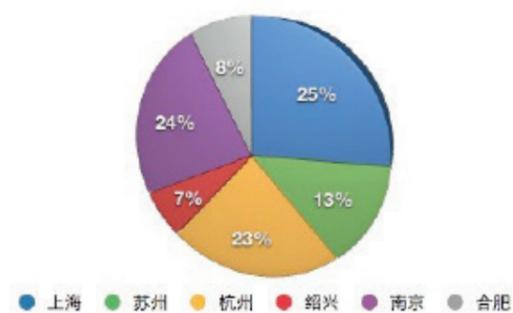
In recent years, group incidents occurred frequently due to land requisition and demolishing at suburban areas and the conflict was upgraded continuously. Social opinion and media report often concentrated the focus of problem on the insufficiency of funds

for land acquisition compensation. However, is the insufficiency of funds for land acquisition compensation the only reason and fundamental reason behind these group incidents? What about the lives of new citizens after they acquired sufficient and satisfactory land acquisition compensation? Have they achieved "happiness" thereafter?

Basing on above thinking, this research confirms suburban new citizen group as research object. Suburban new citizen group refers to suburban land-lost farmers who had handled the change from "agricultural to non-agricultural" status, entered urban management system, acquired corresponding urban and town social security, and achieved urban community life due to urban expansion in suburban area and the complete or partial land acquisition. New citizens do not cover all land-lost farmers, while it refers to the part of group that have achieved citizenization in objective conditions such as housing, household register and social security.

## 1. THE BASIC INFORMATION OF THE SAMPLES

Figure 1-1. The Distribution of the Sample



Samples basic variable description - set age (1-2), education level (1-3) and realizing community life time (1-4), etc., in order to realize analysis of the cross above variables with respondents identity situation.

Figure 1-2. Sample of Age Distribution

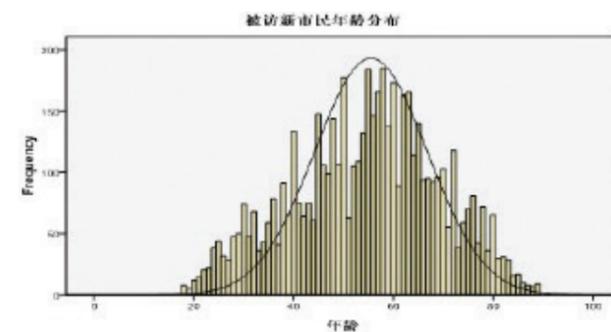


Figure 1-3. Sample of the Distribution by the Education Level

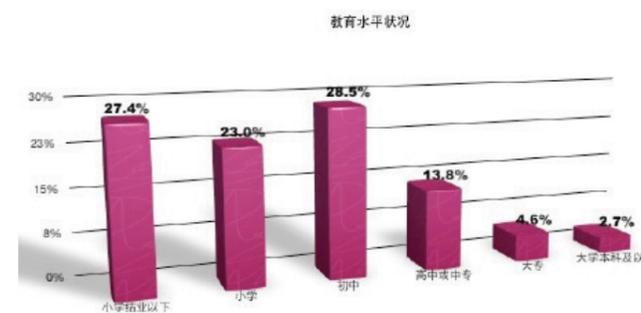
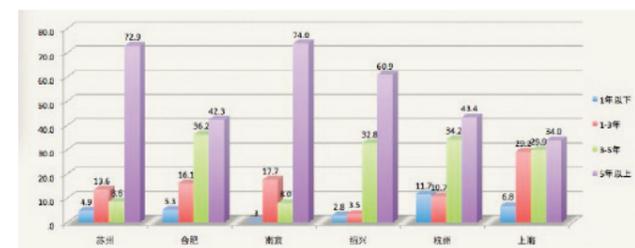


Figure 1-4. Respondents in Number Distribution



## 2. RESEARCH FINDINGS OF EMPIRICAL SURVEY

By virtue of questionnaire design and survey, I visited suburban new citizen groups in six cities at Yangtze River Delta Region, and placed the research on improving the sense of happiness of new citizen groups.

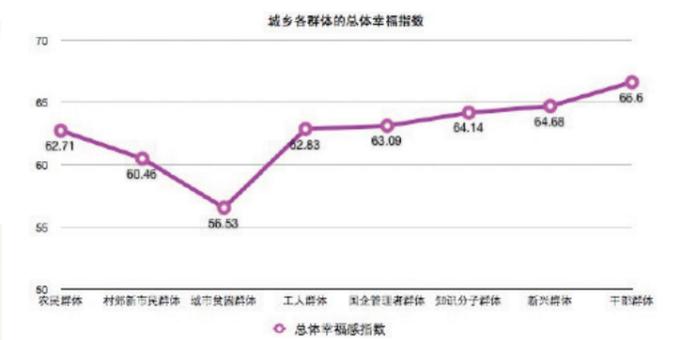
Basing on above theory and combining with empirical research, it is found that:

### 2.1 The Overall Sense of Happiness of Suburban New Citizen Groups Was Not High

Comparing happiness index between new citizen group and other seven groups such as farmers group, workers group, urban poverty group, it is found that

the happiness index of new citizen group is low as compared to the happiness index of other groups. In terms of the happiness index of new citizen group, 33% new citizens among respondents did not believe that their current life is happy. Referring to The Sense of Happiness Scale of Chinese Urban Residents (Brief Scale) of Xing Zhanjun, the measurement and calculation on sense of happiness of suburban new citizen groups was conducted. It obtained that the sample average of sense of happiness of new citizen groups was 60.46 (2-1). As compared to happiness index measured by Xing Zhanjun on other groups (farmers group, urban poverty group, workers group, state-owned enterprise management group, intellectuals group, cadres group and emerging groups), the happiness index of suburban new citizen group was just higher than that of urban poverty group while lower than other groups.

Figure 2-1. General Happiness Contrast of Urban and Rural Areas



Suburban new citizen group is the accompaniment group in urbanization process, which passively achieved citizenization under the arrangement of policy and system, and its sense of happiness is closely correlated to such social change. There are lots of factors resulting in low happiness of new citizen group, and the most prominent is the sharp increase of relative sense of deprivation caused by high imbalance between value expectations and value capacity. It is mainly represented in the sharp increase of economic pressure due to that the current income level of new citizen group cannot meet city life as well as the strengthening of social unfair feeling caused by the imbalance of compensation resources distribution in the process of land requisition and demolishing. In addition, the change of interpersonal communication environment and the mal-adaptation to living environment, community cultural life and production and living mode had, to a certain extent, influenced the sense of happiness of new citizen group.

## 2.2 Sense of Happiness Experience of New Citizen Group Had Regional Differences and Internal Differences

The sense of happiness of new citizen group had regional and internal differences, mainly representing in: the happiness index of new citizen group had great regional differences, which generally increased with the improvement of relative income coefficient of new citizen group; in educational level, the happiness index increased with the improvement of educational level; in age, happiness index gradually decreased from youth to middle-aged and elderly people.

The subject experience and physical and mental health experience of new citizen group was low, and the enjoyed development experience was high. It let practical experience and expected target of new citizen group have great gap, causing the sense of loss, thereby influencing the improvement in sense of happiness.

### 2.2.1 sense of happiness experience of suburban new citizen group had obvious regional differences

The sense of economic pressure of new citizen group was strengthened. New citizen group faced the dilemma of 'increasing income and reducing expenditure' in economy after land requisition and demolishing, thus it strengthened their economic sense of pressure, which was not beneficial for the improvement of sense of happiness of new citizen group. Researches show that regional development extent has certain relations with sense of happiness, and regional affluence extent has obvious influence on per capitain come of residents and the sense of happiness. In areas with low affluence extent, individual income has big influence on sense of happiness. On such basis, survey was conducted on economic status of suburban new citizen group and regional difference of such group was discussed.

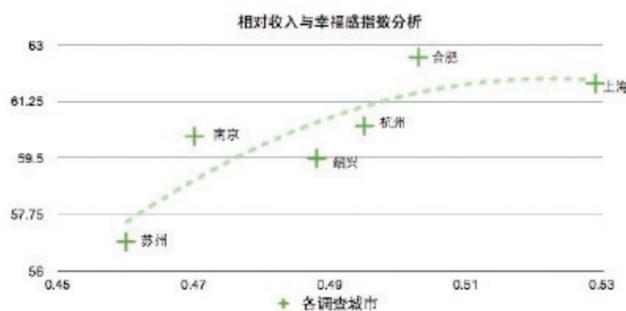
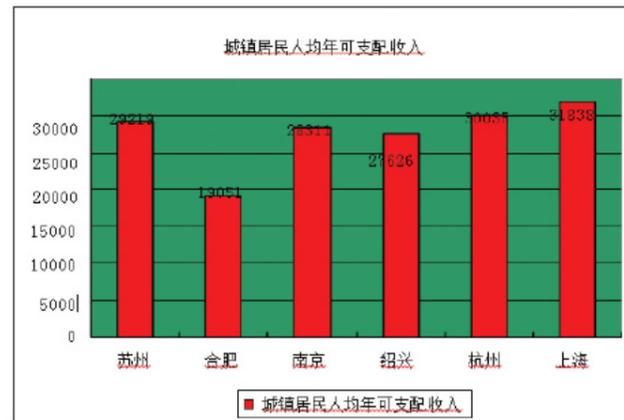


Figure 2-2. Income and Well-being Index Analysis of Cities

Figure 2-3. The Urban per Capita Disposable Income



Conducting relevant analysis on absolute income and happiness index, it is found that the correlation extent between absolute income and happiness of suburban new citizen group was low. Accordingly, survey was conducted on relative income coefficient of suburban new citizen group of various cities surveyed, and it is found that the sense of happiness of new citizen group generally improved with the increase of relative income coefficient (2-3).

### 2.2.2 the difference of happiness experience was obvious under different social adaptation capabilities and conditions

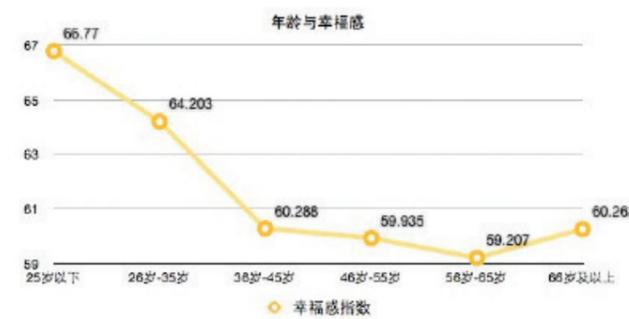
The sense of social unfairness of new citizen group was strengthened. The citizenization of suburban new citizen group was passive citizenization under the arrangement of policy and system. As the economic development level and social development level of various areas had difference, the compensation and follow-up work of various areas had difference. It let new citizen group have strengthened sense of unfairness in social fairness experience.

As per the adaptation theory of sense of happiness, the initial response of individuals on new living incidents caused by social transformation and social development is strong. However, as time goes on, they shall gradually get used to and adapt to new living situations, causing the response to return to the original status. Such adaptation process shall change due to the difference of adaptation subject.

It is found via survey that in age structure, the happiness of youths in new citizen group was relatively high; and with the growth of age, happiness index exhibited downward trend (2-4). The causes of such phenomenon were, on the one hand, the youth group had more accepted the influence of urban living

habits and they had strong social adaptation capability. However, the middle-aged and elderly group was more accustomed to original rural life and could not rapidly adapt to suddenly-arrived urban life. On the other hand, the youths had generally high education and technical background, who hoped to provide more opportunities for self-development taking such urbanization process as springboard, while the middle-aged and elderly group did not possess such conditions. Thus it let the happiness index of suburban new citizen group exhibit such trend in age distribution.

2-4. The Happiness Index of All Age Groups

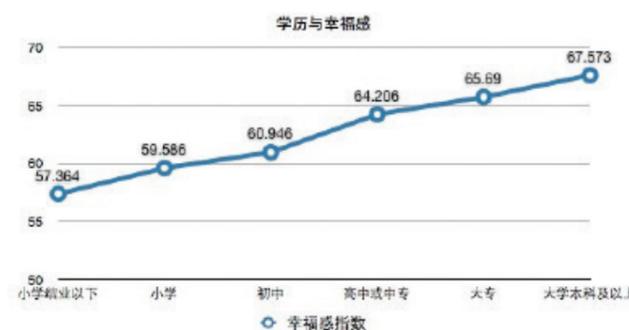


### 2.2.3 the difference of happiness index was obvious under different educational levels

The difference of happiness index was obvious under different educational levels of suburban new citizen group, and the higher the education level, the higher the happiness index shall be (2-5).

The majorities of traditional researches believe that there exists certain relationship between education level and sense of happiness, but the influence extent and trend targeting at different groups is different.

Figure 2-5. The Degree of Happiness Dividing with Education Degree



The sense of happiness of suburban new citizen group increased with the improvement of educational level. On the one hand, the passive change from farmers to citizens undoubtedly provided better and much more employment and development opportunities for highly-educated group. However, as to new citizen group with low educational level, it let them loss land and be unemployed, thus resulting in the dilemma of difficulty in employment, adaptation and living. On the other hand, relative to people with low educational level, people with high educational level had more extensive information source and could more rationally and objectively view the policy on land requisition and demolishing as well as its related problems. Thus it decreased their unfairness experience and dissatisfaction on living indicators, and strengthened happiness experience.

## 3. SUGGESTION AND THINKING ON PROMOTING SUBURBAN NEW CITIZEN COMMUNITY WELL-BEING

Happiness is the main body of psychological for condition evaluation which is self-discipline. Happiness of ascension requires a long process. And the urbanization of new residents is passive, when forced to change life, production environment, produce the characteristic of the group's happiness has its special formation reason. According to the characteristics of the empirical materials, happiness and influencing factors, we try to analyze the influence happiness improve the plight of the suburban new citizen groups, in order to rise the suburban new citizen community well-being through the study of its present predicament and then discusses the feasibility. Based on the empirical analysis of the survey data and information I will summarize present promotion predicament happiness in the new citizen community as:

(1) Relative deprivation caused by the gap between expectations and reality. Thus we must strengthen and improve the rural comprehensive construction and efforts to narrow the gap between urban and rural areas. Set appropriate goals to guide the new citizens expected, less gap between expectation and reality sense of loss. To increase the physical and nonphysical input to the new citizen community, close the gap between new civil community with the original public area.

(2) Contradictory economic situation affected well-being. Accordingly I think on one hand, to further improve the requisition compensation policies, and to guide the new citizen reasonable consumption and

rational investment. On the other hand, should further perfect the job placement measures, improve the skilled employment training.

(3) The lifestyle changes bring uncomfortable sense. Thus, to increase the happiness of the new citizens, we should increase the citizens living standard in the new citizen propaganda, and guide the new citizens achieve a healthy lifestyle. Play a further role to the group, and perfect the new citizen community social network system, strengthen social identity and social concern.

(4) Social support system is not sound which affects happiness. Thus, to increase the happiness of the new citizens, we should further improve the social security system, establishing and perfecting the social security mechanism. Further improve the community construction, community service and community management function, which can provide a good environment for the citizens of new life. Attach importance to the citizens of new psychological feelings and emotional experience of construction of public service function.

Through the analysis of above for happiness in the new citizen community, I think the requisition compensation is not the fundamental and the only factor which influencing the happiness in the new citizen community. New citizen community well-being is not high, even in a few years later demolished and relocated on requisitioned land, tracing back land expropriation compensation is not the only factor. The outbreak of the mass incidents is a comprehensive problem including social security, social adaptation and development of the main aspects, rather than a single factor caused by such the physical level as land expropriation compensation.

In the process of urbanization of farmers, the material is the foundation. And social support is the way. The individual happiness is a goal. Urbanization is the inevitable trend in the development of China's modernization, which requires the suburban area farmers be on the road of searching for happy urbanization. The road costs new citizens 'happiness'. The price should not be borne by the new citizen community alone, what we can do is through the efforts of all parties to bear the cost of the new citizen group to a minimum.

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## Macau Automobile Industry Development: Car Consumption Analysis

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### ABSTRACT

The Macau economy has been growing rapidly since its reversion to China in 1999. A small city of approximately 30 square kilometres in size, is being known worldwide not only for its famous gaming industry and also the stunning population density. Despite the 60.7k local population, there is also 29 million tourists coming to this place in a year (data from Macau Documentation and Information Centre of the Statistics and Census Service as of Dec 2013). With such a superb densely environment and the limited expansion space, traffic problem has been a frequently talked topic since long. In this report paper, we are going to look into the car consumption over the past 10 years and to evaluate how the number of transactions is affected by the income effect as well as the price effect. We hope the research would be helpful to the government for their further consideration on car control policy. The paper design & methodologies based on the data and information from Macau Documentation and Information Centre of the Statistics and Census Service, we calculate the price elasticity, evaluate the income effect and analyse how different factors affect the car consumption respectively.

### 1. INTRODUCTION

Since the Macau Government issued more gaming licenses and changed the rule of the gaming market in 2002, economy has been growing rapidly in the last decade.

Though limited land and few natural space, and there is no rail transport service, the transport burden in this small city increased as number of cars drive on the road. Also, as the fast growth on residents' income, people are able and expecting to buy more than one car. At the same time, the car manufacturers are also one of the most beneficial parties with this. Mercedes Benz, BMW, Ferrari, Toyota, Hyundai, Honda, Porsche, Ford, Kia, Suzuki, Nissan and such worldwide manufacturers had entered the market a long time ago. This income effect we will further discuss in this report to show the relationship between income change and consumption in number of cars

change. From another point of view, car price level also affects the demands of the consumers. Over the past 10 years, the price of automobile kept increasing (according to the Consumer Price Index reports from Macau Documentation and Information Centre of the Statistics and Census Service). Regarding this price change, in this report investigate how consumer reacts in every price change, by applying the price elasticity theory, to see whether the consumers are price sensitive or price elastic or not. The research is based on the figures from 2002-2012, which is from the year Macau Government restudied the gaming license policy and issued more licenses to competitive runners to enrich the industry overall development. The policy allowed foreign investors entered the Macau gaming market. Giants like Sands Group, Wynn Resorts Group, Galaxy Entertainment Group, MGM Group and Melco Crown Entertainment Group not only contributed a lot to the rapid growth of this major industry, but also brought businesses opportunities in tourists, retails, food and beverages and many other areas. This brought an increase into the labor workforce demand and thus, average income of the population is also benefit from the rapid growth of the whole market. Automobile consumption is surely also affected by a number of other factors, such as complimentary products like gasoline, car parking service and insurance, etc. Supplementary products like taxis, buses and the coming Light Rail Transit. It is also influenced by government policies and regulations like automobile tax, gasoline tax, driving restrictions, license fees, driving compensation rates. In this research, we will take some of the above mentioned factors into account and identify the effects from income change and price change respectively.

### 2. REGIONAL ECONOMIC BACKGROUND

Gambling and gambling-related tourism are mainstays of the Macau economy. We overview four significant aspects to affect the buying power of Macau people: population, labor, employment rate and yearly income of Macau. The data are generated by Macau Documentation and Information Centre of the Statistics and Census Service, the period time starts from 2002 to 2012.

Figure 1. Population Number Tendency

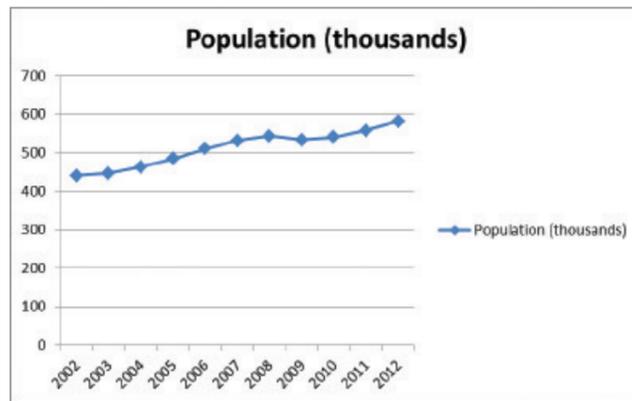
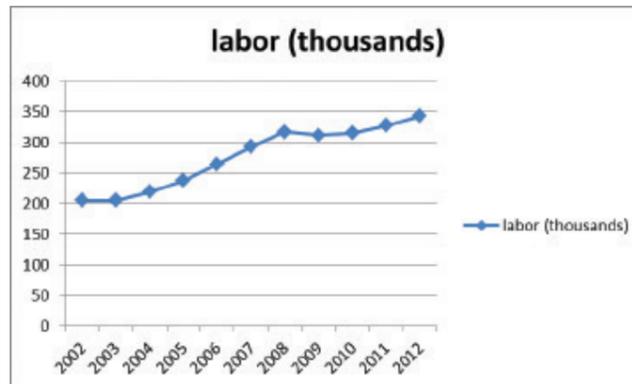


Figure 2. Labor People Tendency



Our first aspect is population, and the second aspect is Labor. From the data, it is easy to find the population increased every year, the population volume of 2012 is increased 31.97% as compared to that of 2002. The second aspect, at the same way, labor population is increased by 14,000 from 2003 to 2004. For the history of Macau, the prosperous

Figure 4. Employment People in Different Industries

Year	Construction	Hotels, restaurants and similar activities ('000)	Recreational, cultural, gaming and other services ('000)	Gaming industry ('000)	Domestic Work ('000)
2002	15.3	23.6	23.5	0	7.8
2003	16.4	22.4	23.9	0	4.3
2004	18.1	24.1	31.3	22.9	5
2005	22.9	24.9	40.8	30.8	6.2
2006	30.8	29.7	52.5	42.6	6.6
2007	31.1	34	72.7	62.6	6
2008	37.6	40.8	77.4	65.3	13.3
2009	31.8	43.2	73.7	61.6	16
2010	27.1	42.8	75.4	62.8	17.4
2011	28.2	46.1	82	70.1	16.8
2012	32.3	53	89.5	78.8	18

on casino gaming start at 2002, and the first foreign casino operator – Sands opened in 2004, other several casino operators opened in the next few years. Such as Venetian, MGM, Wynn, Galaxy Macau. Labor workforce number at 2012 as compared to 2002 is increased by 67.32%, a rapidly increasing on demand of labor. Also it will increase the total buying power of Macau.

Third aspect is Employment Rate.

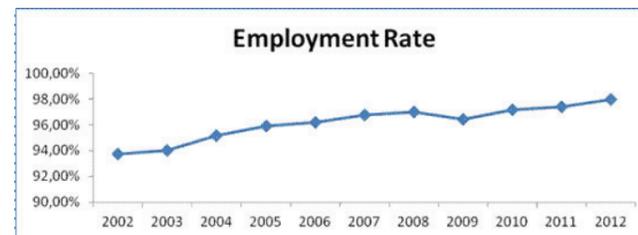


Figure 3. Employment Rate Tendency

The employment rate rises by 4.27% of past ten years, there is one main reason for the rising of employment rate is the new Gaming industries need to hire more labors to provide the services.

Fourth aspect is Industries. The table (Figure 4) shows the employment population on different type of industries.

According to the graph and table, these ten years, since the gaming industries are needed to construct, many shops, hotels, restaurants are led into those industries. We can find the reason why the labor, employment rate is rising in these ten years.

The fifth aspect, the data of average annual income for each person is shown in Figure 5.

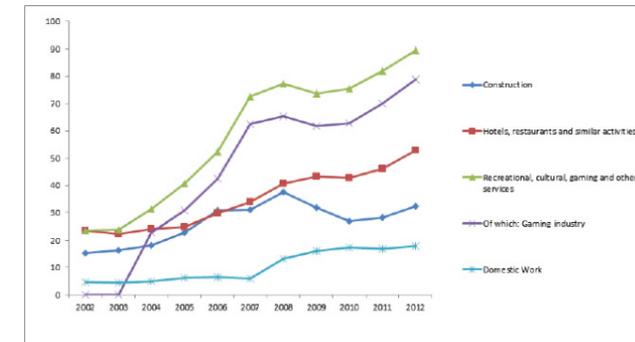


Figure 5. Employment People Tendency

Sixth aspect – Resident GDP Per Capital (Figure 6).

The graph shows that the yearly GDP per capital and employment rate increased yearly from 2002 to

Figure 6. Resident GDP per Capital Chart

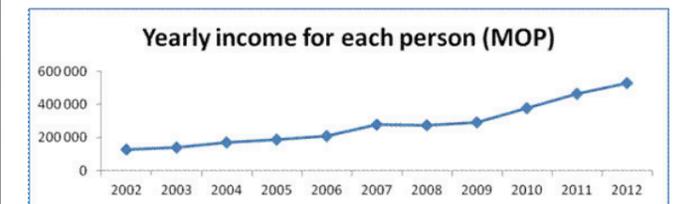
Year	Yearly income for each person (MOP)	Compare to 2002 yearly income of each person
2002	128221	NA
2003	140297	12076
2004	170517	42296
2005	185759	57538
2006	210379	82158
2007	278171	149950
2008	275961	147740
2009	289584	161363
2010	378113	249892
2011	464701	336480
2012	530221	402000

Figure 8. Consumer Price Index of Automobile

Year	Consumer Price Index of Automobile	Quantity of newly registered automobiles
2002	85.88	10105
2003	86.92	12082
2004	88.58	15312
2005	90.57	17550
2006	93.72	18338
2007	96.22	21977
2008	102.82	19979
2009	96.87	15815
2010	102.97	15915
2011	111.97	17702
2012	114.91	17621

2014. If the yearly income of labor increases, then it encouraged more people to work, it also increased the total income.

Figure 7. Resident GDP per Capital Tendency



After overview the population, labor, employment rate and income between 2002 and 2012, the four aspects increase very rapidly, since the Gaming industries are opened in that period. Then the buying

power of Macau people increased between 2002 and 2012.

The graph shows that the yearly GDP per capital and employment rate increased yearly from 2002 to 2014. If the yearly income of labor increases, then it encouraged more people to work, it also increased the total income.

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After overview the population, labor, employment rate and income between 2002 and 2012, the four aspects increase very rapidly, since the Gaming industries are opened in that period. Then the buying power of Macau people increased between 2002 and 2012.

### 3. ELASTICITY OF DEMAND ANALYSIS

#### 3.1 Price Elasticity of Demand Analysis

As Figure 8, the data on the second column is the CPI of automobile, we assume that the change in CPI equals to the change in price of automobile. Then we can calculate the price elasticity of demand by using the formula:

$$\text{Price Elasticity of Demand} = \frac{\text{Percentage Change in Quantity Demanded}}{\text{Percentage Change in Price}}$$

And we will discuss the price elasticity of automobile demanded from 2002 to 2012 as a decade basis. To calculate the price elasticity of demand for automobile, we need to know the quantity demanded of automobile at two different prices, when all other influences on buying plans remain the same.

Firstly, the CPI is 85.88 and 10105 automobiles are demanded in 2002. The CPI then increases to 86.92 and the quantity of automobile is 12082 in 2003. When the CPI increases by 1.04, the quantity demanded also increases by 1977. To calculate the

price elasticity of demand, we use the change in CPI as a percentage of average CPI and the change in the quantity demanded as percentage of average quantity. So the average CPI percentage is:

$$\% \Delta P = \frac{\Delta P}{P_{ave}} \times 100 = \frac{1.04}{86.4} \times 100 = 1.20\%$$

Also, the average quantity percentage is:

$$\% \Delta Q = \frac{\Delta Q}{Q_{ave}} \times 100 = \frac{1977}{11093.5} \times 100 = 17.82\%$$

The price elasticity of demand equals the percentage change in the quantity demanded (17.82%) divided by the percentage change in CPI (1.20%) and is 14.81. That is Price elasticity of demand =  $\% \Delta Q / \% \Delta P = 17.82\% / 1.20\% = 14.81$

In the same way, we can calculate the price elasticity of demand yearly as below:

Figure 9. Price Elasticity of Demand



Yearly	Price Elasticity
2003 to 2004	12.47
2004 to 2005	6.13
2005 to 2006	1.28
2006 to 2007	6.86
2007 to 2008	1.44
2008 to 2009	3.90
2009 to 2010	0.10
2010 to 2011	1.27
2011 to 2012	0.18

Figure 10. Price Elasticity of Demand Tendency

#### 3.2 Income Elasticity of Demand Analysis

Income elasticity of demand is calculated by using the formula:

$$\text{Income Elasticity of Demand} = \frac{\text{Percentage Change in Quantity Demanded}}{\text{Percentage Change in Income Change}}$$

We can calculate the income elasticity of demand according to the data in Figure 11. We decide to calculate the data from 2002 to 2012 as a decade basis, because the data of average income is not announced until December 30, 2014 by the DSEC. Furthermore;

Figure 11. Registered Automobiles Numbers of Macau

Year	Average yearly Local Resident Income (Mop)	No. of Registered automobiles	
		total registered	newly registered
2000	NA	55,939	7,275
2001	NA	56,515	9,138
2002	128,221	60,181	10,105
2003	140,297	64,073	12,082
2004	170,517	68,730	15,312
2005	185,759	73,726	17,550
2006	210,379	77,506	18,338
2007	278,171	82,224	21,977
2008	275,961	85,041	19,979
2009	289,584	86,784	15,815
2010	378,113	90,214	15,915
2011	464,701	95,151	17,702
2012	530,221	101,712	17,621
2013	NA	108,484	19,143

we prefer to adopt the data of quantity of newly registered automobiles rather than the quantity of total registered automobiles, simply because we consider that there would be a certain unknown number of scraped cars each year which decrease the quantity of total registered automobiles. Hence, we use the data of quantity of newly registered automobiles into our elasticity calculation will be more accurate.

Income Elasticity of demand during 2002 to 2003:

Yearly	Income elasticity
2003 to 2004	1.22
2004 to 2005	1.68
2005 to 2006	0.35
2006 to 2007	0.65
2007 to 2008	11.88
2008 to 2009	-4.8
2009 to 2010	0.02
2010 to 2011	0.52
2011 to 2012	-0.04

As we can see the quantity of automobiles in 2002 is 10,105. In 2003, it's 12,082. Suppose no other influence on buying plans changes and the quantity of automobiles newly registered increases to 1977. While the income increases MOP12,076 from MOP128,221 in 2002 to MOP140,297 in 2003.

The change in the quantity demanded is +1977 automobiles. The average quantity is 11,093.5, so the quantity demander increases by 17.8 percent. The change in income is MOP12,076 and the average

income is MOP134,259, so income is increased by 9.0 percent. The income elasticity of demand for automobiles during 2002 to 2003 is  $17.8\% \div 9.0\% = 1.98$  and a similar way, we can calculate the income elasticity of demand for each year as follows:

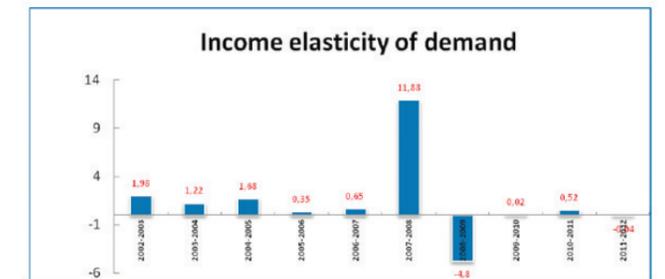


Figure 12. Income Elasticity of Demand

#### 3.3 Cross elasticity of demand of gasoline

Figure 14. Gasoline Price of Macau

Year	Gasoline Price (Mop per Lt)	Count of Automobiles
2002	NA	10105
2003	NA	12082
2004	NA	15312
2005	8.84	17550
2006	9.43	18338
2007	9.79	21977
2008	11.05	19979
2009	8.76	15815
2010	9.69	15915

2011	11.53	17702
2012	12.16	17621
2013	12.11	19143

Cross elasticity of demand is calculated by using the formula:

$$\text{Cross Elasticity of Demand} = \frac{\text{Percentage Change in Quantity Demanded}}{\text{Percentage Change in Price of a Complement}}$$

We all know that automobiles and gasoline are complements. Let's calculate the cross elasticity of demand to measure the responsiveness of the demand for automobiles in Macau to a change in the price of gasoline.

As we can see the quantity of newly registered automobiles in 2005 is 17,550. In 2006, it's 18,338. Suppose no other influence on buying plans changes and the quantity of automobiles newly registered increases to 788. While the price of gasoline increases 0.59mop per liter from 8.84mop per liter in 2005 to 9.43mop per liter in 2006.

The change in the quantity demanded is 788 increased automobiles. The average quantity is 17,944, so the quantity demander increases by 4.4 percent. The change in gasoline price is +0.59mop per liter and the average price is 9.14mop per liter, so incomes increase by 6.5 percent. The cross elasticity of demand for automobiles during 2005 to 2006 is  $4.4\% \div 6.5\% = 0.68$

In a similar way, we can calculate the cross elasticity of demand as follows:

Yearly	Cross elasticity
2002 to 2003	NA
2003 to 2004	NA
2004 to 2005	NA
2005 to 2006	0.68
2006 to 2007	4.89
2007 to 2008	0.79
2008 to 2009	1.01
2009 to 2010	0.06
2010 to 2011	0.61
2011 to 2012	-0.09
2011 to 2012	-20.75

Figure 15. Cross Elasticity of Demand

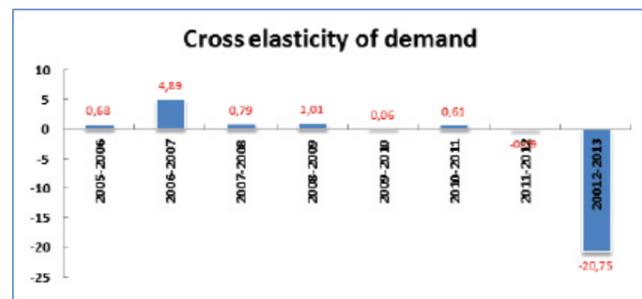


Figure 16. Cross Elasticity of Demand Tendency

#### 4. CONCLUSION

As the above figure shows that the price elasticity of automobile demanded has two situations. In addition to the price elasticity of automobile demanded from 2009 to 2010 and 2011 to 2012 are both less than 1 which means the demand is inelastic, the other price elasticity of automobile demanded is bigger than 1 which means that the demand is elastic. Income elasticity of demand can be positive or negative and they fall into three interesting ranges: Positive and greater than 1: from 2002-2005 and 2007-2008, automobile is a normal good in Macau, which is income elastic. The percentage of income spent on automobiles increases as income increases. Positive and less than 1: from 2005-2007 and 2009-2011, automobile is a normal good in Macau, which is income inelastic. The percentage of income spent on automobiles decreases as income increases. Negative: from 2008-2009 and 2011-2012, automobile is an inferior good. The quantity demanded of an inferior good and the amount spent on it decrease when income increases. From 2011-2013, the cross elasticity of demand of automobiles with respect the price of gasoline is negative, which means automobiles and gasoline are complements. Especially from 2012-2013, the cross elasticity of demand is large, which means close complements.

In this paper, we discuss the economic background information in Macau, as well as the automobile product elasticity demand of analysis. From the analysis point of view to overlook one side of the Macau automobile industry development, it would help us to understand the automobile market status in Macau and its potential. The results were demonstrated in both positive and negative, falling into three ranges, which means cars are sort of cheaper product for residents' consumption, cheaper cars are examples of the inferior goods. Consumers will generally prefer cheaper cars when their income is constricted. As a consumer's income increases the demand of the cheap cars will decrease, while demand of costly cars will increase. On the other hand, the three aspect of

the elastic analysis demonstrate different ways of economic situations. Due to information availability, we assume the impacts from factors of full ownership status per household, supply condition and inflation are excluded. Other certain factor analysis such as automobile suppliers, tariff, and more substitute and complementary goods, are not conducted in this article, further corresponding research is expected to discuss.

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# Commodity Price Shocks, its Impact to Latin America and the Role of Multilateral Development Banks

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## 1. ABSTRACT

Even though the world has become more globalized, countries are far from achieving comparable levels of development. This represents a challenge for Multilateral Development Banks, which are in the position to promote appropriate public policies to foster development and strengthen global integration.

Multilateral Development Banks have been playing an effective role by providing financial resources, technical assistance and knowledge sharing to developing countries. However, during economic downturns, the countercyclical role played by these organizations is crucial for developing countries to address their difficulties.

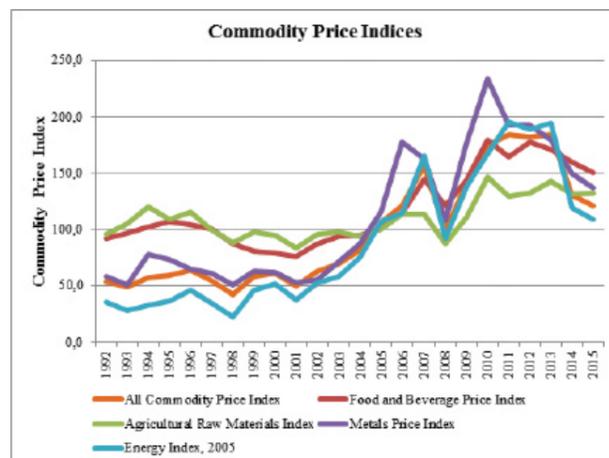
In the last months the financial markets have experienced a sharp drop in commodity prices, which will produce an economic slowdown in most of the Latin American countries, mainly because its exports are driven by natural resources commodities, have only a handful trading partners, and -on the top of that- have low productivity levels which hamper economic development and translate into huge inequality levels.

The above stated demonstrate that not only more actions need to be taken, but also active cooperation among countries, international organizations and private sector is necessary to address these challenges. In this regard, Multilateral Development Banks are in a privileged position to create links among government leaders, policy makers and financial institutions to achieve effective cooperation to reach full economic development and abate inequality.

## 2. COMMODITY PRICE SHOCKS

In the last fourteen months the financial markets have seen a dramatic decline in commodity prices, particularly on crude oil. During 2014 and until February 2015, the Commodity Price Index has declined 34%. The Energy Index alone has dropped around 44%. The Food and Beverages Index declined by 12%. The Agricultural and Raw Materials Index declined by 7% and the Metals Index decreased by 23%.

Exhibit 1. Commodity Price Indices



Source: author's calculations based on IMF Primary Commodity Prices, February, 2015.

Moreover, according to the Commodity Markets Outlook published by the World Bank Group, the energy commodity prices are expected to remain low for the following months. Agricultural and metal prices are expected to decline even more. This negative forecast is mainly due to a weaker global demand for commodities caused by lower industrialization rates of China and India.

Commodity price shocks are considered an important potential threat to the global economy. However the significance of the menace vary depending on i) the level of development of the affected countries and ii) the country's budget dependence on commodity exports.

As Velasco and Cespedes (2012) stated there is a positive association between economic activity and commodity price booms, a 60% increase in the commodity price index, increases output in around 1%. Similarly, there is a positive correlation between commodity price and investment. An increase in 60% in the commodity price index is associated to an increase of around 3% of the investment rate.<sup>1</sup>

<sup>1</sup> A. Velasco, L. Cespedes, *Macroeconomic Performance during Commodity Price Booms and Busts*, National Bureau of Economic Research, Working Paper 18569, 2012, p. 18.

2011-2012	First	Share	Second	Share	Third	Share	Sum
ARG	Soybean meal	26.5	Soybeans	12.6	Soybean oil	12.5	51.5
BOL	Gas	59.2	Zinc	13.4	Soybean meal	6.3	78.9
BRA	Iron ore	30.4	Crude oil	16.7	Soybeans	12.7	59.8
CHL	Copper	94.0	Iron ore	3.2	Fishmeal	1.1	98.3
COL	Crude oil	61.6	Coil	22.5	Coffee	7.5	91.6
EDU	Crude oil	71.3	Banana	13.8	Shrimp	7.0	92.2
HND	Coffee	44.6	Banana	15.6	Palm oil	11.3	71.5
PER	Copper	51.6	Zinc	8.7	Fishmeal	8.5	68.9
PRY	Soybeans	43.4	Beef	19.2	Corn	9.1	71.7
TTO	Gas	45.7	Crude oil	33.1	Iron ore	20.4	99.2
URY	Beef	36.9	Soybeans	24.5	Rice	12.2	73.6
VEN	Crude oil	96.5	Iron ore	2.1	Aluminium	0.9	99.6

Exhibit 2. Main Commodity Exports in Latin America

## 3. ECONOMIC IMPLICATION FOR LATIN AMERICA

The Latin American region is highly dependent of commodities since most of the countries of the region are rich in natural resources, thus large exporters. For instance Venezuela, Colombia and Ecuador heavily rely on crude oil exports. Chile and Bolivia have a substantial dependence on copper and gas, respectively.<sup>2</sup>

The Table above shows the top three commodity exports of selected Latin American countries.

The figures above show that commodity-producing countries in Latin American will face a significant challenge in coping with current market conditions, since the commodity bust will have a large negative impact on economic output and investment dynamic. Also -as Velasco and Cespedes (2012) stated – the impact of commodity shocks on investment tends to be larger for economies with less developed financial markets and weaker macroeconomic policies, which is the case for the countries of the region. Other academics – as Gruss (2014) – also suggests that economic growth for the commodity exporter countries in Latin America could be significantly lower now that the commodity boom is over.<sup>3</sup>

Furthermore, other global factors will also negatively affect the region's economic growth. China has been an important trade partner for most

<sup>2</sup> B. Gruss, *After the Boom-Commodity Prices and Economic Growth in Latin America and the Caribbean*. International Monetary Fund Working Paper, WP/14/154, 2014, p. 34.

<sup>3</sup> B. Gruss, p. 3

Latin American countries not only in the commodity market, but also as a foreign direct investor. China's economic slowdown will lead to lower capital inflows to the region. Likewise, the recent appreciation of the U.S. dollar hampers the economic outlook of the region. The monetary policies taken by the Federal Reserve appear to remain in place for the coming months. All these factors: i) price commodity shock, ii) China's economic slowdown and iii) the strength of the U.S. dollar are placing Latin American countries in an adverse economic scenario.

## 4. ROLE OF MULTILATERAL DEVELOPMENT BANKS

In this scenario, the economic future for Latin American countries depends on the macroeconomic policies implemented by its governments, as well as the actions taken by the Multilateral Development Banks (MDBs)<sup>4</sup> to accompany the countries through this economic slowdown by playing a countercyclical role.

The MDBs need to support the development of their member countries by providing financial resources, technical assistance and knowledge services to alleviate the effects of this economic bust. But, even during procyclical periods, private financing for social investments is often insufficient, and sometimes unavailable without public participation. The private sector is reluctant to provide financing often due to market failures, asymmetric information, and lack of experience with particular types of investments –

<sup>4</sup> Annex 1 for a brief introduction to the Multilateral Development Banks.

economic activities or countries –. To attract private finance it is necessary to catalyze resources.

The current and forecasted economic conditions of the region will demand higher lending participation from MDBs. In this regard, MDBs should be creative to address this challenge with new products and services catalyzing its limited resources. The traditional operation of MDBs under direct loans, guarantees and technical assistance is only a short-term palliative. In order to maximize the use of the resources MDBs must play a catalytic role by attracting resources from the private sector and sharing risk with private investors to enhance the viability of public investments.

To do so, MDBs should underpin its vision for the twenty-first century in creating additionality. As Chelsky, Morel and Kabir (2013) stated, additionality can be generated from different standpoints: i) Financial additionality by bringing financing partners into specific deals through syndication or cofinancing arrangements; ii) Design additionality by bringing technical expertise to the project to improve the ‘bankability’ of the project through promoting efficiency and transparency, facilitating knowledge, supporting capacity building and peer learning, iii) Policy additionality by improving policy and regulatory environment for investment and to mitigate the risk of policy reversals -since relationship between country members’ and MDBs are built upon long-term interests- ; iv) Demonstration additionality by endorsing projects to illustrate the possibilities of success, for instance improving investors’ perceptions of the risk-return trade off of the project; v) Selection additionality by requiring governance and accountability standards of the projects they agree to support. This helps to identify, prioritize, and mobilize financing for investments with the highest payoff in terms of social economic benefits.

The examples above present an array of additionality options that can be applied; however each MDB should identify the choices that better addresses its country members need. Also, MDBs must be attentive to find new ways to create value for its members.

It is important to remark that MDBs should be extremely cautious in not creating a crowding out effect of the private sector. MDBs must avoid being seen as a competitor for private financial institutions. On the contrary, synergy and partnership should be encouraged. These measures will only succeed if

private investors actively participate in financing and co-financing social infrastructure projects.

Therefore, the goal for MDBs should be to play a catalytic role by attracting resources from the private sector and sharing risk with private investors to enhance the viability of public investments in scarce resources episodes.

## 5. CHALLENGES AHEAD

Looking ahead, MDBs face important challenges in supporting regional cooperation and integration not only among its members, but also among other countries since the world is becoming more globalized. This is not an easy task because of the political difficulties hampering regional and international cooperation in many regions.

Another challenge for the MDBs is to address sectoral and national investment, policy and institutional concerns. Until now MDBs have mostly supported investments in individual development projects, but the challenge is to achieve a broader impact on country’s development by defining appropriate public policies, participating in the economic, technical and social evaluation, and critical aspects to project success in order to achieve a wider development impact.

Finally, – in a rapidly changing development environment and fragmented international development architecture – it is a challenge to define and promote an effective long-term vision and to reach out to partners with the goal of forming effective stakeholder alliances that identify successful development solutions. In a world that is becoming increasingly interconnected, and yet has few truly MDBs that address global and regional development issues in an effective manner, it is important to discuss the future of these institutions in forums such as the G20.

## 6. CONCLUDING REMARKS

Over the last decade the commodity boom has brought economic growth and investment to Latin America. However, it seems that the party has come to an end, markets have seen unusual low trade prices in the last months, and analysts foresee prices to remain low in the following months due to a sluggish demand.

Latin American countries have largely benefited from high commodity prices since the economic growth of these countries is heavily dependent on

natural resources. Conversely, the commodity bust will affect the country’s output and investment.

Multilateral Development Banks are a key to provide long-term financing to developing countries to alleviate the effects of the commodity price shock and ensure investment into the region. MDBs are extremely important not only to help the nations to obtain long-term financing, but to catalyze resources while providing additionality.

## ANNEX 1. INTRODUCTION TO THE MDBs

The main purpose of MDBs has traditionally being to provide long-term financing for infrastructure projects to accelerate growth; but more recently have also been involved in education, health and social and environmental development.

MDBs can be classified into Global and Regional depending on the geographic location of its members. There is an important difference between Global and Regional MDB. The former have focused more on poverty reduction as the overarching goal of their engagement in member countries, while the latter have remained more closely focused on support for infrastructure development.

The World Bank is the Global MDB by definition. There are some Regional MDBs like the Inter-American Development Bank and CAF, Development bank of Latin America which have been very active in financing large infrastructure projects in Latin America.

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# Building a Microfinance System with Chinese Characteristics and Mode Selection: A Comparative Analysis of Microfinance Operation Mode in China, America and Japan

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## Session III: Corporations, Consumers, and Employees: Cornerstones in Building Win-Win Relationships

### ABSTRACT<sup>1</sup>

Through a comparative analysis of microfinance operation mode in China, America and Japan, the authors find there are wide gaps between China and the other two countries in terms of organizational structure, guarantee form and risk control etc. China's microfinance is at a preliminary stage to explore its formulation of top-level design and macro policy, both theoretically and practically. However, America and Japan have accumulated rich experience after years of micro-finance development. The priority at the moment is to fully exploit China's advantage in the tremendous space for developing microfinance innovation, learn experience from the two countries according to China's reality and characteristics, and create and select microfinance operation mode with Chinese characteristics in the following respects: (i) a novel information intermediary mode in which disintermediation is compatible with intermediation; (ii) a new financing pattern that combines traditional finance and internet finance together; (iii) a financing pattern of microfinance that integrates P2P with B2P.

**Key Words:** microfinance; policy finance; cooperative finance; commercial finance.

### 1. THE STATUS QUO OF MICROFINANCE OPERATION MODE IN CHINA

The microfinance operation mode not only includes micro financial institution's own organizational structure, guarantee form, risk control mechanism, credit scale and internal governance structure, but also includes ecological environment. China's microfinance operation mode shall be analyzed with full details in the former three aspects.

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### 1.1 The Status Quo of Microfinance Organizational Structure

China's existing microfinance organizational institutions can be divided into the following categories: (i) non-governmental organization (NGO) operation mode; (ii) operation mode of legitimate finance institutions; (iii) operation mode between legitimate financial institutions and other institution unions; (iv) operation mode of private commercial microfinance institution. The research results of different microfinance institutions are as follows (see Table 1):

### 1.2 The Status Quo of Microfinance Guarantee Form

With the vigorous development of microfinance, the guarantee form of China's microfinance system presents rich contents, various modes and diversified structures. China's classification of current microfinance guarantee form is specially shown as follows (see Figure 1).

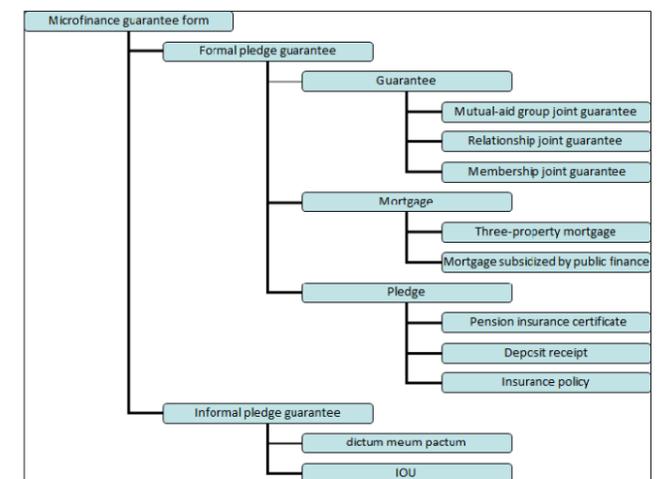


Figure 1. Microfinance Guarantee Form in China

### 1.3 Risk Analysis of Microfinance Institution

Born in the transition of China's economic system, microfinance institutions, compared with

Table 1. Microfinance Organizations in China

Primary Mode	Secondary Mode	Target Client	Loan Quota	Annual Loan Rate and Commission	Loan Scale	Date From	Operation Mode
NGO organization	non-governmental and non-profit microcredit organizations	low and middle income and poor peasant households	rural: 1000-5000RMB per deal; urban: vary among 3000/5000/8000 RMB per deal	3%-18%	more than one billion yuan	1993	group loan
	rural mutual cooperative	shareholders of local farmers, residents and enterprises	—	—	230 million yuan	2006	individual loan and group loan
Legitimate financial institution	ABC and Bank for agriculture development	low and middle income and poor peasant households	1000-5000 RMB per deal	2.21%-3%	38.1 billion yuan	1997	group loan
	RCC	mainly are individual private households, rich and above average households and partly are poor households	1000-3000 RMB; 3000-8000 RMB; 8000- 30,000 RMB	0.9-2.3 times of base rate	more than 300 billion yuan	2000	credit loan; joint loan; guarantee loan; personal mortgage
	commercial bank	small and micro businesses and vulnerable groups which are difficult to obtain loans	a few or tens of thousands RMB per deal	—	more than one billion yuan	2005	no mortgage required; flexible mortgage; guarantee loan
	postal savings bank	—	1000-100,000 RMB	—	more than 100 million yuan	2006	microcredit loan
Private commercial microfinance institution	commercial microcredit company	local farmers, residents (including individual private households), enterprises, etc	an average loan is approximately 100,000 per deal	an average annual loan rate is above 20%	more than one billion yuan	2005	mortgage or guarantee
Legitimate financial institutions and other institution unions	city commercial bank and guarantee corporation	laid-off workers, university graduates, demobilized military personnel, landless farmers and low-income entrepreneurs	an average of 20,000 RMB; the maximum of 100,000-150,000 RMB; the minimum of 5000-10,000 RMB	Guarantee agencies charge 1% commission. Bank lend at base rate and is subsidized by public finance and the borrowers pay no or low interest rate	15 billion yuan	2002	—
	microcredit service subsidized by rural financial institution	—	—	4% (5% in 2005)	—	2004	—
	village and town bank	local farmers	individual loan balance does not exceed 5% of capital finance; the number for enterprise loan balance is 10%	2.3 times of the base rate of Central Bank	—	2006	—
	derivative finance company from bank	—	—	—	—	2007	—

Source: Du Xiaoshan. *China's Credit Loan Development Report (J). Rural financial study*, 2009(2); JiLe, Ren Changqing & GuoPei. *Small loan company and village and town bank- competition or diversification [A]. Specific topic group of People's Bank of China. Small credit communication collection[C]*. Beijing: China's Financial and Economic Publishing House, 2008; Tan Xianfeng. *The study of China's microfinance mode and its anti-poverty performance (J). Journal of postgraduates of ZhongNan University of Economics and Law*, 2010(3).

other financial systems, are congenitally deficient and maladjusted in the following financial reform. At the same time, they are confronting with special financial risks as follows: (i) Strong invisibility. The losses caused by risks are easily overlooked because of scattered and small-scale loans and imperfect supervision system. (ii) High risk. Information asymmetry is an important causative factor of financial risks. (iii) Strong diffusivity. The lack of propaganda organization of microfinance institution leads to an unsmooth transmission of information, which is worsened by the conformist mentality of the participants. Thus once risks occur, it is easy to cause herding behavior, which accelerates the spread of risks.

## 2. MULTI-DIMENSION COMPARATIVE ANALYSIS OF MICROFINANCE OPERATION MODE IN CHINA, AMERICA AND JAPAN

To ensure a balanced and sustainable development of China's economy, it is of great importance to study the successful characteristics of microfinance operations in American and Japan, and make a multi-dimension comparison between China's operation mode and those of the other two countries.

### 2.1 Comparison of Microfinance Organization Form

As a result of a series of reforms, America and Japan have already formed relatively perfect microfinance systems, which provide great reference to other countries.

American P2P lending model plays an important role in microfinance system. Prosper and Lending Club are P2P companies which have large scales in the world. They don't rely on intermediary institution, but realize P2P during the process of loan. This measure greatly decreases the cost of lending and increases the rapidness and convenience of lending. Under the effect of a series of financing supervision, the rate of NPL is lower than 2%.

American community bank is also a crucial component of microfinance. Community bank specializes in financial services for specific area; its main source of fund comes from savings deposits of the region, and mostly invests in the regional construction, resident life and economic development, thus effectively alleviating the regional capital outflow. Community bank provides credit funds, which cannot be obtained from the large and medium-sized bank, to

local small and medium-sized enterprises (SMEs) for their further development.

Japan's cooperative finance is a credit business conducted by the coordinately combined system of agriculture, forestry and fishery, which mainly includes the advanced-level agriculture and forestry vault administrated by the Central Government, the middle-level Agricultural Credit Cooperative Association (agricultural credit association for short) and the bottom-level peasant association.

Japan's policy financial organization is established to achieve Jpan's specific policy objectives. By means of capital fund, government subsidies and loan, the government provides help to areas that common institutions may be reluctant to set foot in.

In contrast, China faces two problems in microfinance organization structure:

(i) The lack of financial organization system that covers widely and meets the demand of rural finance and small and micro businesses. There is no unified guiding and planning in the structure. Financial institutions are unevenly distributed, resulting in their low coverage rate.

(ii) The lack of supporting financial services and of long-term policy mechanism of relevant finance and taxation support policy. Some preferential tax policies for rural microfinance are not in place, some are difficult to implement and some perform practically no function.

### 2.2 Comparison of Microfinance Guarantee Form

At present, America and Japan have basically formed sound guarantee systems with main focus on government guarantee and membership joint guarantee. American financing market system is perfect and healthy. It has formed the hierarchy which combined guarantee of national small business credit, regional guarantee system and community guarantee, and credit guarantee system of process marketization. A sound law and regulation system also supports and secures the financing for small and micro enterprises. Moreover, American community banks are well engaged in credit guarantee. Therefore community banks can take advantage over others in loan market related to relationship or reputation or small scale loan market.

Japan is one of the earliest countries establishing credit guarantee system. After years of exploration and accumulation, Japan has formed a set of effective

and perfect systems for rural financial credit risk prevention. These systems include: credit guarantee certificate, deposit insurance, mutual aid and dual supervision. In Japan, policy financing credit guarantee makes a high proportion in the form of dual-guarantee, that is, local guarantee and national re-guarantee. This policy financing credit guarantee system sets up 52 credit guarantee associations in local regions and they are policy financial institutions serving for small, micro and medium-sized enterprises and implementing public credit guarantee. It also build credit insurance vault of small and middle-sized enterprises nationwide.

China has made a breakthrough in the innovation of microfinance guarantee and mortgage mode. The present form of SME credit guarantee system in China mainly can be divided into three categories: (i) SME credit guarantee institutions dominated by government; (ii) guarantee institutions established by industry associations and serving for their members; (iii) commercial guarantee corporations. However, the first one is strongly policy oriented and limited in scale; the second one may be largely disadvantaged by economic and industrial fluctuation, and its internal governance is defective and immature; the third one with low level of management standardization and exorbitant guarantee expenses develops slowly, thus having a limited impact in the process of financing in small and micro enterprises. China's microfinance guarantee form remains to be further improved. China's microfinance guarantee innovation is confronted with difficulties such as deficient guarantee business, single guarantee form and lack of guarantee institutions in remote areas etc.

### 2.3 Comparison of Microfinance Risk Control Mechanism

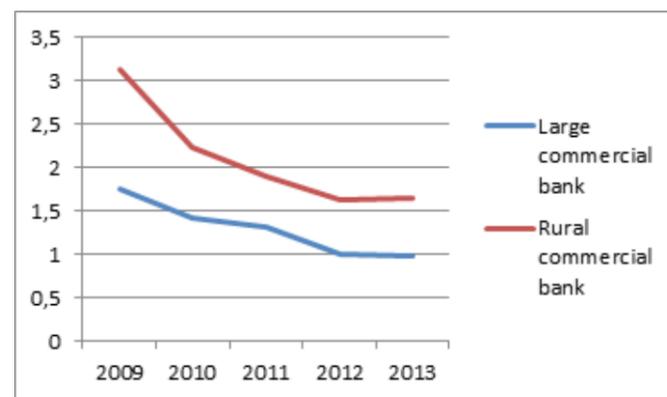
Of the whole America microfinance, community banks have great originality in risk control mechanism, which can be divided into three inside-out levels, that is, information system, internal control and external supervision. These three levels mutually restrain and work in order, generally presenting characteristics of concentrated equity structure, high capital adequacy ratio, prominent core deposit business and relationship-based credit business, coordinated regulatory agencies and circulated supervision mechanism in the framework of prudential supervision. Besides, community banks take some of their soft information into account and thereby improve the ability of risk control.

Japanese rural finance focused on risk prevention at the beginning of its establishment. Agricultural

credit guarantee system which is built directly by government can compensate for those operating losses and debts to the maximum extent; mutual-aid system which is set up among agriculture cooperatives, namely, the agricultural association groups, shall take 10% deposit of the year as a special reserve to improve the liquidity of agricultural cooperatives. Moreover, the rural finance is supervised by the governmental financial supervision department, which is responsible for controlling the fund use of relevant organizations for their regular operation, greatly reducing the probability of risk.

China's microfinance institutions have made a breakthrough in the reform and innovation of risk control mechanism, but it has limited power to restrain market. From the perspective of operation performance, the credit risk is still the most common risk in China's microfinance operation. It is difficult for imperfect credit management mechanism to fully control the risk in the process of lending; incomprehensive and delayed information disclosure also make the credit risk occur more frequently. In recent years, rural commercial banks, as the main body of microfinance, have higher rate of bad debt than that of large commercial banks in general (as shown in the following figure).

Figure 4. Rate of Bad Debt of Rural Commercial Banks and Large Commercial Banks



Source: CBRC official website.

### 3. BUILD MICROFINANCE OPERATION MODE WITH CHINESE CHARACTERISTICS IN REFERENCE TO AMERICA AND JAPAN'S EXPERIENCE

The reform and development of microfinance system should follow two basic principles: (i) to ensure the sustainable development of microfinance, providing financial service for more middle and low-income individuals and SMEs; (ii) to learn

the successful experience of America and Japan discriminately; it is necessary to create new ideas to build microfinance operation mode with Chinese characteristics.

#### 3.1 To Build Microfinance Operation Mode with Chinese Characteristics

The position of financing means of traditional finance is unshakable. However, when it comes to SMEs and the Three Rural Issues, China should also construct a microfinance innovation road which combines traditional finance with network finance. While building microfinance service system, China should select modes with characteristics differ from those of America and Japan: (i) an novel information intermediary mode in which disintermediation is compatible with intermediation; (ii) a new financing pattern that combines traditional finance and internet finance together; (iii) a financing pattern of microfinance that integrates P2P with B2P. Innovative mode selection requires a series of innovation of supporting service.

##### 3.1.1 to create an authoritative rating and credit investigation system mode

Credit record of the main market body should be created under the dominance of governmental departments. Improving the level of data sharing by means of unified data standard, and extracting information from a more extensive system to establish the national unified database and construct the social credit investigation system. Under the premise of obtaining customer authorization and obeying confidentiality clause, financing platforms are allowed to review the borrower's credit record in real time. Industry association for financing platforms should be founded to share the rating information within the industry.

##### 3.1.2 to establish a microfinance supervision mode and self-discipline management system of microfinance industry

The supervision should be dominated by the government. Even the rather mature companies in the United States and Britain will fully accept the supervision of relevant government regulatory institutions. For example, two P2P companies in America were asked to stop running business to reduce risks by redesigning their businesses. The state and local governments should establish corresponding laws, which integrate the microfinance credit subjects

into normal legal system and put them on to a legal footing.

According to foreign experience, self-discipline organization of the industry is also an important participant in the construction of microfinance mode. For example, Zopa Company doesn't have a domestic regulatory institution in the UK, but industry self-discipline organization becomes its important regulatory mechanism. Enterprise behavior and moral can be internally standardized through the establishment of industry self-regulatory organization, which is conducive to the long-term and sustainable development of microfinance.

##### 3.1.3 to generate innovative ideas for product design and for intermediary organ

It is not conducive to long-term development of microfinance financing platforms if lenders face default risk themselves, because the cost of lenders will increase in this way. Therefore, it is desirable to moderately reduce the amount of each loan and share risk with insurance company by drawing in insurance system. The design of loan quota should conform to China's economic development, which means the loan quota can't be too large to sustain the original intention of microfinance.

##### 3.1.4 innovative design of intermediary organ

China shall build a novel information intermediary mode in which disintermediation is compatible with intermediation. On one hand, intermediary organs involved are conducive to the business risk control, prevent default and strengthen supervision. On the other hand, intermediary organs as the separately third party will increase operating cost and prolong time of granting of loans. When it comes to the financing mode of microfinance, the introduction of intermediary should walk on two legs. With respect to differences in scale, credit institution and loan direction, disintermediation and intermediation should be used discriminately and both develop in parallel. Therefore, we should introduce intermediary in constructing microfinance model according to circumstances, aka we can't make sweeping generalizations.

#### 3.2 To Speed up the Legislation of Financing of Microfinance and SMEs

The legal system is the cornerstone to maintain market economy order. Hence, in order to stimulate the construction of ecological environment of

microfinance, it is crucial to highlight the priority of the construction of legal system. At present, the current laws and regulations related to microfinance need to be improved as soon as possible, and direct provisions for microfinance field need to be enacted. China should protect SMEs and their financing support in the form of legislation. On the basis of SME Promotion Law, China should promulgate SME Financing Promotion Law, SME Credit Guarantee Regulation and other comprehensive and multi-level laws and regulations; current legislations related to banking, securities, insurance, trust, lease, pawn and equity financing should be improved in time. Local governments need to continuously improve and effectively implement policies and measures that support SME's development.

### 3.3 To Construct a Comprehensive, Wide-Coverage Multi-Level Microfinance Service System

To adopt diversified organization by learning from American and Japanese experience and considering China's specific situation has become the main line in the following reform of financial system. Based on the new changes and characteristics of domestic microfinance demand, China should speed up the innovation and cultivation of microfinance organization in order to complete the microfinance organizational system in which commercial finance, cooperative finance, policy finance and Internet finance coexist. In the meantime, government departments should increase fund to support microfinance institutions, and encourage introducing successful microfinance projects from foreign countries in order to meet the development needs of microfinance. Microfinance institutions should actively participate in the organization innovation according to the reality and development of microfinance, promoting the innovation of transaction instruments and service varieties, developing commercially sustainable microfinance organizations and achieving specialized operation and scale economy. The CBRC may consider moderately broadening financial market access requirements, reducing license premium of market access and encouraging the development of village and town banks, rural fund cooperatives, community banks, microcredit companies and other small and micro financial institutions, promoting financial innovation and reducing loan cost of SMEs.

### 3.4 To Explore an Evaluation Mechanism for Microfinance Development

In the process of China's microfinance development, there are blind expansions of business boundaries and circumstances of fighting for the customer with other financial institutions. Hence we need to explore and establish an evaluation mechanism for microfinance development, innovation index of SMEs. To make a comprehensive and systematic assessment of performance, business boundary, risk control ability of small and micro financial institutions, their competitive relationships with other finance and their role as promoters to SMEs. Necessary adjustments to the function, position, scope of business and development mode of microfinance will be made according to the evaluation quality for a better development.

Conclusion: the above comparative analysis shows that American and Japanese microfinance modes are advanced, and that China's microfinance is outmoded and deficient. Therefore China should learn the mature experience from those two countries and create a microfinance service system with Chinese characteristics. China does inadequate study in the area of microfinance theory and its pattern of operation and development. Questions such as the way to establish corresponding laws and regulations for microfinance, to review the relationship between microfinance and SME's performance, to compile innovation and development index of SMEs, need to be further discussed.

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# Income Gap, Bank Monopoly and Financial Consumer Protection

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## 1. INTRODUCTION

During the 30-year reform and opening-up policy, with the large amount of financial institution established, the economy fast developed, and the financial innovation spring up, the financial consumer has become a huge group of subject in financial activities. Since in 1960s, financial consumer protection has been hot issues in financial theory researches. In the year 1995, the British economist Michael Taylor proposed the 'Twin Peaks', which claim that financial consumer protection should be treated as important as the prudential regulation. Recently the financial crisis in 2008 made the people find that the complexity of financial innovation, the miscibility of bank industry, and the non-rational of asset securitization has badly hurt the financial consumer's benefit. In 2010, the U.S established Consumer Financial Protection Bureau-CFPB to protect the rights and interests of the financial consumers. At the end of 2012, the PBC, CBRC, CSRC and CIRC all have set up professional financial consumer protection department.

As the core position in China's financial system, bank has deep impacts on Chinese financial consumers. In 2014, the total amount of financial assets in China's bank institution has reached 162 trillion Yuan, which accumulated more than 98% of the total amount of financial assets in China's financial institution. However, as the competition among the bank institutions becoming more intense, they are more inclined to make more short-term-profit than long-time client relations. All the banks prefer to make up high expense on service and even fabricate misleading propagandas to the customers. These activities seriously hurt the financial consumers' self-interest. In another aspect, as the Gini coefficient continuing rising, the poor will face the higher loan interest rate and the lower deposit interest rate. On the contrary, the rich will have the right to choose lower loan interest rate and the higher deposit interest rate. This situation helps China easily enter the poverty trap, and further more injure the relative poor financial consumers.

In this paper, we try using the complaint situation, to represent the financial consumer benefit protection, in order to analysis the relationship among the income gap, bank competition and financial consumer

protection. We collect among 31 provinces bank consumers' complaints and relevant information (2009-2013), using constant benefit regression model and instrumental variables method to check out these three variable's relationship. The first part of the paper is introduction. In the second part we propose the research hypothesis through reviewing the past articles. The third part of the paper tries to use the econometric model to take empirical test. In the last part we propose our conclusion.

## 2. LITERATURE REVIEW AND RESEARCH HYPOTHESIS

In fact, most of the researchers, using the case analysis and the empirical analysis, found that financial regulation and the consumer education are the two most important factors to the financial consumer protection. Financial regulators have great impact on financial institutions' violation operation. As the financial regulator strengthen their regulation supervision intensity, financial institutions will not mislead the consumers through diversified financial service (see Jackson 2007; and Inderst & Ottaviani 2010). On the other hand, if the financial consumers have no awareness of financial self-protection, which is due to the incomplete financial protection legal system and the deficiency of regulatory transparency, they will suffer heavy unexpected losses (see also Carlin & Gervais 2009; Lusardi & Tufano 2009; Sandlant 2011; and Kennedy 2012). In China, most researchers pay more attentions on the relationship between financial institution and consumer, the financial consumer protective regulation and the financial regulator legal system. A group of them through historical review found that financial consumers have been suffered from financial institutions' entrenchment for a long time because of their weak position in the competition market, solving this problem need to strengthen the supervision (Gao 2011; Wang 2012; and Sun 2012). However, from the perspective of the whole economy, the income gap becomes the core factor of the loss of financial consumer protection. Based on the bank's internal profit motivation, bank institution tends to improve their financial service quality for the rich consumer, and ignore needs from the poor one (Chen 2012). This result will make the large group of poor financial consumers lose confidence to the financial

institutions, and further destabilize the financial system.

Based on these literature reviews, we analyze the topics in two aspects: the first one is the relationship between income gap and financial consumer protection, and the second one is the relationship between banking competition and financial consumer protection. The first two hypothesizes centers on the first aspect, which can be stated as:

Hypothesis 1: The income gap has significant negative correlation with consumer complaint efficiency.

Hypothesis 2: The income gap has significant positive correlation with consumer complaint efficiency.

The last two hypothesizes comes from the second aspect, which can be stated as:

Hypothesis 3: The level of competition has significant positive correlation with consumer complaint efficiency.

Hypothesis 4: The level of competition has significant negative correlation with consumer complaint efficiency.

In next part we use the panel data to check out these four hypothesizes.

## 3. DATA ACQUISITION AND EMPIRICAL TEST

In order to weight the effect of social income gap and level of bank competition to the financial consumers' beneficial protection, we use the amount of financial complaints to represent the degree of financial protection and put it into the dependent variable. According to differences types of banks, we differentiate three kinds of bank: State-owned bank, Postal savings bank, and Medium and small bank. Therefore, we build three models to separate the effectiveness in three kinds of banks. These three models are expressed as below:

$$\ln \text{QuanBig}_{it} = a_1 + a_{1t} + b_1 \ln \text{INEQ}_{it} + b_2 \ln \text{Com}_{it} + d_{11} \ln \text{GDP}_{it} + d_{12} \ln \text{LTR}_{it} + d_{13} \ln \text{BLR}_{it} + d_{14} \ln \text{Qualify}_{it} + e_{1it}$$

$$\ln \text{QuanPost}_{it} = a_1 + a_{1t} + b \ln \text{INEQ}_{it} + b_2 \ln \text{Com}_{it} + d_{11} \ln \text{GDP}_{it} + d_{12} \ln \text{LTR}_{it} + d_{13} \ln \text{BLR}_{it} + d_{14} \ln \text{Qualify}_{it} + e_{1it}$$

$$\ln \text{QuanSM}_{it} = a_1 + a_{1t} + b \ln \text{INEQ}_{it} + b_2 \ln \text{Com}_{it} + d_{11} \ln \text{GDP}_{it} + d_{12} \ln \text{LTR}_{it} + d_{13} \ln \text{BLR}_{it} + d_{14} \ln \text{Qualify}_{it} + e_{1it}$$

In these three models above, QuanBig represent the consumer complaints in State-owned bank, QuanPost represent the consumer complaints in

Postal savings bank, QuanSM represent the consumer complaints in Medium and small bank. INEQ refers to the Gini coefficient, and i represent the different area, including Chinese thirty-one provinces, and municipalities. In bank area, we use Com to represent the level of bank competition, and we use the loan-to-deposit ratio to represent the bank credit ability, which can be expressed as LTD. BLR refers to the non-performing loan ratio, which represent the risk level of the bank. Also some macro-economic factors like Gross Domestic Product and residential educational level should be taken into consideration. In the model above, we use GDP to represent the Gross Domestic Product, and qualify as the higher education population proportion in different area. It is worth noting that there is a time virtual variable in the three models above, which is set to differentiate the heterogeneities in separated areas, such as financial literature and any other factors that cannot measure easily.

Because of the difficulty of measuring the level of bank competition directly, we use the Herfindahl-Hirschman Index to measure it. The computational formula is express as:

$$\text{Com}_{it} = 1 - \text{HHI}_{it} = 1 - \sum_{i,j=1}^n MS_{ijt}^2 = 1 - \sum_{i,j=1}^n \left( \frac{TA_{ijt}}{TA_{it}} \right)^2$$

In this formula,  $MS_{ijt}^2$  represent sum of the different types of bank's total assets divide the all types of bank's total assets in different area. This ratio can be represented as the gap among different types of bank. The level of bank competition Com is within the range of 0 to 1, which 0 represents the complete monopoly, and 1 represents the perfect competition. All these variables' statistical information is expressed in the sheet 1.

## 4. MEASUREMENT RESULT AND ANALYSIS

In order to clarify the relationship between all the variables, we use the correlation coefficient to take into consideration. Sheet 2 represents the data. As expressed above, INEQ has no relationship with Rate, Com has positive correlation with Rate, but Rate has no strong relationship with GDP, LTD and BLR. On the other hand, Quantity has positive correlation with INEQ, but no outstanding relationship with Com. All these results show that different income gap and bank competition has different effect on different types of bank complaints.

As the dependent variable in the models, consumer complaints have remarkable relationship with the income gap. This means that the coefficient of INEQ is positive. With the development of income

Sheet 1. Relevant Variable Statistical Information

Variables	Sample size	Mean	Standard deviation	Minimum	Maximum
QuanBig	155	396.13	1252.34	5	1023
QuanPost	155	208.35	899.18	1	859
QuanSM	155	86.83	5014.78	0	694
INEQ	155	0.45	0.96	0.27	0.66
Com	155	0.34	0.71	0	0.69
GDP	155	0.11	0.25	-0.01	0.17
LTD	155	0.65	0.91	0.24	0.75
BLR	155	0.0098	0.084	0.0046	0.062
Qualify	155	0.12	0.43	0.05	0.33

Sheet 2. Correlation Coefficient

	Rate	Quantity	QuanBig	QuanPost	QuanSM	INEQ	Com	GDP	LTD	BLR
Rate	1									
Quantity	0.0403	1								
QuanBig	0.1865	0.0198	1							
QuanPost	0.0741	0.0091	-0.0541	1						
QuanSM	0.0943	0.3332	-0.0084	0.02564	1					
INEQ	0.0121	0.5895	0.7879	0.6988	0.5136	1				
Com	0.6597	-0.5982	-0.7811	-0.5655	-0.5968	-0.4192	1			
GDP	0.0311	0.2591	0.0078	0.1247	0.6149	0.0009	0.0298	1		
LTD	0.0292	-0.4112	-0.0326	-0.0041	-0.1503	-0.0431	-0.1846	-0.0741	1	
BLR	0.0849	-0.0909	-0.2794	-0.0899	-0.0742	0.0692	0.0651	-0.0057	0.1982	1
Qualify	0.2973	0.0003	0.0021	0.0010	0.0001	0.0121	0.1003	0.3022	0.1187	0.0178

Sheet 3. The Regression Result of Financial Consumer Complaint

	QuanBig	QuanBig	QuanBig	QuanPost	QuanPost	QuanPost	QuanSM	QuanSM	QuanSM
In INEQ	2.008**	2.763**	3.001**	1.182**	1.168**	1.212**	0.438**	0.431**	0.432**
	(0.576)	(0.611)	(0.683)	(0.312)	(0.346)	(0.358)	(0.112)	(0.125)	(0.125)
Com=0			-0.215			-0.426			-0.103
			(1.192)			(1.224)			(0.921)
lnCom	-0.101	-0.238*	-0.197*	-0.101	-0.134	-0.117	-0.014	-0.039	-0.041
	(0.132)	(0.102)	(0.101)	(0.092)	(0.097)	(0.096)	(0.178)	(0.181)	(0.182)
lnCom 2		-0.791**				-0.091		-0.099	
		(0.066)				(0.097)		(0.121)	
lnGDP	0.376**	0.389**	0.392**	0.374**	0.396**	0.398**	0.317**	0.323**	0.318**
	(0.121)	(0.134)	(0.137)	(0.132)	(0.143)	(0.138)	(0.119)	(0.121)	(0.118)
lnLTD	-0.126**	-0.133**	-0.137**	-0.042*	-0.031	-0.035*	-0.181*	-0.192**	-0.188**
	(0.074)	(0.069)	(0.071)	(0.011)	(0.012)	(0.011)	(0.087)	(0.085)	(0.082)
lnBLR	-0.077*	-0.053*	-0.051*	-0.051	-0.062	-0.093	-0.061	-0.068	-0.063
	(0.219)	(0.238)	(0.276)	(0.198)	(0.181)	(0.103)	(0.247)	(0.292)	(0.207)
lnQualify	-0.054	-0.042	-0.037	-0.004	-0.005	-0.004	-0.007	-0.007	-0.009
	(0.059)	(0.051)	(0.044)	(0.068)	(0.081)	(0.069)	(0.077)	(0.079)	(0.079)
constant	4.106**	4.107**	4.123**	3.081**	3.093**	3.097**	1.965**	1.991**	1.972**
	(1.671)	(1.605)	(1.518)	(1.072)	(1.093)	(1.087)	(0.672)	(0.598)	(0.678)
N	155	155	155	155	155	155	155	155	155

gap, the group of low-level income increase their dissatisfactions and sense of loss. Adding some special reasons, such as communication difficulties, bad assessment of incentive mechanism and so on, the slight fault can make the serious complaints. In this result, the hypothesis 2 is correct.

Looking at the regression result in sheet 3, the second and third row of the sheet represents the negative correlation in 10% confidence interval. QuanBig also has slight relationship with lnCom2. It means that the development of bank competition can reduce the consumer complaints in state-owned banks. This result fits the hypothesis 4, but opposite to the result in Postal savings bank and Medium and small bank. Considering the control variables, GDP growth has strong effect on consumer complaints in medium and small bank. It means that with the growth of living standards, financial consumer has increased awareness of self-protection. BLR and QuanBig have slight negative correlations in 10% confidence interval, saying that the financial stability has no effect on consumer complaints. The regulation targets of financial stability and financial consumer protection has conflict of interest in most situations.

### 5. CONCLUSION

In this paper, we clarify the relationship among income gap, bank competition and financial consumer protection. With the measurement result we find that:

1. Income gap has positive correlation with consumer complaint in all kinds of banks.
2. The level of bank competition has negative effect on financial consumer protection.
3. GDP growth has positive correlation with consumer complaint in medium and small bank.
4. The ratio of loan to deposit has negative correlation with consumer complaint.
5. Non-performing loan ratio has negative correlation with consumer complaint in state-owned bank in 10% confidence interval.
6. Higher education population proportion has positive effect on level of financial consumer protection.

China is now facing the critical period of financial reformation, this is also important to the financial consumer protection, because it has direct contribution on the financial stability and financial development. As the development of international financial regulation, the prudential regulations and financial consumer protections are the main two regulation targets. In our current financial system, the combination of financial protection institution is a feasible way to promote bank's prudent management

specification, and improve the financial service. Last but not the least, financial consumer's self-quality is also an important factor. Most of Chinese financial consumers have poor financial education, and this can easily lead to the increase of financial dispute, which is not good to hold the financial stability. We believe that if the protection of financial consumer has been taken into serious consideration, the financial stability and financial development can be targeted in a controllable interval.

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# Corporations and Human Rights Impact on Developing Countries

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## 1. INTRODUCTION

As the new millennium emerges, trends in global human rights are changing. Human rights issues are crossing sovereign boundaries and are no longer just issues of the state. As more and more non-governmental organizations are growing, and the Internet expands and facilitates a quicker spread of information, there are more and more people raising concerns about human rights related issues. Some of these come from the increasingly larger and influential commercial sector including large, multinational companies.

### 1.1 Profit over People

As the world globalizes, multinational corporations are also coming under more scrutiny, as questions about their accountability are also being raised. In some cases, some corporations have lobbied their governments to aggressively support regimes that are favourable to them. For example, especially in the 1970s and 80s, some tacitly supported dictatorships as they could control their own people, be more easily influenced and corrupted, allow conditions like cheap labour and sweatshops, and so on. This is less practical today as a company's image with such associations can more readily be tarnished today.

Increasingly then, influence is being spread through lobbying for global economic and trade arrangements that are more beneficial to themselves.

This can be accomplished through various means including:

- Tacitly supporting military interventions (often dressed in propaganda about saving the people from themselves, or undoing a wrong in the other country and so on);
- Pushing for economic policies that are heavily weighted in their favour;
- Foreign investment treaties and other negotiations designed in part to give more abilities for corporations to expand into other poorer countries possibly at the expense of local businesses;

- Following an ideology which is believed to be beneficial to everyone, but hides the realities and complexities that may worsen situations. These ideologies can be influential as some larger corporations may indeed benefit from these policies, but that does not automatically mean everyone else will, and power and such interests may see these agendas being pushed forth more so.

However, with this expansion and drive for further profits, there has often come a disregard for human rights. In some cases, corporations have been accused for hiring local militaries to subdue and even kill people who are protesting the effects and practices of these corporations, such as the various controversies over oil corporations and resource and mineral companies in parts of Africa have highlighted.

As globalization has increased in the past decade or two, so has the criticisms. Whether it is concerns at profits over people as the driving factor, or violations of human rights, or large scale tax avoidance by some companies, some large multinationals operating in developing countries in particular have certainly had many questions to answer.

The pressure to compete has often meant fighting against social clauses and policies that may lead to more costs for the company where other companies may not be subject to the same restrictions. The fear of losing out in competition then drives many companies to a lower common denominator rather than a higher one and so there is a downward pressure on worker's wages and their working conditions because they are such major costs for many operations.

Many multinationals encourage the formation of export processing zones in developing countries which end up being areas where worker's rights are reduced. This way they are able to play off countries against each other; if one tries to improve worker or living standards in some way, the company can threaten to move operations to another zone in another country. Some developing countries such as China also benefit from this arrangement as it makes them more competitive in international markets.

Lobbying at international institutions such as the World Trade Organization also helps them see more favourable conditions and the companies with more money can wield more influence, creating an imbalanced playing field, as opposed to a level one which they publicly argue for.

Despite the rhetoric of many corporations signing up to human rights related pacts and agreements, their lack of real commitment is still apparent, and, as mentioned by the previous link.

### 1.2 Constructive Engagement

Some corporations and think tanks argue that their actions can actually be positive. Their 'constructive engagement' allows the spread of democracy, new technologies and human rights and so on to those regions, which, over time, would allow more positive benefits to be realized.

This sounds nice and comforting and there are certainly cases where this happens. With globalization in general, cross cultural communication is occurring far quicker than ever before. Being exposed to more ideas, such as democracy, can be very powerful. However critics point out that:

- Often those countries which have been dictatorships are often regimes that have been placed in power, or supported, by western nations and the larger Corporations have benefited from the dictatorships' ability to control their own people;
- In some countries, large corporations have even funded media suppression or military activities against workers, themselves;
- Human rights conditions have hardly improved due to corporate activities and the technologies brought in are usually still owned by the company itself;
- So that the self-empowering benefits of technology transfer is less than what it could be;
- However, some public pressure has forced certain large companies to address their human rights issues. Such companies include large oil corporations like BP Amoco and Statoil. It remains to be seen if their drive is from a public relations concern, or a genuine concern for the wellbeing of the people that either work for them in other countries or are affected by their work practices;

- The constructive engagement argument is then seen as a nice cover to continue exploitative practices.

We hear more and more about philanthropic organizations set up by mega-successful business elites, where millions of dollars are donated to seemingly worthy causes. However, the fact that such donations are needed also serves as an indication that development policies and globalization policies in their current form are not sustainable.

### 1.3 Economic Power Also Yields Political Power

While the drive for efficiency is always a good thing (as it should help prevent wasting resources), oftentimes, the goal of keeping these costs down also leads to reducing wages, working conditions and often the basic rights of people.

This occurs because these corporations and even some nations seek out places where poor labour regulations can be taken advantage of in an unfair way, or by not supporting – or even opposing – international or national bodies and policies that could help to ensure fairness.

Whilst it is in the public's interest that resources be used sparingly and in a sustainable reusable manner, Corporations choose to create disposable products which require constant replacement/repurchase. The Corporations' interest in maximizing sales and profits is in direct conflict with our own democratic right to choose how finite resources are allocated.

And regarding the notion of efficiency, there is a difference between an industry and corporation driving towards efficiency for maximizing profits, versus driving towards efficiency that would benefit society. An example of this will be seen in the next section on this site about medical research and the pharmaceutical industry.

To highlight this point further, take for example the illegal drug or tobacco industries. They, like other industries need to operate efficiently and minimize unnecessary costs. However, their impact on society is negative to say the least.

In the same way, other industries, such as the automobile/transportation industries, health industries, even how various laws are structures etc. can all have a net effect of improving efficiency for those industries but not always for society in general? Some transnational corporations make more in sales than the GDPs (Gross Domestic Product) of many

countries! Of the 100 hundred wealthiest bodies, 51 percent are owned by corporations.

Other large corporations are largely unaccountable for the many social and environmental problems that they leave in their wake, and that their size means that their effects are considerable.

It is not that every single corporation is inherently bad or greedy or something like that, but oftentimes, the very large, multinational corporations who naturally have vested interests in international development and trade policies (like any group) are able to deploy enormous financial resources in an attempt to get favourable outcomes. The political power that is therefore held by such a small number of people impacts the planet significantly. As a result a few of these corporations make up some of the most influential sources of political and economic power.

Through influencing governments, larger multinational companies especially, with their enormous resources wield significant political as well as economic power as also highlighted by the above quote as witnessed by the 2012 Presidential Election in the United States, where corporate donations to both Obama and Romney were in the millions of dollars.

#### 1.4 Will Corporations ‘Rule the World?’

A common perception is that due to the enormous influences and power of many major multinationals, corporations are therefore going to ‘rule the world’; that corporations will reduce the need for a government and will dismantle the state. Yet, this is not completely true.

- Corporations still require the state to provide them the environment conducive to their needs.
- The state may reduce its functions and obligations and thus ‘roll back’ its commitment to its people, but that doesn’t mean that they won’t be needed and become obsolete.
- Such rollback will also enable decision-making (and therefore control) to be further concentrated.
- This ‘rollback’ happens both in the North and the South.
- The South has been ‘structurally adjusted’ to open up the economy and roll back the functions of the state, and even concentrates further the Decision-

making. That is, these IMF-, World Bank-prescribed policies have reduced democracy. (See this web site’s section on SAPs for more.)

- In the North, in countries ranging from New Zealand, to the United Kingdom, and most aggressively in the United States, the functions of the government have been constantly rolled back. Less is spent on health, education etc., while more on military, policing and so on. (See Walden Bello, *Dark Victory*, (Food First 1994, 1999 Second Edition) for more on this.)
- Yet governments will still be required to provide repressive functions to ‘keep the rabble in line’ so to speak, as described by Noam Chomsky.
- They will also be required to help create or open up markets, or even provide military support for such things (as described in the military expansion section on this site).
- Also, an interception of society’s wealth is sometimes provided to large businesses to just survive. Western nations provide a lot of protectionism to their industries, while forcing the poor countries to completely open up. If there was true free trade and fair competition, many wealthy western corporations might not be able to survive, as John Pilger suggests.

So, while corporate influence increases and continually drives many aspects of our lives, from influencing and even buying elections, public policy and so on, they still require a government that functions to serve their needs as well. International institutions such as the IMF, World Bank, and World Trade Organization, are also needed. The irony is that by often using tax payer money, the tax payer unwittingly supporting a process that is leading to more exploitation of tax payers. For the poor countries, the multinational corporations of the west are seen as further extensions of those western nations.

As the post September 11, 2001 corporate scandals have shown in the U.S., even U.S. multinationals are not exempt from all issues. Corporate accountability has come to the fore especially for shareholders due to accounting and other scandals (though there are still concerns of corporate welfare going on by using the war on terror as an excuse – sometimes legitimate, sometimes not).

Courts for aiding and abetting human rights violations committed by others abroad.” A number of multinationals have been accused for gross human

rights violations around the world, as briefly discussed in various sections on this site, and as that L.A. Times provides an example of.

It is possible therefore, that with the drive for real democracy and accountability at all levels of society that the interests and influences of big multinationals and others that are currently regarded by many as having a negative impact may perhaps be checked appropriately, though history has shown that this is no easy task. The above example from the L.A. Times is just one small step.

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# Reconsideration of Trade Policies in Global Value Chains

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## 1. INTRODUCTION

The growth of global value chains (GVCs) has increased the interconnectedness of economies and led to a growing specialization in specific activities and stages in value chains, rather than in entire industries. The whole process of producing goods, from raw materials to finished products, is increasingly carried out wherever the necessary skills and materials are available at competitive cost and quality.

The growing fragmentation of production across borders highlights the need for countries to have an open, predictable and transparent trade and investment regime as tariffs, non-tariff barriers and other restrictive measures impact not only on foreign suppliers, but also on domestic producers. It also highlights the importance of an ambitious complementary policy agenda to leverage engagement in GVCs into more inclusive growth and employment. Finally, more interconnected economies characterized by GVCs can have implications for multilateral, plurilateral and regional trade agreements.

## 2. HOW GLOBAL VALUE CHAINS CHANGE INTERNATIONAL TRADE

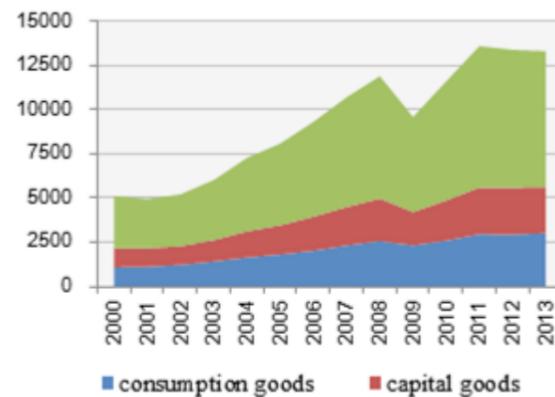
### 2.1 Intermediate Goods Trade Surges

The growing international flows in intermediate goods reflect the evolution of intra-industry trade, the impact of offshoring and the prominent role of networks of multinational enterprises (MNEs) in world trade. A common way to assess trade in intermediate goods is to use the United Nations' Broad Economic Categories (BEC) classification, which groups commodities by main end-use, principally distinguishing between consumption, capital and intermediate goods.

In 2013, world exports of intermediate goods represented 58 per cent of non-fuel merchandise exports (see Figure 1). It nearly tripled between 2000 and 2013, from around US\$ 2,949 billion to US\$ 7,684 billion, with an annual average growth rate of 7.6 per cent. A feature of world trade in intermediate goods is that its share of total trade has remained quite stable over the past 15 years, around 57 per cent of non-fuel merchandise exports. As a matter of

fact, world exports in the three categories of goods – capital, consumption and intermediates – evolved at similar speeds between 2000 and 2013, in line with the overall growth of total merchandise trade. Intermediate goods are embedded in final goods and the values generated within the different intermediate trade flows are reflected in the subsequent flows of the final (consumer or capital) goods, hence the stability of shares and growth between the three categories.

Figure 1. Non-Fuel Merchandise Exports by Type of Good, 2000-2013 (in billions of US\$)



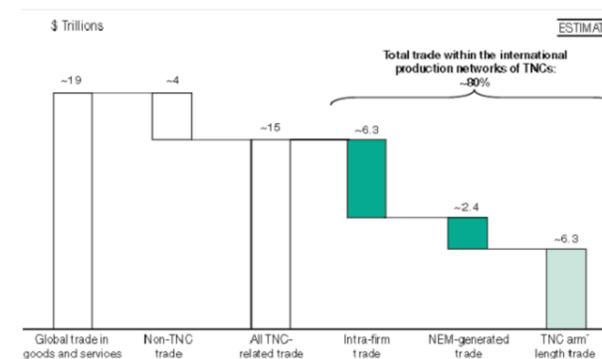
Source: own calculations based on UN-COMTRADE.

### 2.2 TNCs and Intra-Firm Trade

GVCs are typically coordinated by TNCs, with trade of inputs and outputs taking place within their networks of affiliates, contractual partners and arm's-length suppliers. In GVCs, investment and trade are inextricably intertwined. Much of trade in natural resources is driven by large cross-border investments in extractive industries by globally operating TNCs. Market seeking foreign direct investment (FDI) by TNCs also generates trade, often shifting arm's length trade to intra-firm trade. Efficiency-seeking FDI, through which firms seek to locate discrete parts of their production processes in low-cost locations, is particularly associated with GVCs. It increases the amount of trade taking place within the international production networks of TNCs and contributes to the 'double counting' in global trade flows.

UNCTAD (2013) estimates that about 80 per cent of global trade (in terms of gross exports) is linked to the international production networks of TNCs (figure 2), either as intra-firm trade, through NEMs (which include, among others, contract manufacturing, licensing, and franchising), or through arm's-length transactions involving at least one TNC. For example, the share of exports by United States affiliates abroad directed to other affiliated firms, including parent firms, remained high at about 60 per cent over the past decade. Similarly, nearly half of the exports of goods by foreign affiliates located in the United States are shipped to the foreign parent group and as much as 70 per cent of their imports arrive from the foreign parent group. Although further evidence on intra-firm trade is patchy, the general consensus is that intra-firm trade accounts on average for about 30 per cent of a country's exports, with large variations across countries.

Figure 2. Global Exports of Goods and Services by Type of TNC Involvement, 2010



Source: UNCTAD, World Investment Report, 2013.

### 2.3 What You See Is Not What You Get!

GVCs lead to a significant amount of double counting in trade – about 28 per cent or \$5 trillion of the \$19 trillion<sup>1</sup> in global gross exports in 2010 – because intermediates are counted several times in world exports. It is patterns of value added trade in GVCs determine the distribution of actual economic gains from trade between individual economies and are shaped to a significant extent by the investment decisions of TNCs.

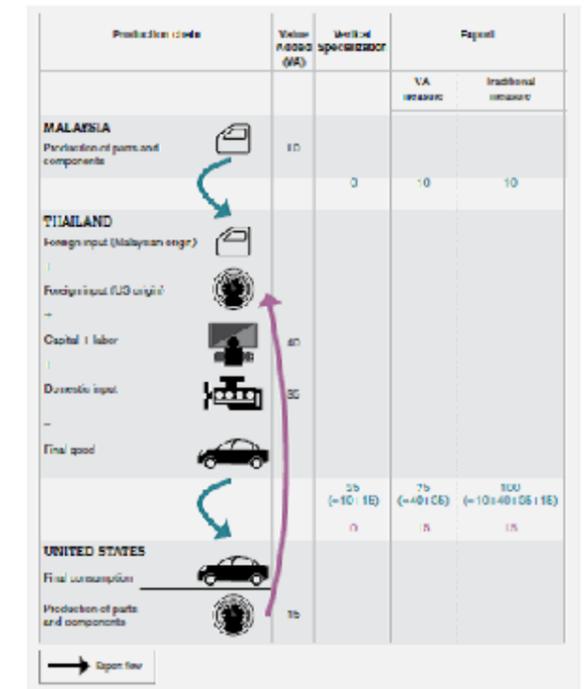
#### 2.3.1 how value-added trade works: an example

Figure 3 illustrates a simplified vertical production chain involving three countries. The production sequence starts in Malaysia and in the United States

<sup>1</sup> UNCTAD, World Investment Report 2013, Global Value Chains, Investment and Trade for Development, 2013, p.135.

with the manufacturing of car components (for example, body parts, and tachometer) for export to Thailand, where the next production phase takes place. A Thai production unit combines the imported components with domestic parts and accessories into the final assembly of the car predestined for the US market. One of the characteristics of the car finally purchased in the United States is that it is composed of elements originating from various countries, including the United States itself.

Figure 3. Difference between Trade in Value Added and Gross Term Trade in GVCs: An Illustrative Example



Source: WTO and JETRO, 2011.

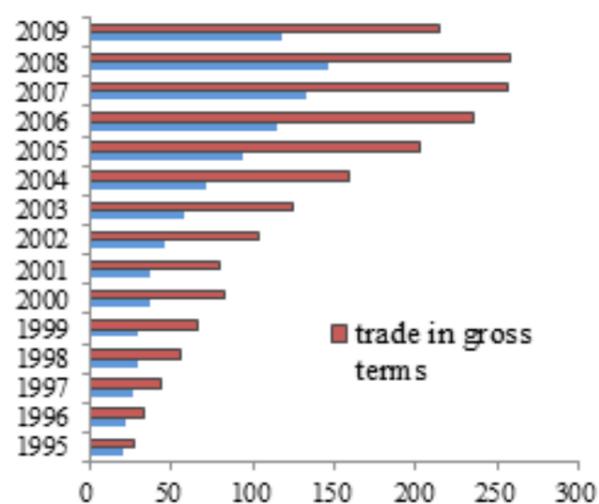
The value of Malaysia's and US exports to Thailand is the same whatever the valuation method applied (i.e. the value added or traditional method); however, this is not the case when evaluating Thailand's exports to the United States. According to traditional measurement, Thailand's exports to the United States amount to a value of 100, including the value added of parts and components imported from Malaysia and the United States itself. This demonstrates the double-counting issue of traditional trade statistics. Since the value of intermediate goods manufactured in Malaysia and in the United States are counted twice. For this reason, Thailand's exports to the United States are overstated. As shown in the example, measuring trade flows in value added terms overcomes this problem. The domestic value added of Thailand's exports to the United States amounts to 75 (40+35), excluding the value of goods non-

sourced from Thailand. Since value added is one of the components of gross exports, the estimate of trade in value added is necessarily equal or lower than the traditional value.

### 2.1.2 trade in value added and bilateral trade imbalance

In the example above, the bilateral trade imbalance between Thailand and United States is over estimated by trade in gross terms because the traditional statistical system counts the foreign value added in Thailand's export to the United States.

Figure 4. China and U.S. Bilateral Trade Imbalance (in Billions of US\$)



Source: Wang and Sheng, 2014.

In GVCs, developing countries, such as China and Mexico often use intermediates goods from developed countries to export the final goods back to them after simple processing or assembly. This means that trade in gross terms counts the foreign value added in China's export. In this case, China's trade surplus with final demand countries is overestimated significantly. Taking the China and U.S. bilateral trade for example, Figure 4 illustrates how traditional trade statistics fail to estimate the actual bilateral trade imbalance in GVCs. It shows that from 1995-2011, trade imbalance between China and the United States in gross terms is much higher than that in terms of value added. In average, China trade surplus with the United States in gross terms is twice as much as that in value-added terms.

In Table 1 we can see that foreign value-added represents a larger share in China export to the United States, in which the share of value-added from U.S.

itself is growing. While East Asia's (EA-4) role as the important source of intermediates for China is weakened. The growing share of value-added from other economies indicates that China is embedding into a comprehensive GVCs rather than East Asia production network only.

Table 1. Decomposition of China Export to the U.S. (%)

year	Domestic value-added	Foreign value-added	in which		
			EA-4	U.S.	Others
1995	62.3	11.1	5.3	1.1	4.7
1996	64.8	9.8	4.6	1.0	4.2
1997	65.2	9.7	4.8	1.0	3.9
1998	65.5	8.8	4.3	0.9	3.6
1999	65.9	9.9	4.6	1.0	4.3
2000	61.6	11.7	4.9	1.0	5.8
2001	61.7	10.8	4.3	1.0	5.5
2002	59.8	11.7	4.7	1.1	5.9
2003	58.4	9.5	5.2	1.2	3.1
2004	55.1	16.4	5.9	1.6	8.9
2005	54.9	16.6	4.5	1.6	10.5
2006	57.9	16.2	5.1	1.6	9.5
2007	55.6	15.4	4.6	1.5	9.3
2008	52.4	17.9	4.4	1.7	11.8
2009	54.6	15.2	4.2	1.7	9.3

Note: EA-4 includes Japan, Korea, Indonesia and Taiwan.  
Source: Wang and Sheng, 2014.

## 3. HOW GLOBAL VALUE CHAINS CHANGE TRADE POLICIES

### 3.1 Challenges to Traditional Trade Policy

Supply-chain trade in GVCs has transformed the world, while WTO has not kept pace. Adapting world trade governance to the realities of supply-chain trade will require a new organization – a WTO 2.0 as it were<sup>2</sup>.

#### 3.1.1 from international selling to international making

The argument for a new organization boils down to profound differences between supply-chain trade and traditional trade. Traditional trade means selling into one nation goods that were made in another nation; traditional trade is thus mostly about selling things internationally.

Supply-chain trade is much more complex and much more asymmetric. Supply-chain trade arises  
<sup>2</sup> R. Baldwin WTO 2.0: 'Global governance of supply chain trade'. CEPR Policy Insight, No.64, 2012.

when high-tech firms combine their technology with low-wage labor in developing countries. This combination benefited rich-nation firms because it boosted the value of their firm-specific assets. It benefited developing nations because it removed many bottlenecks that had previously stymied industrialization in all but a handful of developing nations. Supply-chain is thus mostly about making things internationally, although international selling is also important.

The internationalization of supply chains transformed trade policy in two fundamental ways. It created new political-economy 'supply' and 'demand' for openness. It created a bond among various strands of policy – some of which had hereto been viewed as purely domestic trade policy. Specifically, North-South supply-chain trade creates a need for two types of disciplines corresponding to the two elements of supply-chain trade: producing abroad; and coordinating internationally dispersed production facilities. The former requires heightened tangible and intangible property assurances. The latter requires assurances of unhindered two-way flow of goods, services, people, and capital.

#### 3.1.2 protectionism became destructionism

In a world where production unbundling is pervasive; protection doesn't protect industry, it destroys it (Baldwin 2012). The basic economic logic is ancient. In a world of GVCs, inputs that previously had to be made locally could now be sourced from abroad. Nations must import components from the most competitive sources if their own output is to be globally competitive since everyone else is sourcing internationally.

In sectors where international supply chains are important, protecting local, inefficient producers of the component may save a few jobs in the upstream sector. However, the inefficient upstream sector can only sell in the domestic market and thus creates few jobs. The downstream industry, by contrast, can sell to the world, and so entails many more jobs. In other words, tariffs on intermediates destroy more jobs downstream than they create upstream. Protectionism became destructionism. Komerkskollegium National Board of Trade (2007) took shoe industry as an example to examine whether anti-dumping measures, which are traditionally used against industrial goods, are suited for supply chain trade with consumer goods. Using five cases, it turned out that 'the European companies are damaged rather than protected by anti-dumping'.

## 3.2 Multilateralism or Regionalism?

Internationalization of supply chains created the 'trade-investment-service nexus' at the heart of today's international commerce. Complex trade needs complex rules. As the WTO was otherwise occupied, the incipient governance gap was filled by uncoordinated developments elsewhere – primarily in deep regional trade agreements (RTAs), bilateral investment treaties, and autonomous reforms in emerging economies.

### 3.2.1 'WTO-plus' and 'WTO-extra' in RTAs

Mega-regional agreements, such as TPP (The Trans-Pacific Partnership), TTIP (Transatlantic Trade and Investment Partnership), emerged in recent years. Either of them relates to further obligation concerning policy areas that are already in the WTO or even to new trade policy areas that ever existed in WTO framework before. Horn, Mavroidis and Sapir (2009) classified such policy areas into two broad groups: 'WTO-plus' (WTO+) and 'WTO-extra' (WTO-X).

Table 2. Brief Description of WTO+ and WTO-X Areas

WTO-plus	WTO-X Areas	
FTA industrial goods	Anti-corruption	Economic policy dialogue
FTA agricultural goods	Competition policy	Education and training
Customs administration	Consumer protection	Energy
Export taxes	Data protection	Financial assistance
SPS measures	Environmental laws	Health
TBT	Investment	Human rights
State trading enterprises	Movement of capital	Illegal immigration
Antidumping	Labor market regulations	Illicit drugs
Countervailing measures	Intellectual Property Rights	Industrial cooperation
State aid	Approximation of legislation	Information society
Public procurement	Audio visual	Money laundering
TRIMs	Civil protection	Public administration
GATS	Innovation policies	Regional cooperation
TRIPs	Cultural cooperation	Research and technology

Source: Horn, Mavroidis and Sapir, 2009.

The former is meant to include obligations relating to policy areas that are already subject to some form of

commitment in the WTO agreements. The RTAs can either reconfirm existing commitments, or provide for further obligations. Examples of WTO-plus areas include obligations concerning SPS (sanitary and phytosanitary) measures, TBT (technical barriers to trade) measures, antidumping, state aid, obligations covered by the GATS and also those intellectual property rights provisions which address issues falling under the TRIPs agreement. A WTO-X designation is, on the other hand, meant to capture an obligation in an area that is ‘qualitatively new’, relating to a policy instrument that has not previously been regulated by the WTO, such as competition policy, environmental protection, labor market regulations and so on (see table 2).

Table 3. WTO-X and WTO-Plus Provisions in RTAs

	Pre-WTO	1995-2000	post 2001
	WTO+ Issues		
Customs	13	11	56
AD	12	8	53
CVM	4	5	52
Export Taxes	8	8	41
State Aid	10	9	34
TRIPs	6	4	41
GATS	7	2	39
STE	5	3	35
TBT	2	2	36
SPS	2	1	35
Public Procurement	5	0	32
TRIMs	6	2	31
	WTO-X Issues		
Competition	Policy	11	9
Movement of Capital	6	5	38
IPR	5	2	39
Investment	4	1	35

Note: The WTO+ and WTO-X classification is from Horn, Mavroidis and Sapir (2010).  
Source: *World Trade Report, WTO, 2011*.

WTO (2011) concludes that RTAs have been getting increasingly ‘deep’ with most of the provision being legally enforceable (see table 3). RTAs in the 21st century cover more WTO-X areas than earlier RTAs. One of the most striking results from the WTO’s new work is the identification of a core of four deeper disciplines that appear in over a third of RTAs, but which are not part of the WTO’s rulebook. These are competition policy (47% of all agreements), movement of capital (39%), intellectual property rights not in the TRIPs Agreement (37%), and investment (31%). As these WTO-X provisions

are largely regulatory in nature, their growth is ‘testimony to the growing importance of behind-the-border measures in RTAs.’

### 3.2.2 spaghetti bowl and its multilateralization

With a large number of RTAs, world trade is regulated by a motley assortment of unilateral, bilateral and multilateral trade agreements – a ‘Spaghetti Bowl’<sup>3</sup> of trade deals (see figure 5). Baldwin (2006) argues that the spatial fragmentation of the manufacturing process and attendant offshoring of tasks – have changed the political economy of the Spaghetti Bowl of preferential tariffs. The last ten years have witnessed an important reduction in tariffs worldwide. During the same period, however, the world has also witnessed two massive multilateralizations of the tangle of tariff and the attendant miasma of rules-of-origin.

This discriminatory tariff liberalization is inferior to multilateral liberalization on three main counts:

- Economic inefficiency. Multiple tariff rates introduce economic inefficiency into the trade system, with this problem being especially severe in industries with complex international supply networks.
- Stumbling blocks. The existence of preferences may help or hinder moves towards multilateral liberalization. To the extent that preferences hinder multilateral tariff cutting, RTAs are a problem for the global trade system.
- Hegemony. The world of trade negotiations is governed by something of the law-of-the-jungle where nations with big markets have more leverage than those with small markets.
- Repairing the fragmentation and exclusion will require supply-chain disciplines to be multilateralized into a new organization. There are two ways of eliminating the Spaghetti Bowl.
- Set all nations’ MFN tariffs to zero.

This eliminates the distortions of ‘geographically discriminatory import taxes’ by eliminating the discrimination. It simultaneously eliminates the distortions of non-harmonized ROOs (Rules of Origins) and bilateral cumulation since it eliminates the incentive to prove origin.

- Switch to diagonal rules of cumulation.

<sup>3</sup> The term was first used by Jagdish Bhagwati in ‘U.S. Trade Policy: The Infatuation with Free Trade Agreements’ in Jagdish Bhagwati and Anne O. Krueger, *The Dangerous Drift to Preferential Trade Agreements*, AEI Press, 1995. Subsequently, Bhagwati has used the term on various occasions in describing a problem of FTAs.

If a group of nations has a complete set of bilateral RTAs among themselves, they can reduce the distortionary effect of ROOs and bilateral ROCs (Rules of Cumulations) by switching to a harmonized set of ROOs and diagonal cumulation<sup>4</sup>. This reduces distortions of the international economic production pattern within the zone, but does little to improve the efficiency of the global production pattern.

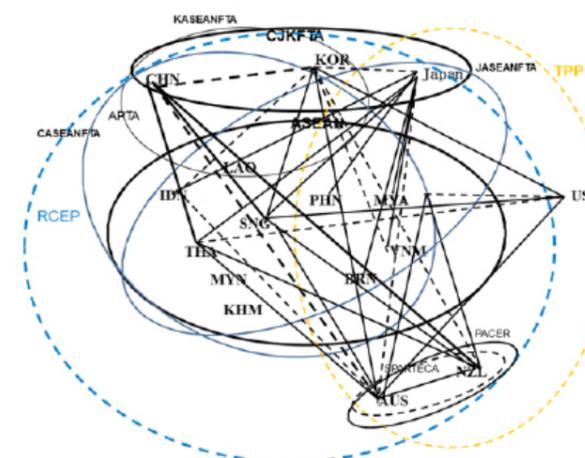


Figure 5. Spaghetti Bowl in Asia and Pacific

## 4. POLICY IMPLICATIONS OF GLOBAL VALUE CHAINS

### 4.1 GVCs Magnify the Costs of Protection

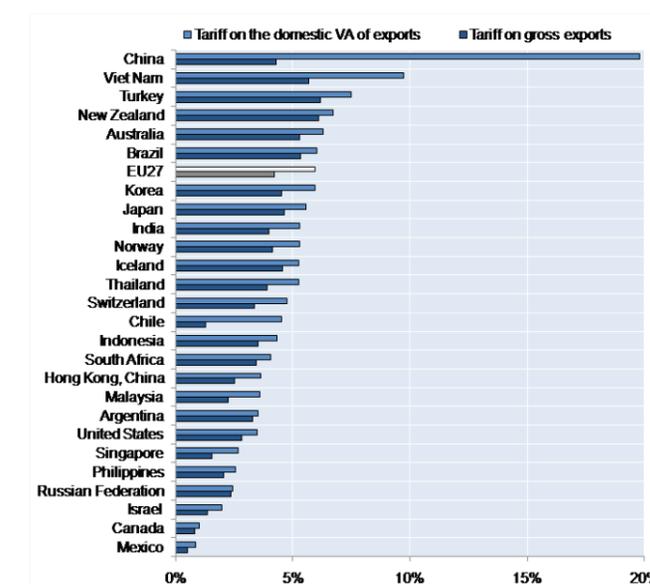
In GVCs, goods are traded across borders many times as intermediates and then as final products. The cost of trade barriers are magnified when goods cross borders several times, which means that a relatively ‘small’ tariff adds up may add a significant cost to the price of the finished goods. Furthermore, the magnification effect is intensified because tariffs are levied on the gross value of imported goods, rather than on value-added. If foreign content accounts for a large fraction of the value of a good, even small tariffs have a sizable effect on costs. Figure 6 shows that, nominal duties on gross exports are an incomplete measure of effective tariff barriers. The effective burden for the exporter is better measured by tariffs on the domestic value added of exports, which are particularly high in those economies that have a large share of intermediate imports in their exports.

Success in international markets today depends as much on the capacity to import world class inputs as

<sup>4</sup> Roughly speaking, switching to diagonal cumulation creates what might be called a ROOs customs union in that it imposes common external ROOs and means that a product can never lose origin status by crossing an internal border.

on the capacity to export. Protection measures against imports of intermediate products increase costs of production and reduce a country’s ability to compete in export markets: tariffs and other barriers on imports are a tax on exports. Policies that restrict access to foreign intermediate goods and services also have a detrimental impact on a country’s position in regional and global supply chains.

Figure 6. Tariffs on the Gross Value and the Domestic Value Added of Manufacturing Exports, 2009



Source: OECD, 2013b.

Success in international markets today depends as much on the capacity to import world class inputs as on the capacity to export. Protection measures against imports of intermediate products increase costs of production and reduce a country’s ability to compete in export markets: tariffs and other barriers on imports are a tax on exports. Policies that restrict access to foreign intermediate goods and services also have a detrimental impact on a country’s position in regional and global supply chains.

### 4.2 What Policies for Engagement in GVCs?

The fragmentation of production has created potential new opportunities for developing economies and for small and medium-sized firms to access global markets as components or services suppliers, without having to build the entire value chain of a product. At the same time, GVCs place new demands on firms, in particular as regards the need for strong coordination

and efficient links between production stages and across countries.

#### 4.2.1 trade facilitation: transforming border bottlenecks into global gateways

As goods now cross borders many times, first as inputs and then as final products, fast and efficient customs and port procedures are essential to the smooth operation of supply chains. To compete globally, firms need to maintain lean inventories and respond quickly to demand, which is not possible when their intermediate inputs suffer unpredictable delays at the border. A country where inputs can be imported and exported within a quick and reliable time frame is a more attractive location for foreign firms seeking to outsource production stages. As such, trade facilitation measures are crucial to foster integration into global production networks and global markets.

The OECD Trade Facilitation Indicators and related analysis identify priority areas for reform. As shown in Figure 7, The potential cost reduction of all the trade facilitation measures combined add up to almost 15% for low-income countries, 16% for lower-middle-income countries, 13% for upper-middle-income countries and 10% for OECD countries. Harmonizing and simplifying documents, streamlining border procedures and automating processes are among the most beneficial areas for reform in developing economies. Automation and the availability of information are bottlenecks for OECD countries.

#### 4.2.2 standard setting: avoiding unnecessary restrictions

The rising number of quality and safety standards is in part driven by concerns about information, coordination and traceability which are more acute in a world dominated by GVCs. The complexity and heterogeneity of safety and quality assurance standards to protect final consumers through

appropriate should not be understated, has become one of the main barriers to insertion into GVCs, in particular for small and medium-sized enterprises. Upstream firms supplying intermediate inputs to several destinations may have to duplicate production processes to comply with conflicting standards, or to incur burdensome certification procedures multiple times for the same product. Increasing international regulatory cooperation, including via the convergence of standards and certification requirements and mutual recognition agreements, can go a long way to alleviate the burden of compliance and enhance the competitiveness of small-scale exporters.

#### 4.3 Implications for Trade Agreements

Multilateral and regional trade and investment agreements will need to reflect the fact that many goods and services are now from ‘everywhere’, rather than, as they are defined today, from ‘somewhere’.

##### 4.3.1 from reciprocal ‘concessions’ to unilateral responses

With the emergence of GVCs, the mercantilist approach that views exports as good and imports as bad, and that views market access as a concession to be granted in exchange for access to a partner’s market, is even more clearly self-defeating. Domestic firms can of course benefit from export opportunities, but they also depend on reliable access to imports of world class goods and services inputs in order to improve their productivity and their competitiveness. Responses to this reality can be undertaken unilaterally, and have indeed led to unilateral liberalization in recent years. ‘First movers’ in liberalization can also be the first to gain from specialization and improve their position on international markets in downstream industries.

##### 4.3.2 a stronger case for multilateral and plurilateral agreements

The gains are even greater when more countries participate and markets are opened on a multilateral

basis. GVCs strengthen the economic case for advancing negotiations at the multilateral level, as barriers between third countries upstream or downstream matter as much as barriers put in place by direct trade partners and are best addressed together. A good illustration of this approach is the 1997 Information Technology Agreement (ITA), whose success lies in covering as many products and as many countries involved in the IT value chain as possible. The ITA also highlights the benefits of applying the Most Favored Nation (MFN) principle in plurilateral agreements, which eliminates “red tape” related to rules of origin and their potential distorting impact on trade.

##### 4.3.3 designing regional agreements for GVCs

While multilateral agreements are widely accepted as the best way forward, most of the liberalization outside of purely unilateral opening has occurred at the regional level in the past two decades. To promote the expansion of GVCs, regional trade agreements (RTAs) are more effective when their membership is consistent with regional production networks. They also have a role to play in deepening integration provisions: the convergence of standards or the recognition of qualifications can start bilaterally or regionally. But the RTAs of the future should be careful to avoid the pitfalls of distorting firms’ choices and losing the connection with the rest of the value chain. More liberal rules of origin, for example, would make RTAs more GVC-friendly and increase their impact on firms’ productivity. In the longer term, consolidating and multilateralizing RTAs would help turn the ‘spaghetti bowl’ of preferential agreements into a clearer and more efficient trading regime for all actors in GVCs.

#### 5. CONCLUDING REMARKS

Global value chains are the consequence of and depend upon open markets, and need to be complemented with appropriate trade policy frameworks. And be accompanied by a changed emphasis in trade and investment policies which takes into account the growing interdependence between exporters and importers, host countries and home countries.

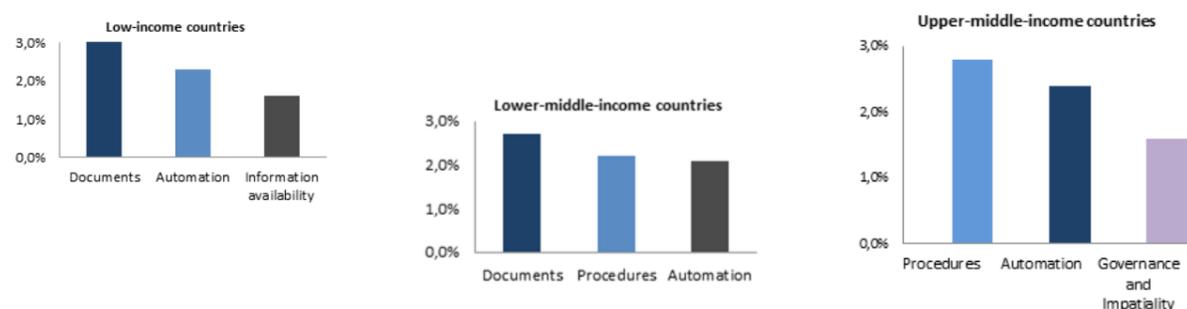
Supply-chain trade in GVCs is associated with a number of changes in trade policy-making. First, it reduces incentives for the use of traditional protectionist measures, though traditional trade restrictiveness measures still harm growth and resilience of GVCs. Second, behind-the-border

measures and trade facilitation bottlenecks are becoming more important to GVCs than traditional trade policy measures. Third, new rules and disciplines underpinning the rise of supply-chain trade are being written into the ‘mega’ RTAs, creating a risk of contributing to fragmenting the multilateral trading system. It is necessary for international community to work together to coordinate trade policies to reap the full benefits of GVCs and to ensure that new strategies of firms benefit all.

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Figure 7. Trade Facilitation Measures: Potential Cost Reduction in Goods Trade (%)



Source: OECD, 2013a.

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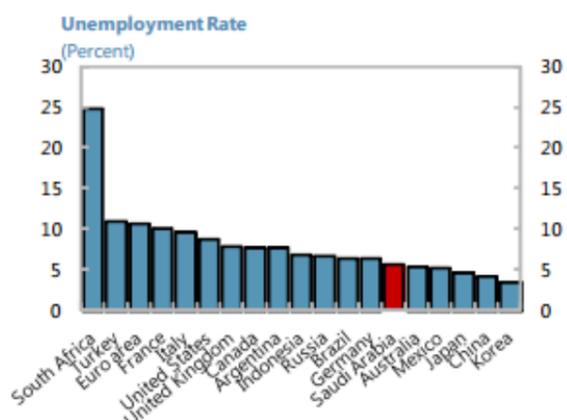
## INTRODUCTION

Saudization is the process of replacing foreign workers with Saudi nationals with the abilities and skills which the employer needs. In other words, Saudization can be defined as the process of bringing national labor in the place of foreign workers according to specific time plan. This procedure is a national goal and an economic demand, as the goal of any developed nation is to achieve the economic prosperity for all of its citizens.

## 1. THE IMPORTANCE OF SAUDIZATION PROGRAMS

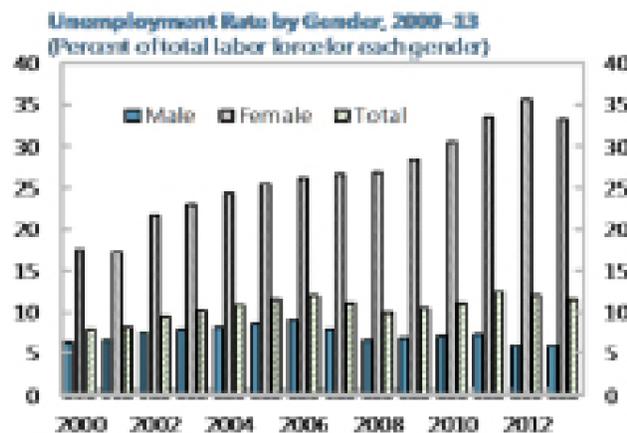
The importance of this article comes from the impact of Saudization programs on the economy. As Saudization case is one of the vital strategic cases, which it's related to the economic and social stability. In addition, it represents an integral part of the role of private sector in achieving economic and social development. Saudization the private sector has been a goal of the kingdom since at least the Fourth Development Plan (1985-1989) which called for replacing foreign workers with Saudi natives as one of its objectives (Wynbrandt, J. 2010). However, the large number of foreign workers in private sector kept rising which it was dominated mostly by employees from Southeast Asia and Arabs world, forced the government to make the decision to reduce unemployment among nationals by creating programs which include Saudization regulations that every

Figure 1. Saudi Arabia and G20 Comparators: Unemployment Rates 2009-13



company must comply with its regulations. We can see on these graphs the impact of nationalization programs on Saudi Arabia's unemployment rates among the other G20 countries and the growth rate of employment in Saudi Arabia:

Figure 2. Unemployment Rate in Saudi Arabia by Gender 2000-13



Sources: Country authorities; Markit; Joint Oil Data Initiative (JODI); and IMF staff calculations. PMIdata is average of three months in respective quarter, except for 2014Q2 which is May data. New orders data is for the last month of the respective quarter, except for 2014Q2, which reflects May data.

## 2. WHAT IS THE NITAQAT PROGRAM?

One of the most effective Saudization programs that the government created within the past four years is Nitaqat (which means 'Ranges' in Arabic) program. In 2011 the ministry of labor created the program. Nitaqat program have been designed to motivate organizations including small organizations to nationalize jobs in private sector. The Nitaqat program replaces the previous nationalization of jobs program. Unlike Nitaqat, the previous Saudization program followed a blanket approach requiring 30% quota for the locals in all companies, irrespective of their private economic activity and size. Under Nitaqat, the government would evaluate entities based on their nationalization performance, which is measured by calculating the percentage of Saudi nationals employed by the firm.

<b>Excellent</b> <ul style="list-style-type: none"> <li>Entities achieving superior nationalization performance with the highest percentage of local employees</li> </ul>	<b>Green</b> <ul style="list-style-type: none"> <li>Entities achieving good nationalization performance with good percentage of local employees</li> <li>Green and Excellent companies represent the top half of entities with same size and economic activity</li> </ul>
<b>Yellow</b> <ul style="list-style-type: none"> <li>Entities achieving below average performance with lower percentage of local employees</li> </ul>	<b>Red</b> <ul style="list-style-type: none"> <li>Entities achieving poor nationalization performance by hiring the lowest percentage of local employees</li> <li>These firms represent the bottom one fifth percentile of entities with same size and economic activity</li> </ul>

Source: Ministry of Labour.

## 3. HOW DOES THE NITAQAT PROGRAM WORK?

The nationalization performance of the companies will be calculated on a moving average basis over successive periods of 13 weeks. Based on this performance relative to their economic activity and size, the entities would be classified into four bands: Excellent, Green, Yellow and Red. Within each cell of the industry by size classification, firms are assigned to a color group based on their Saudization percentage relative to the Ministry's color group cutoffs for that cell. For a medium-sized construction entity, for example, the color band ranges were: Red: 0-2% Yellow: 2-6% Green: 6-28% Platinum: 28+%.

A construction firm with five Saudi employees and 95 foreign workers would therefore be classified as Yellow with a Saudization rate of five percent. Firms with fewer than 10 employees were classified as 'White' and were not included in the program.

### 3.1 Nitaqat Program Privileges or Penalties of Each Category

The companies receive privileges or penalties depending on the category they belong to:

- red**
  - \*Existing visas cannot be renewed for longer than three months.
  - \*Job descriptions for foreign workers cannot be changed.
  - \*No hiring of expatriate workers from other firms.
  - \*No new visas issued Firms cannot open any new facilities or branches.
  - \*Existing work visas can no longer be renewed.
  - \*Expatriate employees may freely transfer their employment to Green or Platinum band companies without the consent of their current employer.
- yellow**
  - \*Existing visas cannot be renewed for longer than three months.
  - \*Job descriptions for foreign workers cannot be changed.
  - \*No hiring of expatriate workers from other firms.
  - \*No applications for new temporary or seasonal visas accepted.
  - \*Firms are entitled to one new visa for every two workers departing the country on a final exit visa.
- green**
  - \*Visa applications can be submitted as usual.
  - \*Job descriptions for foreign workers can be updated as necessary.
  - \*Firms are entitled to one new visa for every two workers departing the country on a final exit visa.
  - \*Firms receive a six-month extension for the submission of the Certificate of Zakat and Income Tax.
  - \*Expatriate workers may be hired from Red firms and delayed Yellow firms.
- excellent**
  - \*Unrestricted approval of new visas.
  - \*Job descriptions for foreign workers can be updated as necessary.
  - \*Firms are entitled to one new visa for every two workers departing the country on a final exit visa.
  - \*Expatriate workers may be hired from Red firms and delayed Yellow firms.
  - \*Firms receive a one-year extension for the submission of all MOL documents.
  - \*Firms receive a six-month extension for the submission of the Certificate of Zakat and Income Tax.
  - \*Existing visas may be renewed for any employee with less than three months remaining on their visa.

Nitaqat program also can be beneficial for all different parties related to this program, for several of reasons:

### For Job Seekers

1. More job opportunities offered to nationals, as Nitaqat program provide new visas for organizations in the green zones which will motivate them to employ nationals in order to receive new visas for their foreign workers.

2. Bridging the gap in the competitive advantage between national job seekers and foreign job seekers by raising the cost of employment expatriate.

3. Motivating organizations to invest more in human resources in order to offer suitable jobs that have the quality in which it will meet national's ambitions.

### For Employers

1. Nitaqat program uses logical evaluation criteria based on the market reality. Nitaqat depends on the actual performance during the previous period through detailed studies of a number of private sector organizations. It also takes into account the size and activity of each organization.

2. Nitaqat program facilitate the recruitment of foreign labor for organizations located within the Green and Platinum "excellent" ranges, and Nitaqat gives them the privilege to pick the best foreign employees with experience from organizations that fail in renewing work permits of its employees.

3. It's a fair program since the evaluation of firms is based on the performance of other similar firms which they have the same size and activity, thus to ensure justice for all organizations.

Table 1. Labor Force in the Private Sector by Sex and Nationality

LABOR FORCE THE PRIVATE SECTOR BY SEX AND NATIONALITY					
	2010		2011		Annual Growth Rate
	No. of workers	Percentage Distribution	No. of workers	Percentage Distribution	
<b>1. Total labour force</b>	<b>6,991,200</b>	<b>100,0</b>	<b>7,781,496</b>	<b>100,0</b>	<b>11,3</b>
Males	6,847,167	97,9	7,568,544	97,3	10,5
Females	144,033	2,1	212,952	2,7	47,8
<b>2. Saudis</b>	<b>724,655</b>	<b>10,4</b>	<b>844,476</b>	<b>10,9</b>	<b>16,5</b>
Males	669,037	9,6	744,990	9,6	11,4
Females	55,618	0,8	99,486	1,3	78,9
<b>3. Non-Saudis</b>	<b>6,266,545</b>	<b>89,6</b>	<b>6,937,020</b>	<b>89,1</b>	<b>10,7</b>
Males	6,178,130	88,4	6,823,554	87,7	10,4
Females	88,415	1,3	113,466	1,5	28,3

Source: Ministry of Labour.

Table 2. Labor Force in the Private Sector by Region, Sex and Nationality

BREAK DOWN OF LABOUR FORCE IN THE PRIVATE SECTOR BE REGION, SEX AND NATIONALITY							
Region	2010			2011			Percentage Ratio
	Males	Females	Total	Males	Females	Total	
<b>Riyadh</b>							
Saudis	236,621	23,373	259,994	265,887	38,716	304,603	3,9
Non-Saudis	2,098,781	37,857	2,136,638	2,351,312	48,698	2,400,010	30,8
Total	2,335,402	61,230	2,396,632	2,617,199	87,414	2,704,613	34,8
<b>Makkah</b>							
Saudis	156,854	15,003	171,857	156,360	27,657	184,017	2,4
Non-Saudis	1,325,835	18,592	1,344,427	1,417,525	25,143	1,442,668	18,5
Total	1,482,689	33,595	1,516,284	1,573,885	52,800	1,626,685	20,9

Table 3. Number of Saudis and Non-Saudis Employees in Banking Sector

Year	Saudis			Non-Saudis			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
2001	15,476	1097	16,573	6,152	17	6,189	21,628	1114	22,742
2002	16,009	1,214	17,223	5,805	17	5,822	21,814	1,231	23,045
2003	16,775	1,331	18,106	5,060	14	5,074	21,835	1,345	23,180
2004	18,293	1,509	19,802	4,779	9	4,788	23,072	1,518	24,590
2005	22,843	2,157	25,000	4,674	11	4,685	27,517	2,168	29,685
2006	26,415	2,710	29,125	4,736	10	4,746	31,151	2,720	33,871
2007	27,781	3,311	31,092	4,852	19	4,871	32,633	3,330	35,963
2008	28,345	3,700	32,045	5,030	16	5,046	33,375	3,716	37,091
2009	27,748	3,791	31,539	5,009	17	5,116	32,847	3,808	36,655
2010	-	-	32,156	-	-	5,254	-	-	37,410
2011	29,479	3,984	33,463	5,694	310	6,094	35,173	4,294	39,467
<b>Growth rate in</b>									
2011			4.1			14.3			5.5

### For Society

1. Helping to achieve economic growth since Nitaqat program will not impose restrictions on the collaborated organizations and that will help them to contribute in the economic growth of the country.

2. Reducing unemployment among nationals will lead to an increase in GDP per capita, which it will ensure more sustainable society and higher purchasing power.

### 4. THE IMPACT OF SAUDIZATION PROGRAMS ON EMPLOYMENT GROWTH FROM 2010 TO 2011

#### 4.1 The Impact of Saudization Programs on Employment Growth in the Banking Sector

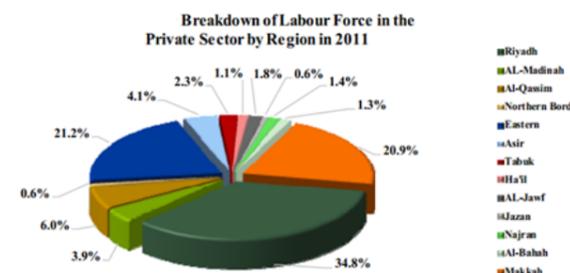


Figure 4. Labor Force in the Private Sector by Region

### CONCLUSION

In summary, The goal of this article is to look over one of the most effective Saudization programs that the government implemented in order to tackle nationals youth unemployment in private sector. While many Saudi nationals found job opportunities in the government sector, over the years there were not enough jobs for the growing number of youths in government sector. Saudization programs such Nitaqat program played an essential part in the transformation from foreign employees to nationals in the private sector in the past four years.

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## Law and Human Rights

### *Session I: Protection of Vulnerable Groups*

Asylum seeker policy has been controversial in Australian politics in recent decades, with the issue being a strong policy platform for the major political parties during each election campaign. With an overwhelming amount of information and opinions from political parties, sections of government, NGOs and numerous media outlets, the average citizen would find it difficult to sort the facts from the political hype. Despite constant policy changes and different measures to handle the influx of arrivals, human rights organisations have criticised each new approach for being at best ineffective, or at worst in violation of human rights law. Nevertheless, Australia's shores are not the only borders that asylum seekers attempt to cross, and countries around the world have developed policies to cope with influxes of refugees. The concept of a refugee is not a new one, but over the past half century the number of people fleeing from their own countries has exponentially increased. Australia has been seeking to find the balance between the maximum numbers of refugees it can accept, whilst applying proper processes for new arrivals.

This report attempts to assess the balance between the two opposing objectives. On one side, the need to uphold basic human rights (in particular the right to seek asylum) and on the other, the need for the Australian government to effectively deal with asylum seekers whilst maintaining safe borders. The topic of asylum seekers is vast; therefore this presentation will focus on a few key issues. Firstly, it will cover an overview of asylum seekers around the globe, and will summarise past and current approaches to asylum seekers in Australia. Secondly, three main issues surrounding asylum seeker policies will be discussed: mandatory detention, offshore processing and public perception of asylum seekers. Finally, this report will examine alternative approaches to consider an Australian asylum seeker policy that addresses both the human rights needs of those seeking asylum and the ability to effectively handle the new arrivals.

#### 1. HISTORY

Asylum seekers and refugees have existed throughout history and law and policy is in place to deal with the movement of people around the globe. In 1951, the United Nations High Commissioner for Refugees produced the Convention Relating to

the Status of Refugees to provide a coherent legal document that details the rights of asylum seekers and the obligations of states receiving them. As a party to this Convention, Australia was required to integrate this treaty into domestic law, which was achieved by the Migration Act 1958. Article 1 of the 1967 Protocol to the Convention provides the definition of a refugee:

*'A person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it...'*

This definition was transposed into s35 of the Migration Act 1958. Although the definition of persecution is not given under the Convention, it is understood to mean either serious harm or a failure of state protection.<sup>1</sup> The Universal Declaration of Human Rights provides the right for everyone to seek asylum from persecution. However, there is no binding international legal norm providing the right to *obtain* asylum, allowing 'destination countries' such as Australia to determine resettlement processes unilaterally.

Statistics from the UNHCR show staggering numbers, estimating that in 2013, the total of forcibly displaced persons was 51.2 million, 16.7 million of them refugees.<sup>2</sup> Research shows that 'destination countries' such as Australia only account for the intake of approximately one fifth of refugees worldwide. Developing countries are the main recipients, while Australia is 68<sup>th</sup> on the list on a per capita basis and 91<sup>st</sup> relative to national wealth.

Another issue facing the determination process is the method of arrival and application. In Australia the media fuels public perception that 'boat people' are 'queue jumpers', unfairly advantaged against those waiting in refugee camps around the world. However,

<sup>1</sup> B. Carrick, *Free to Claim Asylum?* 21 *AJ Admin L* 8, 2013, p. 12.  
<sup>2</sup> UNHCR, *Global Trends Report*, UNHCR, 2013.

the numbers show that of the 13,750 protection visas<sup>3</sup> allocated to refugees each year, only approximately 50% are granted to onshore boat and air arrivals. Nonetheless, it is clear that arrivals by boats cause the most controversy in the media, and are the focus of most asylum seeker policy.

## 2. AUSTRALIAN APPROACH

The influx of asylum seekers arriving in Australia by boat correlates to trends in world events. The first major wave of asylum seekers was between 1976 and 1981 after the Vietnam War, the second in 1989. Both were predominantly Vietnamese nationals. 1991 saw a third wave, mainly from the Middle East. In response, in 1992 the Labour Keating government introduced a hard line policy for unauthorized arrivals. The policy involved mandatory detention for any person arriving on Australian shores without a valid visa. Prior to this decision, detention was a discretionary power, individual to each case. This stricter regime also led to the elimination of external countries from the Australian migration zone, allowing the denial of the international legal obligation to grant protection in Australia if found to be a refugee<sup>4</sup>, tighter coastal surveillance and the development of offshore processing.

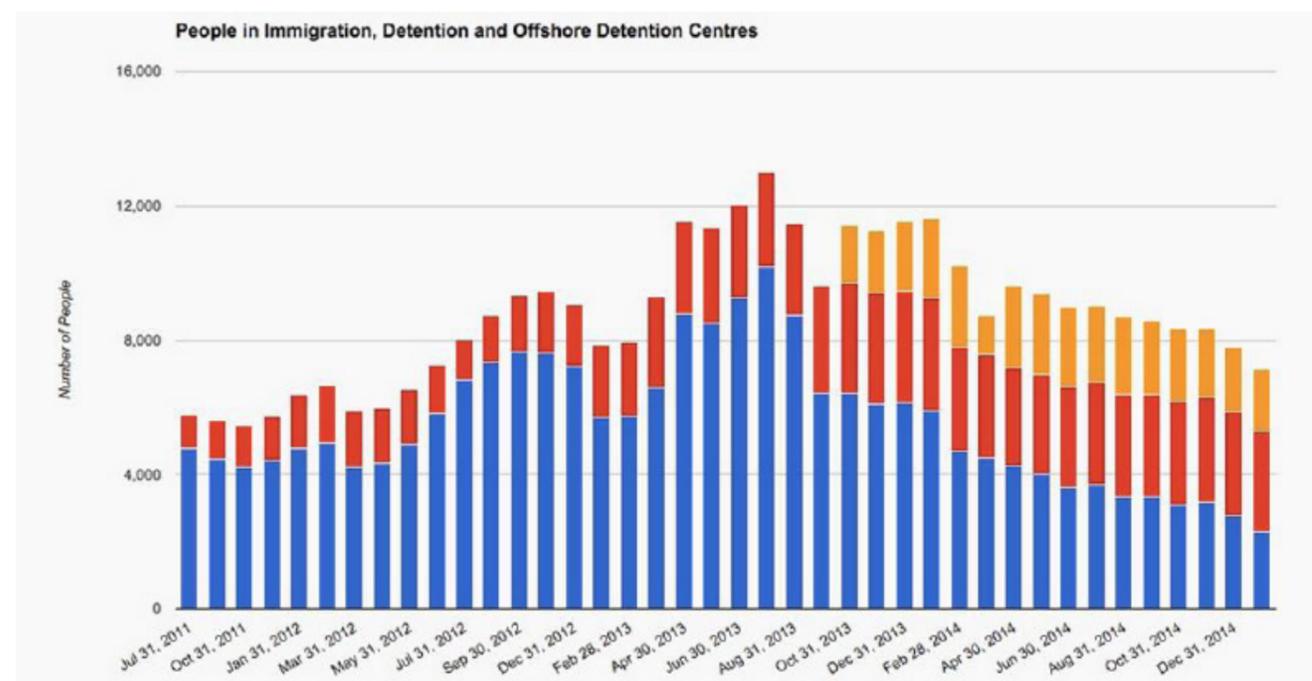
<sup>3</sup> The main mechanism through which Australia fulfills its international obligations towards refugees.

<sup>4</sup> Taylor, S (2005) *Sovereign Power at the Border* (2005) 16 PLR 55, 2005, p. 59.

In 2001, the high profile case of the TAMPA led to development of the so-called ‘Pacific Solution’. The case involved a Norwegian vessel carrying rescued asylum seekers being refused entry to Christmas Island, leading to a standoff that forced hasty agreements with Nauru and New Zealand to accommodate the incomers.<sup>5</sup> The government of the time, led by John Howard of the Liberal National Party, emphasized resettlement in third party countries, signing Memorandums of Understanding with Papua New Guinea and Nauru. This approach led to strong criticism due to claims that it was against international refugee law, was costly, and was psychologically damaging for refugees. The ‘Pacific Solution’ was abandoned in 2007 by the Rudd Labour government, with a focus shift to the deterrence of people smugglers who were seen to be central to the proliferation of boat arrivals.

In 2010 the Labour government, with Julia Gillard as Prime Minister, devised the ‘Malaysia Solution’, proposing that 800 boat arrivals would be sent to Malaysia in return for Australia receiving 4000 refugees from refugee camps in that country, over a period of four years. Although this arrangement was signed in July 2011, it was quickly challenged in the High Court of Australia the following month, and deemed invalid. As Malaysia is not a signatory to the Convention on the Status of Refugees, its domestic laws were insufficient for the protection of refugees,

<sup>5</sup> J. Phillips and H. Spinks, *Boat Arrivals in Australia since 1976*, 2013.



Source: <http://www.asrc.org.au/resources/statistics/detention-and-refugee-statistics/>.

Table 1

a requirement under the Australian Migration Act.<sup>6</sup> In response to the sinking of two vessels carrying asylum seekers in one week<sup>7</sup>, an expert panel on asylum seekers was formed and offshore processing centres were reinstated in 2012 on Manus and Nauru Islands on the panels’ recommendation.<sup>8</sup>

The current centre-right government, led by Tony Abbot of the Liberal National Party, entered into their term in September 2013 with a strong response to asylum seekers, beginning ‘Operation Sovereign Borders’. This policy promised to deter people smugglers and protect Australian borders, by ‘turning back the boats’ and denying resettlement in Australia to those in offshore detention centres.<sup>9</sup> Permanent protection visas were capped, meaning that those accepted into the humanitarian program in Australia could only apply for temporary visas after the limit of permanent visas was reached in March of 2014. The High Court of Australia eventually deemed this cap invalid.<sup>10</sup> The offshore detention centres have been criticised by the UNHCR for being below international standards, and not providing efficient measures for processing asylum seekers.<sup>11</sup>

## 3. KEY ISSUES

Each of these policies and approaches have had mixed results. What is clear is that the main policy process for asylum seekers arriving by boat, being mandatory detention and offshore processing, is ineffective, in breach of international law, and detrimental to those seeking asylum. Human rights groups such as the Asylum Seeker Resource Centre have expressed grave concern for the conditions in Australia’s offshore detention centres, the two main ones being on Nauru Island and Manus Island.<sup>12</sup> In an inspection of the Nauru detention centre in October 2013, the UNHCR stated that it ‘does not provide safe and humane conditions of treatment in detention.’<sup>13</sup> Issues surrounding mandatory detention include the lack of infrastructure to properly process refugee claims, mental and psychological welfare of the detainees, effect of insufficient education and recreation for children in detention, and long processing times due to the small number of visas

<sup>6</sup> Plaintiff M70/2011 v Minister for Immigration and Citizenship [2011] HCA 32, 2011, p. 131.

<sup>7</sup> D. Whitmont and J. Cohen, *No Advantage*, Four Corners, 2013.

<sup>8</sup> ASRC, *Timeline of Events*, Asylum Seeker Resource Centre, 2014.

<sup>9</sup> ASRC, *Timeline of Events*, Asylum Seeker Resource Centre, 2014.

<sup>10</sup> ASRC, *Timeline of Events*, Asylum Seeker Resource Centre, 2014.

<sup>11</sup> UNHCR Regional Representation, *UNHCR Monitoring Visit to Manus Island, Papua New Guinea*, UNHCR, 2013.

<sup>12</sup> ASRC, *Timeline of Events*, Asylum Seeker Resource Centre, 2014.

<sup>13</sup> UNHCR Regional Representation, *UNHCR Monitoring Visit to Nauru Island*, UNHCR, 2013.

being granted.<sup>14</sup> A report by the United Nations in 2014 held strong criticism against the use of offshore detention facilities.<sup>15</sup> The Manus and Nauru processing centres have both seen a lack of transparency and information, with refusals to allow cameras and reporters inside the centres.<sup>16</sup> Reports of cramped quarters, self-harm<sup>17</sup>, sexual abuse and psychologically damaging conditions<sup>18</sup> have led to public calls to close the offshore centres. The fact that one of the wealthiest and largest countries in the world<sup>19</sup> is using remote, primitive centres on small islands hundreds of kilometres from the Australian shore calls into question how accountable the institutions are to Australian human rights law.<sup>20</sup> Beyond this, the cost of running the centres is astronomical, with estimates of the Nauru centre costing \$1.9 billion over 4 years from 2013.<sup>21</sup>

The time currently taken to process applicants is another serious concern. On one hand, the UNHCR condemned the ‘fast track’ approach that has resulted in some asylum seekers claims being denied within 48 hours, stating that such a short time period does not allow for sufficient and thorough examination of each application. On the other hand, mandatory detention policy sees some detainees, including children, spending months in offshore detention centres, with little or no progress in their case, often left uninformed about how their claim is developing.<sup>22</sup> As a signatory to the International Covenant on Civil and Political Rights, Australia has repeatedly been found to have breached Article 9(1), which obliges signatories to not subject anyone to arbitrary detention.<sup>23</sup> ‘Asylum seekers that are placed in detention are not detained based on individual assessments, but because of their mode of arrival. This leads to prolonged and indefinite detention.’<sup>24</sup> The absence of a time limit can be extremely frustrating and psychologically damaging for those awaiting an outcome. Furthermore, despite

<sup>14</sup> ASRC, *Nauru Detention Centre Fact Sheet*, Asylum Seeker Resource Centre. Retrieved from: <http://www.asrc.org.au/wp-content/uploads/2013/07/Nauru-Offshore-Detention-Facility-May-2014.pdf>, 2014.

<sup>15</sup> P. Williams, *UN Torture Committee criticises Australia’s mandatory detention policy for asylum seekers*, ABC News, 2014.

<sup>16</sup> D. Whitmont and J. Cohen, *No Advantage*, Four Corners, 2013.

<sup>17</sup> IBRU, *Australia faces International Criticism after returning asylum-seekers to Sri Lanka*, Durham University, 2014.

<sup>18</sup> D. Whitmont and J. Cohen, *No Advantage*, Four Corners, 2013.

<sup>19</sup> Jericho, G. (2013) *Australia is Rich and on Top of the World*, *The Guardian*.

<sup>20</sup> UNHCR Regional Representation, *UNHCR Monitoring Visit to Nauru Island*, UNHCR, 2013.

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<sup>22</sup> UNHCR Regional Representation (2013) *UNHCR Monitoring Visit to Manus Island, Papua New Guinea*, UNHCR.

<sup>23</sup> ASRC, *Nauru Detention Centre Fact Sheet*, Asylum Seeker Resource Centre, 2014.

<sup>24</sup> ASRC, *Nauru Detention Centre Fact Sheet*, Asylum Seeker Resource Centre, 2014.

this deterrent, boats are still arriving on Australian shores. As stated by Christine Milne, leader of the Australian Greens Party, 'Just becoming crueller and crueller is not going to change the fact that you can never be as cruel as the circumstances from which people are running.'<sup>25</sup>

These combined issues call for a change in approach to the refugee processing schemes. For change to occur, pressure from the public is required to demand that the government account for breaches in humanitarian law.

Public perception of asylum seekers arriving by boat has a significant impact on policy changes. In order to create a more effective process for asylum seekers, those arriving on Australian shores, whether by boat or by air, need to be portrayed in a different light.

*'The facts remain that thinking of others as charity-cases, despite the best of intentions, dehumanises them creating a disconnect between 'us' and 'them' to the extent that even Australians whose own families were effectively refugees have decreasing empathy for those portrayed as 'queue jumpers' and 'economic migrants' in disguise.'*<sup>26</sup>

Public opinion was greatly affected during the 1970s influx of refugees from Vietnam, leading to a fear that Australia would be taken over by its Asian neighbours.<sup>27</sup> This 'Yellow Peril' epidemic sparked a public push for strong border policy, which has had repercussions as recently as the popular support of the governments' handling of the Tampa incident in 2001. Shortly following this incident, the September 11 attack in the United States of America gave rise to an international fear of terrorism, which was used to emphasise the need to undertake rigorous security checks on those coming into Australia<sup>28</sup>.

Opinion polls in the last 5 years still show a strong sector of the public opposed to asylum seekers by boat. A majority stated that 'boat people' are not genuine refugees, and many are calling for tougher measures for asylum seekers.<sup>29</sup> Media coverage fuels this attitude, which can be 'extremely damaging to the plight of a desperate minority, seeking peace and solitude

<sup>25</sup> S. Cullen, *First Asylum Seekers arrive on Manus Island*, ABC News, 2012.

<sup>26</sup> A. Lentin, *Refugees: a Call for Open Borders and Free Movement for All*, *The Guardian*, 2013.

<sup>27</sup> J. Phillips and H. Spinks, *Boat Arrivals in Australia since 1976*, *Parliamentary Library*, 2013.

<sup>28</sup> S. Taylor, *Sovereign Power at the Border* 16 PLR 55, 2005.

<sup>29</sup> P. Dorling, *Australians want boat arrivals treated more harshly*, poll, *The Sydney Morning Herald*, 2014.

on Australian shores.<sup>30</sup> Only 27 per cent of those polled in 2014 believed that refugees should receive government support.<sup>31</sup> The regional representative of the United Nations High Commissioner for Refugees, Mr. Richard Towle, attributes this attitude to a misinformed public.<sup>32</sup> Labels such as 'boat people' and 'queue jumpers' are misguided and oversimplify the asylum process, damaging the public perception of such asylum seekers.

#### 4. SOLUTIONS

As can be seen from above, there are many different factors contributing to the asylum seeker debate in Australia. As the current government continues to follow the path of strict and strong border policies, other groups have developed alternate solutions to achieving the best possible policy to both safeguard the Australian public and allow protection of incoming refugees.

Germany, as of 2014, handles the most asylum seekers amongst industrialised countries.<sup>33</sup> They recently reviewed their asylum seeker policy, to account for the influx of refugees arising out of the conflict in Syria. Due to its geographical closeness, Europe, in particular Greece and Italy are the predominant recipients of asylum seekers from the Middle East. The UNHCR in 2015 has a number of aims to ensure the best protection is given to refugees in Europe. Responsibility sharing is to be emphasized among member states of the European Union, and the enhancement of integration strategy will allow for better assimilation into the community.<sup>34</sup> Mandatory detention is not a policy that has been adopted in the EU states, and the right to work allows for lower costs associated with housing refugees.<sup>35</sup> Although Australia's situation is admittedly different to that of Europe's, there are still measures that could be taken to commit to a more ethical and efficient form of asylum processing.

The UNHCR has proposed a number of recommendations to improve Australia's approach to asylum seekers. Firstly, having children in detention is inhumane, and the alternate proposed is community

<sup>30</sup> M. Holdsworth, *Media Representations and Public Perceptions of Asylum Seekers*, *The University of Queensland*, 2012.

<sup>31</sup> P. Dorling, *Australians want boat arrivals treated more harshly*, poll, *The Sydney Morning Herald*, 2014.

<sup>32</sup> M. Gordon, *Refugees are 'Boat People' to Most*, *UN Survey Finds*, *The Age*, 2012.

<sup>33</sup> BBC News, *Europe's Asylum Seekers*, *BBC News Europe*, 2014.

<sup>34</sup> UNHCR, *2015 UNHCR Subregional Operations Profile – Northern, Western, Central and Southern Europe*, UNHCR, 2015.

<sup>35</sup> H. Kiesel, *Overview of German and European Asylum Policy*, *Deutsche Welle*, 2014.

housing for under-aged applicants.<sup>36</sup> Secondly, the fast track process, similar to UK model of a 48 hour timeline, produces a high stress environment that may lead to incorrect decisions being made. This process has been reprimanded, with the UNHCR pushing for proper processing. The offshore detention centres have also been condemned, with a UN representative stating that 'while the entire purpose of the centre was to process asylum seekers, there was no legal framework for processing and asylum seekers were there indefinitely.'<sup>37</sup> A proper system of processing needs to be put in place, and claims need to be considered expeditiously, with the claimant fully informed of the decision.<sup>38</sup> Finally, the UNHCR recommended that durable solutions be developed for the long-term status of asylum seekers, to allow for certainty for the future.<sup>39</sup>

In an article published by *The Guardian*, Alana Lentin, a senior lecturer at the University of Western Sydney, proposed a two-pronged approach to combatting the issue. Firstly, to open the borders would allow for regular movement of asylum seekers, which could lead to the development of a more cost efficient processing scheme, and eliminate the great expense it takes to turn boats away and to maintain offshore processing centres. The second part of the approach would be to tackle the current toxic public perception of asylum seekers, allowing them to be 'humanised' and assimilate more easily into Australian society. This approach would lead to considerably larger number of people arising, but if an onshore processing scheme could be developed, a large amount of time and money could be spent avoiding the offshore process.<sup>40</sup>

All of the alternate solutions and recommendations provide a large framework for Australia to improve its asylum seeker approach. If the policies on refugee processing are reviewed, the offshore detention centres are either removed or greatly improved, and children in detention are moved to community housing, Australian policy will no longer be the subject of condemnation by the United Nations Refugee Agency. To change the law and policy surrounding the issue, the attitudes of the public and the media must also be adjusted. If all this can be accomplished, Australia

<sup>36</sup> G. Roberts, *Asylum Seekers: UNHCR urges Australia and other countries to stop detaining children*, *ABC News*, 2014.

<sup>37</sup> ASRC, *Manus Island Detention Centre Fact Sheet*, *Asylum Centre Resource Centre*, 2014.

<sup>38</sup> UNHCR *Regional Representation*, *UNHCR Monitoring Visit to Nauru Island*, UNHCR, 2013.

<sup>39</sup> UNHCR *Regional Representation*, *UNHCR Monitoring Visit to Nauru Island*, UNHCR, 2013.

<sup>40</sup> A. Lentin, *Refugees: a Call for open borders and free movement for all*, *The Guardian*, 2013.

will have achieved a more secure, efficient, humane and effective form of asylum seeker processing.

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## Citizenship and Assimilation: An Overview

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### 1. INTRODUCTION

While citizenship as a subject of study had been long neglected in the social sciences, it is indeed fair to say that we have now entered 'age of citizenship' (Kivisto & Faist 2007), characterised by 'the return of the citizen' as a subject of academic interest (Kymlicka & Norman 1995; Scobey 2001, 20). Citizenship is contested and defined along two component features. First of which is the concept as a datum/certificate attesting a reciprocal relationship between individual (citizen) and the state (sovereign), shaped by a defined set of rights and duties (Turner 1993). This is constricted perspective of the concept is referred to as traditional or Marshallian citizenship, in reference to the works of T.H Marshall (1950; 1965). Second is the dialectic process involved in inclusion and exclusion, upon which membership in a polity is established (Kivisto & Faist 2007). For Turner (1993), to be a citizen is to belong to a political community; this involves common institutions and a single code of rights shared by its members, as well as a clearly defined territory within which the members identify and feel they belong (Smith 1991). However, both of these accounts present citizenship within the framework of the nation-state. On the one hand, notions of citizenship as a national construct have been thinned by increased movement (Basch et al. 2004), and the depleting nation-state (Soysal 1994; Jacobson 1996). On the other, individual and cultural identifications have challenged citizenship as a national construct. The interest here is to engage in a discussion of citizenship as a third, more abstract construct, citizenship-as-identity.

Isin and Wood's *Citizenship and Identity* (1999) further illustrate the composite nature of the concept. In unpacking the dialectic embedded within the relationship of citizenship and identity, the authors unravel a multitude of meanings and associations, characterized by ethnicity, globalism, ecology, movement, sexuality, and culture. Deducing that citizenship today is dynamic, flexible and inherently complex (Kivisto & Faist 2007). It is along this scope of analysis, citizenship-as-identity, that this paper is focused. Normative approaches to the concept conceptualize emerging meanings of how individuals *identify* and position themselves within the expansive citizenship scope (Isin & Wood 1999). Realizing

the broadness of such questions, the interest here is to *individualize* the transgression of citizenship. In individualizing and contextualizing citizenship from within a grounded approach, the salience of a previously unanticipated dimension of analysis emerged: the question of assimilation. It was found that, it is upon notions of assimilation that citizenship is conceptualized. This latter section of this paper sets out to define and contextualize meanings of assimilation, conclusively stating that, assimilation is a nodal point of analysis upon which citizenship is contested. It is from within paradigms of citizenship-as-identity with special attention to notions of assimilation that this paper is structured.

Citizenship has penetrated a multitude of discipline trajectories, such as multiple citizenships (Held 1995), cultural citizenship (Kymlicka 1995; Delgado-Moreira 2000), environmental citizenship (Jelin 2000), gendered citizenship (Seidman 1997), cyber citizenship (Tambini 1997), flexible citizenship (Ong 1999), to name but a few. Underpinning this expansion underlies the notion of citizenship-as-identity and the challenge of contemporary citizenship studies to best manifest and represent this realization, be it in the form of *multi-cultural* representation (Kymlicka 1995) or political representation of queers (Seidman 1997) among numerous others. While contemporary theories have expanded the concept along various trajectories, they are criticized for continuing to be conscripted to citizenship as a set of rights (Kivisto & Fast 2007). The underlying motivation of scholarly work on the expansion of citizenship remains positioned within a dialogue of increased access to rights for individuals or groups in the attempts to remedy skewed political representation which has left minority groups marginalized (Young 1989; Kymlicka 1995).

No one knows quite what it means to be a citizen, or what exactly that would entail (Turner 1993). Citizenship studies have become increasingly interested with meaning, normatively constructing what it means to be a citizen and asking if such meanings are represented in membership structures (Isin 2002). Contemporary approaches towards citizenship delineate an interactive, changing, and contested triangular relationship, between citizens and state, as well as citizens and each other (Olson 2008;

Jensen & Papillon 2000). In discussing the traditional emergence of the concept and its contemporary theorization, citizenship is presented from within an evolutionary framework. The expansion and universalization of the concept has naturally resulted in its state-specific contextualization and appropriation. This coupled with characterised hypermobility of the mid to late 21<sup>st</sup> Century which has led scholarship to explore the emergence and evolution of new meanings of citizenship and identity. Traditional citizenship was not concerned with questions of identity. Based on the works T.H Marshall published in 1950 in the aftermath of the Second World War, traditional citizenship is presented as bundle of rights- political, civil and social- guaranteed by the sovereign to all member of the state, irrespective of cultural, national, religious identification. Marshallian citizenship is embedded within notions of democracy represented by equal access to rights (Marshall 1950; 1965).

Citizenship is manifested in how it defines the 'other'. This process entails a constant negotiation and re-negotiation of construction of the in-group vis-à-vis the 'out-group', an exercise upon which citizenship is defined. The study of boundaries of citizenship and how they are defined has gained increased scholarly attention since the early 1990s with the rise of citizenship theories concerned with the effects of movement on citizenship structures. While these theories are criticized for overlooking an increasingly growing group of vulnerable persons -the stateless-, and contesting citizenship by those it includes rather than excludes, they successfully invite scholars to re-think questions pertaining to the nature of boundaries and how they are constructed. The rise of universalism, characterized by global movements of peoples, goods, open economies and increasingly permeable borders, has necessitated that states reconceptualise how to define and categorize their citizenry. Transnational movements (Glick Schiller Basch et al. 1992) and dual citizenship (Weil & Hansen 2002) have introduced membership duality to debates of membership in the early 1990s, which posed fundamental challenges to the exclusionary characteristics of traditional citizenship. While entitlements remain imperative within discourses of membership, it is the cultural turn, which has been central to the citizenship debates over the past two decades. While citizenship has become increasingly inclusive of cultural differences, it has largely remained conscripted in one way or another to politically vested interests targeted towards increased participation and representation. Ever changing, the concept has evolved and continues to develop along various trajectories, making the simple task of

unitarily defining it nearly impossible. The limitless scope of citizenship has penetrated various scholarly disciplines, from political philosophy, sociology, anthropology and psychology.

This paper sets out to conceptualize citizenship vis-à-vis notions of identity and assimilation. Divided into three parts: the first addresses T.H Marshall's definition of citizenship as a set of right; this informs discussions of traditional citizenship and provides a nodal point from which contemporary citizenship has emerged. Second, realizing the expansive scope of citizenship, in honing and narrowing the scope of relevance, citizenship is presented from within a framework of identity and identification. Pluralist theories of citizenship are discussed, as they are founded upon ideologies of identity as a central pillar upon which rights are granted. Third, the final section relates notions of citizenship-as-identity to the findings of this research, which discovered that, it is upon notions of assimilation that citizenship is constructed. This final section engages with Brubaker (2001) definitions of assimilation and Richard Alba's (2005) theorization of the processes of crossing, blurring and shifting of boundaries of assimilation.

## 2. T.H MARSHALL'S CITIZENSHIP: A BUNDLE OF RIGHTS

The most influence post-war conceptualization of citizenship was written by T.H Marshall and published in 1950. Marshall's citizenship is founded upon principles of equality, ensuring that every citizen should be treated as an equal member of society. In the widely cited seminal lectures, 'Citizenship and the Social Class' (1950), Marshall presented contemporary citizenship as founded upon three sets of rights which he saw take place in England: civil rights, political rights and social rights. Introduced in the eighteenth century, the idea of equality of all members of society was developed in the form of civil rights, which granted equality to all members before the law. The nineteenth century saw the rise of political rights, allowing for increased participation and political representation by members of the state; the contribution of the twentieth century was in the form of social rights such as social security, unemployment insurance, pension, healthcare, and welfare (Marshall 1965, p.77-8). While Marshallian citizenship attempted to alleviate negative effects of economic classes within capitalist society by ensuring equal access on the basis of rights it is not to be conflated with attempts to resolve class conflict (Marshall 1965), as class divisions went on to outlive the proliferation and adoption of citizenship, and

functioned simultaneously along one another. For Marxists, citizenship is a containment of class conflict and a unifying factor of heterogeneous nation-states.

The relevance of Marshall is in the continued propagation of his work, from which contemporary citizenship theory has expanded. This section will review his definitions of citizenship, and in doing so highlight their inappositeness to the case study. Firstly, Marshall's theoretical framing of citizenship as a bundle of rights does not take into account the concept as a form of subjective and appropriated identity. As the works of contemporary citizenship theorists has portrayed, the concept is socially nuanced, and framing it from within a rights-based approach is limiting. Secondly, Marshall's citizenship construct was based on the British model, and as a result, the applicability of Marshallian citizenship as a one size fits all is geographically biased.

For Marshall, citizenship is analysed and understood as a bundle of rights granted within a reciprocal relationship between the individual and the state. Citizenship is most often analysed through an understanding of rights and obligations (Walzer 1989), however, it the generalizability of Marshall's citizenship which is problematized. Citizenship, even in its early forms, was a principle of equality, and that during this period it was a developing institution. Starting at the point where all men were free- and, in theory, capable of enjoying rights, it grew by enriching the body of rights they were capable of enjoying. But these rights did not conflict with inequalities of capitalist society; they were, on the contrary necessary to the maintenance of that particular form of inequality. (Marshall 1965, p.150).

While Marshall discusses the notion of equality as the underlying incentive for citizenship as a guarantor of equal access to all, it is the limited scope within which equality is discussed which is lacking. As Kymlicka and Norman remind us, access to rights is not an adequate guarantor of equality (1994). Members can have access to an equal set of rights yet remain socially, culturally, or politically unequal (Young 1989, 1990). Contemporary social movements assert pride in ethnic and national specificity against the idea of assimilation, which in the Westerns multiculturalism societies has become rather taboo. These movements have called to question whether it in fact just to enforce equal treatment to all members, central to these arguments is the concept of differentiated citizenship (Young 1989).

## 3. WHAT IS ASSIMILATION?

Assimilation is 'not identity, but similarity'; to assimilate means to become the same (Brubaker 2001, p.534). While assimilation is regarded as a practice of same-making, erasure or blurring of difference, it is the degree to which this is practiced which best informs the process. For Alba and Nee, assimilation is defined as 'the decline of an ethnic distinction and its corollary cultural and social differences' (2003, p.14). For O'Leary and McGarry, assimilation is understood as a process of integrating minorities into dominant culture; favouring the merging of ethnic identities into one recognized umbrella identity (for example French Identity), or into a new form such as Yugoslav identity (1994, p.102).

While it has become somewhat of a problematic word within the multicultural context, assimilation is practiced in various forms, some more obvious than others. Brubaker (2001) argues that, practices of assimilation are not yet to be dismissed as a thing of the past; it is the trajectories of assimilation that have been largely overlooked. Alba argues that, there has been relatively little work to theorize the nature and process of boundaries, upon which ethnic assimilation is constructed (2005, p.20).

Brubaker (2001) presents two distinct definitions of assimilation: abstract and organic. First, the 'abstract' definition is discussed, according to which, assimilation is the process of making or treating as similar. While the scale and methods of this process are subjective, it is in principle concerned with the end result; a process of same-making through the elimination of characteristics which differentiate the other from the collective self. Brubaker's second 'organic' definition is both specific and coercive at the same time. This organic assimilation process entails an element of transformation. In observing the Oxford Dictionary definitions of assimilation, it is understood as a process:

*'to convert into a substance of its own nature'* (quoted in Brubaker, 2001); [or concerning]the body or any biological system: to absorb and digest (Oxford Dictionary).

In this sense, as explained by Brubaker, organic assimilation is a process of complete absorption (2001, p.534). Given the contemporary shift towards difference and multiculturalism, this conformist organic definition is discredited by the author and others (Zolberg & Woon 1999) as degenerative. This pathological understanding of organic assimilation

resonates with processes of citizen implantation, as the pathological movement of cells to a new part of the body; the Oxford dictionary defines implantation as a process in which :

*'[to] insert or fix (tissue or an artificial object) in a person's body, especially by surgery'.*

Whereas civic integration has the more modest object of creating a common civic , national or patriotic identity and citizenship; organic assimilation aims eventually to create a common ethnic identity through the merging of differences [the melting pot]. Where one community adopts the culture of the 'host' or dominant community (O'Leary & McGarry 1994)

While Brubaker's definitions of assimilation position state approaches within one of two trajectories, abstract and organic, he leaves the extent to which each is exercised entirely subjective. Such that, the procedural practice of assimilation is interpretive and case dependent (2001, p.536). In positioning the Lebanese assimilation process, which as I will go on to discuss is characterized by organic assimilation, it became apparent that the assimilation literature has been largely dominated by cases of conventional migration destinations, such as the United States and Western Europe, primarily France and Germany (Alba 2005; Brubaker 2001). While this is justifiably so, it has in turn left non-conventional destinations largely under theorized. In Brubaker's definitions of to the Lebanese model of assimilation, I contend that, it is evocative of an organic model, which according to Brubaker, entails a process of 'conversion' (2001, p.534). Assimilation is not one-way process of same-making, it is far more complex. In constructing the meaning of citizenship, it is imperative to engage with the contextualization of the assimilation process, in asking: *'how is assimilation conceptualized by individuals? How is the process implemented vis-à-vis state policies? How is assimilation institutionalized?'*

Such questions, similar to those concerned with the meaning of citizenship, are highly subjective and can only be understood within a contextualized framework. Conzen (1996) calls for an individualized approach towards the study of assimilation. She argues that, is indispensable to personalize experiences of assimilation, and that, there is a habitual tendency to cluster such experiences under ethnic groupings. This has situated assimilation within a collective framework focused on places (or groups) of ethnic concentration, 'where the odds of finding evidence for ethnic maintenance are the greatest' (1996, p.21). In turn, overlooking individual experiences

of assimilation which are not part of the collective. Much of the studies on assimilation have taken a collective approach. The inability and refusal to assimilate has rightly sparked academic interest in Palestinian refugees, from humanitarian (Sirhan 1975; Peteet 1987), political (Suleiman 1999; Smith 2009; Hanafi & Long 2010), social (Sayigh 1977), cultural (Khalidi 2005), economic (Hanafi & Tiltne 2008); this has in turn left the assimilation processes of non-camp and implanted Palestinians principally overlooked. The following section engages with individual experiences of assimilation processes of both refugees and implanted citizens.

Assimilation is analyzed along the trajectory citizenship, is it best understood, like citizenship, as a tool of analysis upon which state ideology is extended and manifested. Principally, according to Barry (1975) assimilation is instrumental to the implementation of state ideology. Notions of assimilation, which permeate their way into social and citizen membership schemes, are reflective of state ideologies. This is echoed in the salience of the national myth in prospective membership processes in Lebanon (Maktabi 2001). The interest here is in to engage in a dialogue of citizenship acquisition from within the perspective of assimilation as a predominant factor upon which the decision- to naturalize or not- is constructed.

The following section sets out to discover, albeit hypothetically, why individuals wish to become citizens of some states as opposed to others. Refugees were asked where, if they could choose, would they opt to be resettled. While initially aiming to conceptualize the construction of citizenship among refugees, this informed the assimilation process, which was discovered to be the foundation upon which citizenship is constructed.

#### **4. BLURRY VS. BRIGHT BOUNDARIES: CROSSING, BLURRING AND SHIFTING**

Assimilation involves a crossing of boundaries. According to Zolberg and Woon (1999), these boundaries are crossed, blurred or shifted. Alba (2005, p.23) explains that, crossing involves individualized assimilation, in which a person crosses from one group to another; blurring occurs when social profiles of boundaries and belonging to them becomes less defined; shifting takes place when outsiders become insiders, such that those located on the outside, as a result of factors such as citizenship acquisition, are thus shifted to the inside (Baubock 1994).

Expanding upon these trajectories it is necessary to recognize that not all boundaries are alike (Alba 2005; Lamont 2005; Lamont & Molnár 2002); for Alba, the variable upon which assimilation is measured and analyzed is parity. Arguing that, the achievement of equality among second generation migrants, in contrast with that of their predecessors, is an adequate measure of assimilation. Alba presents boundaries as a variable of analysis. In any study concerned with assimilation processes, according to him, it is imperative to engage in an exercise of boundary construction, as it is upon such constructions, while subjective, that assimilation is conceptualized;

The argument I will make is that the processes involved depend crucially on the precise nature of the ethnic boundary. Some boundaries are 'bright' – the distinction involved is unambiguous, so that individuals know at all times which side of the boundary they are on. Others are 'blurry', involving zones of self-presentation and social representation that allow for ambiguous locations with respect to the boundary. The nature of the minority-majority boundary depends on the way in which it has been institutionalized in different domains, some of them correlated with an ethnic distinction rather than constitutive of the distinction itself. In turn, the nature of the boundary affects fundamentally the processes by which individuals gain access to the opportunities afforded the majority (2005, p.22).

Migration studies, transnational studies and assimilation studies share an interest in the study of movement of peoples across bright boundaries and according to Alba; it is upon subsequent generation integration that boundaries are blurred. For him, such boundaries are constructed within the domains of citizenship, religion, language and race. In revisiting Alba's earlier definition of assimilation (Alba & Nee 2003), it is in principle a decline of ethnic distinction. Ethnicity is a belief in common decent, a shared history of common ancestry, which may be real or believed (Weber 1968, p.389; Alba 2005). Ethnicity is both symbolic and social; it defines, constructs and creates boundaries- both real and imagined.

The interest here is in the disputation posed in the construction of boundaries vis-à-vis the collective or mainstream. The means with which the social distance between the 'self' or the 'group' are constructed depends on the nature of the boundaries themselves. On the one hand, when the boundary is bright, 'there is no ambiguity of the location of the self with respect to it...assimilation is likely to take the form of boundary crossing and will generally

be experienced by the individual as something akin to a conversion i.e a departure from one group and discarding of signs of membership in it, linked to an attempt to enter another' (2005, p.24).

In such instances, there is a dialectic surrounding membership, necessitating exclusivity and eliminating possibilities of duality, poses a psychic burden on boundary 'crossers' propagated by growing distance from peers and feelings of disloyalty. On the other hand, when a boundary is blurry it is ambiguous. Blurred boundaries are characterized by porous culture and identity of the mainstream, allowing for the incorporation and adoption of cultural elements from migrant groups (Swidler 1986; Alba 2005).

While Alba addresses how boundaries become blurry, he does not address: how are these boundaries constructed? What happens then to these boundaries when inclusion is not determined upon permeability and adaptability of the collective culture, but on the thinness of the boundaries themselves; when the social distance between majority and minority groups is almost seamlessly bridgeable? Whereas, the usual criteria of boundary determination- race, religion, language- are shared, and the difference lies entirely within disparate constructions of Weberian notions of ethnicity i.e. a shared and common history. Alba's study is based on cases in which boundaries are easily definable, he selects the case of Mexicans in the United States, Turkish migrants in Germany and Maghrebins in France. In which the boundaries are clearly defined by language, ethnicity, and in some cases religion. Arguably, this in turn overlooks cases where boundaries are contested. In looking at Palestinians in Lebanon, the divisive criteria for boundary construction are absent almost entirely; elements such as religion and language are common to both and shared by both groups. On the one hand, this has 'eased' the assimilation of implanted citizens, on the other it is the primary impediment upon which the process is rejected by refugees.

#### **5. CONCLUSION**

Pluralist citizenship models were discussed as they position notions of identification as the central structures upon which rights are structured. The works for Young (1989) and Kymlicka (1994) were presented because for them, notions of identification are implicit to the question of rights. For Young (1989) ethnic based rights are the pathways upon which rights are to be granted, an exercise which according to her would work to eliminate ethnic and racial inequalities. While this may be so, the interest

in pluralist citizenship was two-fold, the centrality in which identity was presented in the citizenship debates expanded the dialogue of citizenship-as-identity and further developed the role of identity within the citizenship dialogue. Second, the relationship between the group as a construct and citizenship as a process is of relevance; the group is central to pluralist constructs of citizenship, the relevance of this is in the 'group' as a variable of analysis. The succeeding section, which discussed notions of assimilation within the citizenship construct, argued that, those who identified with the 'group' i.e. refugees for example, assimilation into host state was a far more challenging in contrast with those who did not. Thus, this further informs the pluralist construct for which group identity is central.

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# The Domestic Violence Epidemic: A Human Rights Violation and an International Disgrace

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*In loving memory of Sandra Margaret Thomson (1961 – 2011) and the inconceivable number of others like her, who died at the hands of their partner.*

## 1. INTRODUCTION: THE PREVALENCE AND DISGRACE OF DOMESTIC VIOLENCE

This year in Australia, deaths relating to domestic violence will reach record heights. This despite Australian laws becoming increasingly progressive in their approach to domestic violence and in spite of campaigns that have existed for decades to warn men that ‘violence against women’ is unacceptable. Though for the sake of delimitation this paper will focus predominantly on Australian society, domestic violence is far from a uniquely Australian issue. Rather, home and family violence, and its continuing escalation, is internationally prevalent; human rights are being violated on a global scale.

Though laws against domestic violence are vastly important, it is clear as the death toll continues to rise that there is a limit to what can be achieved in a purely legal sphere. An analysis of the psychological reasons behind domestic violence suggests that many of the causes are sociological – to be found in the family home, in the community and in the media. There is hope in these findings, a chance that through genuine societal change we will finally see the end of the domestic violence epidemic.

### 1.1 Domestic Violence in the Australian Context

Domestic violence was not an issue on the Australia agenda for a shamefully long time. For this, we can blame the pervasive thinking that ‘domestic’ violence was something that occurred behind closed doors and thus something that couples should be given privacy to deal with alone (Binder & Meeker 1992; Goldsworthy & Raj 2014; Special Taskforce on Domestic and Family Violence (STDFV 2015)). It was not until the 1980s that domestic violence was properly recognised as a crime, thanks to the tireless activism of women’s groups throughout the 1970s and 1980s (STDFV 2015). The sociological and legal attitudes have been slowly evolving ever since. Where once the view was that domestic violence could only occur between a husband and wife (Goldsworthy & Raj

2014), the law in all Australian states now extends to couples of either the opposite or same gender, married, engaged or de facto couples, as well as people who are separated or divorced, who have a child together, who are living together or have previously lived together as a couple. Furthermore, where once the law only saw fit to intervene in cases of extreme injury (Binder & Meeker 1992), to the acknowledgement that ‘domestic violence’ as a term encompasses physical, sexual, emotional, psychological, or economic abuse as well as any behaviour that is threatening, coercive, or in any other way controls, dominates, or causes a person to fear for their safety or the safety of another (e.g., s 8(1) *Domestic and Family Violence Protection Act 2012*, Qld). It is interesting (and important) that this particular definition has been used in our legislation.

The terms we use to define domestic violence actually drastically affect the information that we receive with regard to the issue. Where domestic violence is simply defined by one-time physical violence, the statistics appear to show that men and women are affected equally. However, when analysing domestic violence using the criteria outlined in Australian legislation, which is also the definition endorsed by feminists (Goldsworthy & Raj 2014; Malone & Phillips 2014; Neate 2014; Neate & Poole 2014), there is a clear gender asymmetry (Braaf & Meyering 2013; Hamby 2014). This is important because, when defining domestic violence in such terms, we can clearly see that it is a gendered crime – a fact that needs to be understood when deconstructing how domestic violence comes about and in structuring the best response mechanisms in ‘*the criminal justice system... the human services sector, and the broader community*’ (STDFV 2015, p. 71).

### 1.2 The Statistics

The most recent official figures show that one in six Australian women have experienced physical or sexual violence from a current or former partner, compared to one in 19 Australian men; one in five women have experienced sexual abuse compared to one in 22 Australian men; and one in four Australian women have experienced emotional abuse from a current or former partner, compared to one in seven

Australian men (see Figure 1, source: STDFV 2015). In Australia, one woman dies every week as a result of domestic violence and so far in 2015 we have seen this spike to two women dead every week (Tuohy 2015). This horrific rise in the death toll is nonetheless predictable – given that for years we have seen the domestic violence numbers steadily rising.

For example, in Queensland from 2010-2011 there were 52,889 reported occurrences in domestic violence, a 7.0% increase on the previous year. During 2011-2012, there was a 9.6% increase from the previous year. This increased by another 10% during 2012-2013, and in the period of 2013-2014; another 2.7% increase saw 66,016 reported occurrences of domestic violence (STDFV 2015). Furthermore, whilst these statistics are shocking, we also know that they are only the tip of the iceberg, with a huge number of domestic and family violence incidents going unreported (Gilmore 2014; Goldsworthy & Raj 2014; STDFV 2015; Tuohy 2015). That we have seen such a steady increase in the rate of domestic violence, in spite of the efforts of lawmakers, enforcers, and activists, is a disturbing trend, and one that cannot be allowed to go unexamined.

Figure 1. The Gendered Nature of Violence



### 1.3 Marginalised Women

Although domestic violence can affect anybody from any background, women most at risk are those with marginalised voices in our society – for example, transgender women, Indigenous women, and women with disabilities. It is imperative that these women are not left out of the discourse surrounding domestic violence or we risk addressing only a small portion of this insidious and far-reaching issue. Thus far society and the mainstream media have drastically failed marginalised women.

A 2010 study found that 44% of murder victims were transgender women although these women only constituted 11% of the sample being studied (Goodmark 2014). The Special Taskforce on Domestic and Family Violence this year acknowledged transgender women as particularly at risk (2015). Exacerbating this issue is the transphobia that these

women can face in trying to access support services (STDFV 2015). This discrimination manifests itself in situations such as the exclusion of trans women from supportive women’s spaces, putting them at greater risk of staying in abusive environments or becoming homeless (Kacere 2014), and even in the way that the media approaches violence against these women. In 2014, following the brutal murder of Mayang Prasetyo at the hands of her partner, the media focused on the fact that she was a transgender woman with headlines gleefully and irreverently proclaiming her a ‘Shemale’ and ‘Ladyboy’ to the horror of the LGBTI community (Dearden 2014). It is difficult to imagine the butchering of a cisgender woman being discussed in the same way.

Research also suggests that an astoundingly high prevalence of domestic violence is inflicted on women with disabilities (STDFV 2015). These women are often vulnerable to specific care-related abuse and face great challenges in trying to reach out for help – not least of which is the lack of empathy to be found in the general community. Last year, when reporting the murder of Kim Hunt and her three children by her husband, the media painted her life in terms of his disability and emphasised what a ‘gentle, considerate bloke’ her husband and killer was because he had been so very strained by her disability (Ford 2014). As the incredible Australian journalist and disability advocate, the late Stella Young, said at the time: ‘*[It’s] as if her status as a disabled woman gives us a little more empathy towards the perpetrator of violence. It’s a victim blaming at its very worst*’ (Young 2014).

Perhaps worst still than denigrating or downplaying the abuse of women is the approach that the media takes to Indigenous women. Aboriginal and Torres Strait Islander women are almost 35 times more likely to be hospitalised for domestic partner abuse than members of the general female population – and this shockingly high statistic exists in spite of the fact that an estimated 90% of violence against Indigenous women is not disclosed (STDFV 2015). These are horrifying figures, and yet they do not make it into headlines. It is an immense failure of Australian society that even as we are beginning to have this discussion about domestic violence, Indigenous women who by all accounts are most vulnerable to this epidemic, do not even make it into the mainstream discourse. They are made invisible by our media, and they are left to suffer in silence.

In seeking to effect positive change for all women, we cannot leave any behind. That being said, we also cannot lump minority women unspecified

into the framework of ‘all women’. People from different backgrounds require different kinds of support (STDFV 2015) and our only way to achieve this is by *respectfully* including all women in our conversation and by embracing intersectionality as a fundamental element of the social movement to end domestic violence (Nixon & Humphreys 2010). More broadly, it is clear that much more can be done within our community – as indicated by a multitude of psychological and sociological research, driven by the question ‘why?’

## 2. WHY: THE RESEARCH

### 2.1 The Red Herring: Why Do Victims of Domestic Violence Stay?

Research has demonstrated that it can take up to seven times for a woman to leave her abusive partner before she stops returning (Pascale 2015), and this may be for a number of factors. Fear undoubtedly plays a role for many in this situation – statistics show that when a woman is in the process of leaving her partner she is most at risk of being murdered by him (Davey 2014; Tuohy 2015). There are also issues of emotional coercion, social isolation and financial reliance (Malone & Philips 2014), threats (for example in same-sex relationships of ‘outing’ a partner to their family and friends: STDFV 2015), and concerns for the safety of children and even pets (Schetzer 2014; Smith & Segal 2015). In addition to this, research has demonstrated evidence for the psychological phenomenon of ‘traumatic bonding’, whereby ‘powerful emotional attachments are seen to develop from two specific features of abusive relationships: power imbalances and intermittent good-bad behaviour’ (Dutton & Painter 1981; 1993), making it much harder in a psychological sense to detach oneself from an abusive relationship.

However, though there are certainly well documented explanations for why survivors of domestic violence may remain in abusive relationships, it is my firm belief that to dwell on this part of the issue is a dangerous red herring. Our focus should not be on having victims explain their actions, not merely because no survivor of domestic abuse deserves to have blame apportioned onto themselves, but also because this risks leading us away from the real issue. The key reason for the continuation of abuse is the abuser, and understanding why someone is abusive rather than why someone is abused is a far more useful investigative tool for putting an end to this crisis. Interestingly, Jackson Katz, an anti-sexism educator, reaches this same conclusion through an

analysis of language use. He argues that framing domestic violence and rape as ‘women’s issues’ because women are the victims takes the focus away from the root of the problem – the perpetrators, not the victims. Thus, he argues, we must emphasise that ‘*these are men’s issues, first and foremost*’ (Katz 2012).

### 2.2 The Real Question: Why Do Perpetrators Commit Domestic Violence?

The majority of the following research specifically analyses men in the role of perpetrators of violence against women, because statistically this is far more often the case (Gilmore 2014; Mihalic & Elliott 1997; Raghavan & Cohen 2014; STDFV 2015; Stith et al. 2000). There are numerous factors influencing why a man may become abusive to his partner and – apart from an inbuilt ‘antisocial behaviour trait’ (Simons et al. 1995) or aversive circumstances such as economic pressure that are confined to a specific point in time (Conger et al. 1984; Simons et al. 1993; Straus & Smith 1990) – these factors manifest themselves in a number of interconnected external ‘environments’, namely the childhood home, society more broadly, and the media.

#### 2.2.1 the childhood home... bandura’s social learning theory

An immense amount of research has been conducted into the trans-generational transmission of domestic violence (e.g., Ehrensaft et al. 2003; Magdol et al. 1998; Maxfield & Widom 1996; Pears & Capaldi 2001; Smith & Thornberry 1995; Stouthamer-Loeber et al. 2001; Thornberry 2009). The most popular explanatory model for this phenomenon is Bandura’s ‘Social Learning Theory’ (1973; Mihalic & Elliott 1997), which posits that children adopt the violent behaviour patterns of their parents through parental modeling and observational learning. In addition to this, in violent families it is more likely that a child will fail to learn how to manage conflict appropriately and that they will be reinforced for violent behaviour – factors that may result in a violent adult later in life (Stith et al. 2000). As Gelles said of family violence in 1972: ‘Not only does the family expose individuals to violence and techniques of violence, the family teaches *approval* for the use of violence’.

An interesting element of this phenomenon is the differential effect of gender. Female children are more likely to become victims (rather than perpetrators) of domestic violence as adults, whilst males are overwhelmingly more likely to become

perpetrators rather than victims (Stith et al. 2000). The reason for this may lie in social learning theory – perhaps children reflect the role played by the parent of the same gender – however, a far more nuanced explanation can be found within an analysis of our society.

#### 2.2.2 society... differential socialisation

Differential socialisation practices can help us to explain why females are more likely to end up victims whilst males are more likely to end up perpetrators upon growing up in violent homes. Research shows us that ‘whereas traditional socialisation for boys encourages them to be macho and use violence to settle disputes, traditional expectations for girls include obedience, deference and loyalty’ (Sugarman & Frankel 1996). Thus, whilst boys are reinforced more often for being aggressive, girls are reinforced for being passive and this carries on into the role they play as adults (Stith et al. 2000).

Further research demonstrates the effect of other attitudes that our society should shoulder blame for fostering – the perception of gender roles. Research into domestic violence within religious communities has found that those families with very ‘traditional’ views of gender roles are particularly at risk (Cwik 1995; Hassouneh-Phillips 2001; Levitt, Todd-Swanger & Butler 2008; Popescu et al. 2009; Wang et al. 2009). In wider society, the relationship between those traditional views and domestic violence has not been found (though this may be the result of underreporting), but it has been shown that domestic violence is particularly likely in partnerships with discordant views of gender roles – for example, where a man believes his partner should conform to a more subservient role but she disagrees, violence is particularly likely to arise (Coleman & Straus 1986; Mihalic & Elliott 1997). This is a disturbing finding in a society where women currently seem to be far more embracing of the equality of women than men, many of whom still hold themselves apart from the feminist movement. The same study showed that egalitarian couples had the least amount of conflict and violence (Coleman & Straus 1986).

#### 2.2.3 the media... an indirect-effects model

The mass media has been shown to ‘contribute to the development of intermediate responses’ to violence against women (Malamuth & Briere 1986, p.77). That is to say, it influences subconscious thought patterns that go on to guide real-world behaviour and, as such, plays a vital role.

One grave concern is the portrayal of violence against women in film and on television. It not only serves to normalise such violence but to desensitise the viewer to it. For example, Malamuth and Check (1981) demonstrated sustained effects of sexually violent films on men’s acceptance of violence against women (these results were later replicated by Demare 1985). Linz (1985) found that repeated exposure to feature length films portraying sexual violence desensitised viewers – which could even carry over to their judgement of rape victims (in a simulated rape trial) following the viewing of such films. Furthermore, Linz’s study showed that these men became less empathetic to rape victims in general. These results were particularly heightened when the stimuli depicted violence against women as having positive consequence, or even simply no negative consequences. Further studies purport that desensitisation can extend to general acceptance and potentially perpetration of violence against women (Malamuth & Briere 1986).

Burt (1978, 1980, 1983) presented an extremely influential theoretical perspective in this area across numerous papers. She argues that a cultural matrix that encourages rigid sex roles and supports male dominance generates rape-supportive attitudes and beliefs. In this day and age the media is a very significant factor in shaping such a cultural matrix. Furthermore, Malamuth (1983) showed that men with *attitudes* condoning aggression against women were more likely to actually be physically aggressive toward women in *real life* when given the chance. But the depiction of violence against women is not the only problem.

Media that portrays male entitlement to women and their bodies also has much to answer for, with recent studies showing that men who feel ‘sexually entitled’ to women are far more likely to be aggressive or violent toward them if, for example, they feel rejected in the context of a long-term relationship (Kelly, Dubbs & Barlow 2014). Thus the sexism that continues to pervade our media, such as the portrayal of women as objects in advertising, or as nothing more than figures of lust in the plot of a film, actually does far more damage than simply degrading women. It may well be killing them.

## 3. IMPLICATIONS

The climbing rates of domestic violence make it clear that law reform alone cannot combat this epidemic. We must not only ‘think big’, in terms of legislation and government, but also ‘think small’

(Enloe 2011, p.499) – that is, to effect change we must consider the everyday politics of our language use, our media, our subconscious expectations of male and female roles. The psychological research tells us the same thing.

We must teach children how to express themselves without resorting to violence. We must not reward violence nor normalise it in our boys, nor teach subservience to our girls. We must remind ourselves to critically analyse the portrayal of violence against women and male entitlement to women in the media – and the media itself should seriously reform its depictions of women in film, television and news, because it is letting us down. Finally, we must keep having this conversation – we cannot let domestic violence slip back into being a ‘private’ matter, we cannot let it remain a matter that goes un-shamed and unpunished (thus developing no mental resistance to the concept amongst our young men). Marginalised women in our society must be an essential part of this discussion, they cannot remain silenced – a movement toward equality is nothing if it is not intersectional.

And now, I urge you to take this argument, framed somewhat in an Australian context and society, and apply it to your own. Critique your press, your government, and the attitudes of your peers. Critique this paper – just keep the conversation going.

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## The Empowerment of the Disabled by Using Media as a Tool: Looking at the Case of Short Film Production with Down Syndrome Youths

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### ABSTRACT

This paper emphasizes the importance of empowering disabled people and influencing biased views of the public. Media and culture are suggested as an effective means to accomplish these goals. A research project on producing a short film with Down Syndrome youths is reported in order to give a specific case example of using media for the empowerment of the disabled. This paper closely examines how the project was designed, conducted and concludes with its findings. Lastly, suggestions are made in order for media and film to be more effectively utilized for the disabled in the future.

### 1. INTRODUCTION

#### 1.1 Empowering the Disabled

According to the World Health Organization, over a billion people are estimated to have disability, which equals to roughly 15% of the entire world population. Furthermore, a huge portion of the disabled population was not born with impediments. Rather, only 17% of the disabled had inherent disabilities. (Papworth Trust disability facts and figures, 2010) In the case of New Zealand, the leading cause of disability is a disease or illness (40 percent), followed by an accident or injury (30 percent). (New Zealand Disability Survey 2001) Two conclusions could be drawn from the listed facts above: 1. Disability is something that the public could easily be exposed to, as it could be acquired by an illness or injury 2. A large percentage of the general population has disability, although the degree of the impediments varies. Thus, it is difficult to define the disabled people as a social minority group that is separated from the general public, especially because disability is something that could possibly be acquired. Therefore, this paper is based on the notion that finding key methods in providing the disabled with equal opportunities and rights regarding employment, politics, education and other sectors is extremely crucial, and aims to come up with an effective solution for making this possible.

However, for the actual realization of the policies and systems that would guarantee the rights of the

disabled individuals, empowering these individuals is necessary. In other words, they need to be able to build up a capacity to impose one's will or achieve a position of superiority. (Weissberg 1999) Disabled individuals need to have the ability and opportunity to make decisions and to act for oneself. (Staples 1990) By being empowered, they will be able to understand, upgrade and use their capacity to better control and gain power over their own lives. Empowerment provides people with choices and the ability to choose, as well as to gain more control over resources they need to improve their condition. (Schuftan 1996) Thus, the policies protecting the disabled are unlikely to have a lasting effect, unless the disabled people are able to achieve a level of empowerment on themselves. The empowerment is also important because it would correspond with raised social awareness of the general public, which in turn would create a social atmosphere that highlights equality between the disabled and non-disabled as the biases against disability are fixed.

#### 1.2 Using Self-Expression and Media

Observing the Report on Public Opinion Poll 'About People with Disabilities and Their Employment', almost half of the disabled respondents (47.2%) gave importance to social integration, communication and interaction, and psychological depression. These problems could be considered partly as a result of public stereotypes, and the answers to questions on awareness about people with disability have indicated that there are indeed stereotypes present in society. On the other hand, this could also be explained by the presence of the 'medical model' of disability, meaning that a person with disability is considered as sick and in need of long-term treatment, which results in isolation from society (USAID & Save the Children 2012). Thus, the public should grasp the concept that the disabled individuals are not 'sick', but disabled. Therefore, there is no need to sympathize, because disability is not a disease. After people stop sympathizing with the disabled individuals, the non-disabled and disabled would finally begin to see each other at the same level, making equality much more likely to be achieved than in the past.

Table 1. List of People with Down Syndrome

Name	Details	Birth Place	Source
Danny Alsabbagh	Actor who played Toby in Summer Heights High	Australia	[4]
Edward Barbanell	Actor who starred in The Ringer	United States	[5]
Jamie Brewer	Actress, best known for her role Adelaide 'Addie' Langdon in the horror TV series American Horror Story: Murder House and Nan in American Horror Story: Coven	United States	[6]
Chris Burke	Actor and folk singer, best known for his role in Life Goes On as character Charles 'Corky' Thacher	United States	[7]
Charles Waring Darwin	Youngest child of Charles and Emma Darwin	United Kingdom	[8]
Anne de Gaulle	Youngest child of Charles and Yvonne de Gaulle	France	[9]
Marte Wexelsen Goksøyr	Actress, playwright, writer and disability rights activist	Norway	[10]
Pascal Duquenne	Actor who won the Best Actor Award at the 1996 Cannes Film Festival for his role in The Eight Day	Belgium	[11][12][13]
Andrea Fay Friedman	Actor and voice actor who portrayed Amanda in Life Goes On and Ellen in the Family Guy episode 'Extra Large Medium'	United States	[14]
Karen Gaffney	Special Olympian, swimmer and president of the disability rights organization the Karen Gaffney Foundation. She is the first living person with Down syndrome to receive an honorary doctorate degree	United States	[15]
Marin Gerrier	Actor who was nominated for a Genie Award for his role in Café de Flore		[16]
Sarah Gordy	Actress who has appeared in Upstairs Downstairs and Call the Midwife	United Kingdom	[17][18]
Sandra Jensen	Patient who was initially denied a heart-lung transplant by the Stanford University School of Medicine in California because she had Down syndrome. After pressure from disability rights activists, Stanford University School of Medicine administrators reversed their decision. In 1996, Jensen became the first person with Down syndrome to receive a heart-lung transplant	United States	[19]
Tommy Jessop	Actor who starred in BBC drama Coming Down the Mountain and played Hamlet professionally with Blue Apple Theatre	United Kingdom	[20][21]
Laz-D	Rapper	United States	[22]
Joey Moss	Edmonton Oilers locker room attendant	Canada	[23]
Pablo Pineda	Actor who starred in the semi-autobiographical film Yo También and first student with Down syndrome in Europe to obtain a university degree	Spain	[24]
Lauren Potter	Actress who played Becky Jackson in Glee. She was also nominated by Barack Obama onto the The President's Committee for People with Intellectual Disabilities	United States	[25]
Paula Sage	Film actress and Special Olympics netball athlete. Her role in the 2003 film AfterLife brought her a BAFTA Scotland award for best first time performance and Best Actress in the Bratislava International Film Festival, 2004.	United Kingdom	[26][27]
Judith Scott	Outsider sculptor and fiber artist.	United States	[28]
Sanna Sepponen	Actress and Special Olympian, known for her role in Salatut elämät	Finland	[29]
Tim, the 'Oldenburg Baby'	An infant who was born after an unsuccessful abortion attempt and subsequently fostered.	Germany	[30]
Luke Zimmerman	Actor who starred in The Secret Life of the American Teenager	United States	[25]

In order to change the perceptions of the public and empower disabled individuals, self-expression could play a major role. The freedom to express one's opinion is one of the core values of a democratic society and is regarded as an important tool in exposing oneself to the public. The United Nations Universal Declaration of Human Rights states that 'everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers'. One way of using self-expression is to utilize culture. Culture may be defined as the symbols of expression that individual, groups, and societies use to make sense of daily life and to articulate their values. According to this definition, when we listen to music, read a book, watch television, or scan the internet, we try to identify or connect with something or someone. Culture links individuals to their society, providing shared and contested values, and the mass media help distribute those values. (Campbell, Martin & Fabos 2005) In other words, culture could form powerful connections between the disabled and the society and mass media could be useful means. The mass media are the cultural industries—the channels of communication—that produce and distribute songs, novels, newspapers, movies, Internet services, and other cultural products to large numbers of people (Campbell, Martin & Fabos 2005). Therefore, by using media, the disabled could effectively express themselves to the public.

In an attempt to address the needs of the disabled and make media more barrier-free, the author decided to conduct a project that would give opportunities to the disabled to utilize media as a tool of self-expression. This paper is a report of that project, which took place in Seoul, Korea. The duration of the project was about five months, from October, 2014 to February, 2015. In the following contents, this paper will closely examine the planning process of the project, observe the project in action, list the findings, and give further suggestions for the future.

## 2. DESIGNING THE PROJECT

### 2.1 Films

Dating back to the late 1800s, American films have had a substantial social and cultural impact on society. They told communal stories that evoked and symbolized Americans' most enduring values and secret desires. The most popular films often made the world seem clearer, more manageable, and more understandable. (Campbell, Martin & Fabos 2005) In

fact, films have had power in influencing people. It is a form of media that contains visual imagery, which means that it could send out a message effectively to leave a lasting impression. Jerome Bruner (n.d.), as summarized by Lester (2006) mentioned a research which showed that people only remembered 10% of what they heard and 20% of what they read, but 80% about what they saw and did. The fact that films contain strong visual images, especially because there is greater freedom for artistic expression compared to other visual forms of media, is an important advantage. Furthermore, films are comparatively barrier-free. There are fewer restraints to mentally disabled people, because the process of shooting a film could be simplified to just clicking a button and holding the camera. Also, even for people with hearing impediments and visual impediments, they could engage in writing out the scenarios or designing the props and costumes. In other words, film opens up various opportunities for people with different characteristics, making it the perfect platform for the disabled to use their various talents and imagination in their own ways to express themselves and leave a powerful message.

For these reasons, the author decided to set the project topic as making a short film of about ten minute in length. Assuming that they would not be experienced film makers, short film of about ten-minute length seemed reasonable.

### 2.2 Down Syndrome

The target group of the project was set as youths with Down Syndrome, which is a genetic condition caused by the presence of an extra chromosome 21 in the body's cells. (the United Kingdom. Down's Syndrome Association 2015) The main reason for this decision was that people with Down Syndrome were known to have many artistic talents. Judith Scott was a self-taught artist that was born with Down Syndrome. She created fiber art sculptures that was worth as much as \$10,000. Jamie Brewer, an American actress who recently appeared on the New York Fashion Week for designer Carrie Hammer, also was born with Down Syndrome. Furthermore, the author was able to discover 23 renowned individuals with Down Syndrome who have had each been participating in their own artistic fields; many of them especially talented in acting (see Table 1).

Thus, Down Syndrome youths seemed to be the most suitable group for the project judging by their talents, interests and passion. However, in order to make the empowerment of the disabled possible,

the author decided to add a different element from the status quo. Rather than taking part in the film-making by just acting, the Down Syndrome youths also structured the scenarios, shot the camera and engaged in other stages of creating a film, taking strong initiative in shooting the films.

### 2.3 Details

This project was financially supported by Korea University Center for Teaching and Learning, as part of its student research supporting program. The project was conducted by a group of four Korea University (KU) students experienced in film making, including the author, and professor from the Division of International Studies Department. The Korea Down Syndrome Society supported the project by recruiting the Down Syndrome youths interested in film making and providing a place for learning film-making. The project name was entitled 'Kamome Class', which was drawn from the Japanese movie Kamome Kitchen.

## 3. CONDUCTING THE PROJECT

### 3.1 Lessons

The lessons were divided into three and they were primarily focused on planning out the movies and learning film making techniques.

In the first lesson, Kamome Class watched four short movies of different genres and shared sentiments after watching the movies. The Korea University students and Down Syndrome youths also discussed preferences of movie genres and general plan-outs of the movies they wished to produce in the future.



Picture 1. Down Syndrome Youths Listening to the Presentations about Movies

In the second lesson, the KU students gave more detailed explanations about movie genres using presentations and mentioned about the steps of movie

production. (see Picture 1). Kamome Class also had more in-depth discussions about the topics and contents of the scenario. In order to stimulate flow of ideas, the KU students prepared mini-sized cards with written keywords. They showed the cards one by one and wrote down everything the Down Syndrome youths had to say about the keywords. This was done in order to collect ideas for the scenario, as it was difficult for the Down Syndrome youths to write out the scenarios.

In the third lesson, the Down Syndrome youths got a chance to test the cameras. Camcorders were lent for the purpose of easy manipulation. The KU students gave a brief lecture about shooting techniques and the Down Syndrome youths had a chance to try out the techniques afterwards (see Picture 2). Moreover, roles in the shooting were distributed according to each individual's interest and talent. The roles were divided into camera shooting, signaling for shooting, holding the lights, designing the arts and acting.



Picture 2. Down Syndrome Youth Trying out Film Techniques

### 3.2 Shooting

Two scenarios were created based on the discussions made in the second lesson. The first scenario, titled Model Job! was filmed at the Korea Down Syndrome Society building. The second scenario, titled Fantastic 21-21 representing the extra 21 chromosome Down Syndrome individuals have—was shot at a local café and streets near the Korea Down Syndrome Society building. Although the KU students were giving general directions, Down Syndrome youths took the initiative in signaling when to start, adjusting the camera angle, filming and acting. Some youths were especially enthusiastic in filming and they volunteered to film behind the scenes later on (see Picture 3,4,5).

Picture 3. Down Syndrome Youths on the Shooting Day Picture



Picture 4. Same as Picture 3



Picture 5. Same as Picture 3



### 3.3 Screening

After editing the films, the final products of the shooting were screened at a café located near Korea University. Posters and online postings were used in order to advertise the screening. Around 60 people attended the event, including both non-disabled and disabled individuals. After the screening, discussions on the movie followed. The Down Syndrome youths

and KU students came to the front and answered questions from the audience (see Picture 6).

Picture 6. A Down Syndrome Youth Speaking in front of the Audience



## 4. RESULTS

### 4.1 Budget Allocation

See Table 2. Details Regarding Budget Allocation

### 4.2 Findings and Suggestions

The project initially had two main purposes. First, it was aimed at empowering the disabled through providing them with effective sources of self-expression. Second, it sought to change the common bias among general public that looked down upon disabled individuals. By designing the project in a way that the Down Syndrome youths actually took the initiative in producing short films, the purpose of empowerment was achieved. However, because these youths did not have much experience in filming before and generally lacked concentration due to their inherent characteristics, the quality of the films was not high. In order for the films to have stronger effect, it would be better if this film-making process continues and the Down Syndrome youths are better trained to express themselves through movies. On the issue of changing perceptions of the general public, it was partly achieved through screening at a local café. However, the scale of the screening was too small. In order for the movie to actually have effect in shaping different images about the disabled, government, NGO or other organizations should provide support for the movies to be exposed to greater number of audience. If these two suggestions are adopted, this project is likely to have much more effect in achieving the original purposes.

Table 2. Details Regarding Budget Allocation

The 6 <sup>th</sup> Korea University Creative Challenger Program statement of accounts								
Team name		Kamome Class						
Name of the research		1,209,200 won	Given budget		2,000,000 won (100%)			
Total budget			Additional budget		0 won (0%)			
Specifics								
Title of the activity	Accounts category	Consumed budget	Given budget	Additional budget	Output			Notes
					Category	Price	Quantity	
Lessons and Shooting	Lending equipment	190,000	190,000	0	Sony HDR-CX380	1 day 25,000 won	2 cameras	SLR rent, used 10,000 points
	Snacks	114,300	114,300	0				
	Meals	116,310	116,310	0				
	Scenarios (printing cost)	9,390	9,390	0				
	Lending café (movie location)	300,000	300,000	0				
	Props	44,400	44,400	0				
	Paying the actor	50,000	50,000	0				
	Supplementary materials to lessons	Name Tags	17,500	17,500	0		500	14
Pens		4,500				2 sets		
Q Cards		1,500				1		
Screening	Lending the cafe	300,000	300,000	0				Including tea for the audience
	Making the posters	7,300	7,300	0				
	Snacks	60,000	60,000	0	Madeleine	2 1,000	120	About 60 people
Total		1,209,200	1,209,200					

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# Law and Human Rights -Violence against Women in India

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## 1. ABSTRACT

The public outcry following a brutal gang rape of a two teenage girls on 27 May, 2014 in the Katra village of Budaun district, Uttar Pradesh, India's was a watershed moment in the world's largest democracy. Acid attack on Preeti Rathi in Mumbai on Jan 18, 2014 and dowry harassment in Mathura on 1 November, 2014. All this generated widespread public and political support for strengthening legal provisions to punish sex offenders. Although the legal response is a useful deterrent against such heinous crimes, women continue to suffer due to deeply rooted social prejudices that make them vulnerable to violence and discrimination in society. In this commentary, I am to analyze the current developments with respect to gender violence in India within a background of the social position of women in Indian society. Using secondary data related to sex-selective abortions and crimes against women, we analyze the reasons of underreporting of violence and steps taken to improving gender parity in our country.

## 2. INTRODUCTION

*'There is no tool for development more effective, then empowerment of women'*

*(Kofi Annan)*

Women in India have been subject to many great changes over the past few millennia. From equal status with men in ancient times through the low points of the medieval period to the promotion of equal rights by many reformers, the history of women in India has been eventful. In modern India, women have held high offices in India including that of the President, Prime Minister, Speaker of the Lok Sabha and Leader of the Opposition. As of 2011, the Speaker of the Lok Sabha and the Leader of the Opposition in the Lok Sabha (Lower House of the Parliament) were women. An affluent society brings lots of violence, is a universally accepted truth. Gandhi ji highlighted years ago, we cannot get American dollars without American vice. There is an all-round increase in affluence and prosperity and with this affluence there is also an increase in crime and violence. Violence against women is a worldwide yet still hidden problem. Escalation in crime and violence is seen in its worst form in the case of crime against women. Women

constitute half the population in the society and it is presumed that best creation belong to the women. It is harsh reality that women have been ill-treated in every society for ages and India is no exception. Violence against women is largely unreported. Fear and stigma often prevent women from reporting incidents of violence or seeking assistance. Violence against women can fit into several broad categories. Acid throwing, child marriage, domestic violence, dowry, female infanticide and sex selective abortion, rape, sexual harassment and trafficking are on increase.

## 3. VIOLENCE AGAINST WOMEN: THE ISSUE

### 3.1 Acid Attacks

A Thomas Reuters Foundation survey says that India is the fourth most dangerous place in the world for women to live in. Recent study reveals that 78% of the reported acid attack case is for refusal to marriage or a rejection of romance. Acid is cheap, easily available, and the quickest way to destroy a woman's life. Acid attack victim faces long-term consequences, after the attack there, life style itself will changes fully in one day, even their loved one's also started ignoring the acid attack victims. Due to their horrific physical appearances, the society also looks at the acid attack victims as an alien. Acid attack victims itself feel worthless and embarrassed to come out from their houses due to their drastic changes in their appearance, their remaining life will be ruined after that incidences. After that attack there are not able to work due to their deformities, they are not get job it is difficult for them to survive in society. Damage caused by acid attacks was irreparable and it affect the victim woman both physically and psychologically.

### 3.2 Child Marriage

Child marriage has been traditionally prevalent in India and continues to this day. Historically, child brides would live with their parents until they reached puberty. In the past, child widows were condemned to a life of great agony, shaved heads, living in isolation, and being shunned by society. Although child marriage was outlawed in 1860, it is still a common practice. India had the highest number of unregistered children under age five between 2000 and 2012 and the second-highest number of child marriages,

according to a U.N. report which said the country still needs to improve immunization coverage and stop gender-based sex selection. At 71 million, India had the largest number of children under the age of five whose births were not registered between 2000 and 2012. The report said that birth registration levels in South Asia have increased since 2000, but progress has been slow. India has the greatest disparity between the poorest and richest households, with children in the poorest households being three times less likely to be registered than those in the richest. Religion also appears to play a role as Muslims have the lowest level of birth registration in India (39 per cent) followed by Hindus (40 per cent) while the Jains have the highest (87 per cent). According to UNICEF's "State of the World's Children-2009" report, 47% of India's women aged 20-24 were married before the legal age of 18, rising to 56% in rural areas. The report also showed that 40% of the world's child marriages occur in India.

### 3.3 Dowry Deaths

Dowry-system and the sati-system are the worst forms that such crimes assume. Dowry death occurs every 77 minutes, and one case of cruelty committed by either the husband or relative of the husband occurs every nine minutes. This occurs despite the fact that women in India are legally protected from domestic abuse under the Protection of Women from Domestic Violence Act. In 1985, the Dowry Prohibition (maintenance of lists of presents to the bride and bridegroom) Rules were framed. According to these rules, a signed list should be maintained of presents given at the time of the marriage to the bride and the bridegroom. The list should contain a brief description of each present, its approximate value, the name of who has given the present, and relationship to the recipient. However, such rules are rarely enforced. A 1997 report claimed that each year at least 5,000 women in India die dowry-related deaths, and at least a dozen die each day in 'kitchen fires' thought to be intentional.

The cases of dowry deaths have decreased by 1.8% during the year 2013 over the previous year (8,233 Cases). 28.9% of the total such cases reported in the country were reported from Uttar Pradesh (2,335 cases) alone followed by Bihar (1,182 cases) (14.6%). The highest rate of crime (2.43) was reported from Bihar followed by Uttar Pradesh (2.36) as compared to the national average of 1.4.

## 3.4 Sati System

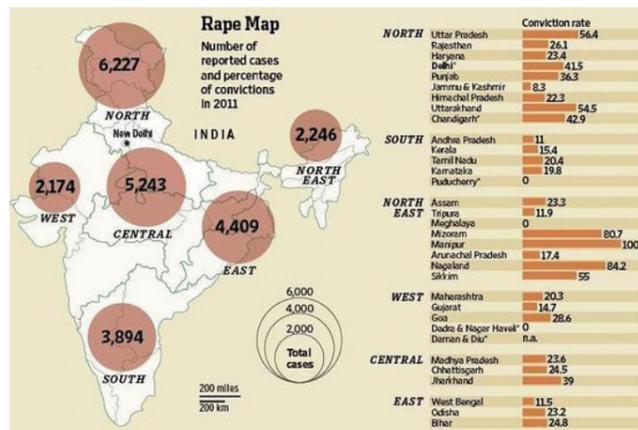
A woman who dies burning herself on her husband's funeral fire was considered most virtuous, and was believed to directly go to heaven, redeeming all the forefathers rotting in hell, by this 'meritorious' act. The woman who committed Sati was worshipped as a Goddess, and temples were built in her memory. According to Commission of Sati (Prevention) Act, 1987 sati is prohibited. Even though its prohibited still few cases occurs in India like On 21 August 2006, Janakrani, a 40-year-old woman, burned to death on the funeral pyre of her husband Prem Narayan in Sagar district. Then on 11 October 2008 a 75-year-old woman, Lalmati Verma, committed sati by jumping into her 80-year-old husband's funeral pyre at Checher in the Kasdol block of Chhattisgarh's Raipur district

## 3.5 Rape

Rape is one of the most common crime in India. According to the National Crime Records Bureau 2013 annual report, in 98percent cases victim knows the alleged rapist. According to NCRB data, there is a gradual increase in the number of rapes reported in India - from 24,923 in 2012 to 33,707 in 2013. Despite of several protests after Nirbhaya incident in New Delhi, the national capital continuous to be the unsafe city in the country. The number of rapes in Delhi has almost doubled from 585 in 2012 to 1,441 in 2013. Delhi is followed by Mumbai (391), Jaipur (192) and Pune (171) among the top unsafe cities in the country. The most horrifying fact is that majority of the offenders are known to the victims. NCRB statistics shows that 31,807 (94%) were familiar to the accused, which includes neighbors' (10782), other known persons (18171), relatives (2315) and parents (539).It is also revealed that most victims are aged between 18 and 30 years (15,556) and 14 and 18 years (8,877). Activists argue that legal system is slow to prosecute rape cases, but officials say the number of rape cases have increased because of the awareness on the part of the victims, who come forward to lodge complaints.

There were 33,764 victims of rape out of 33,707 reported rape cases in the country during the year 2013. 13.1% (4,427 out of 33,764) of the total victims of rape were girls under 14 years of age, while 26.3% (8,877 victims out of 33,764) were teenage girls (14-18 years). 46.1% (15,556 victims) were women in the age-group 18-30 years. However,13.8% (4,648 victims) victims were in the age-group of 30-50 years while 0.7% (256 victims) was over 50 year's .of age.

Figure 1. Graphic Showing the Conviction Rate of Rape Cases in India in 2013



### 3.6 Kidnapping and Abduction

These cases have reported an increase of 35.6% during the year as compared to previous year 2012 (38,262 cases). Uttar Pradesh with 9,737 cases has accounted for 18.8% of the total cases at the national level. Delhi UT has reported the highest crime rate at 41.1 as compared to the national average of 8.8.

The problem of gender-based violence runs very deep in India. The rape crisis is just one facet of the multitude of problems that reflect the gender discrimination scenario. These prejudicial attitudes are seen right from womb to tomb. They start with the practice of sex-selective abortion and infanticide, and continue through adolescent and adult life with high levels of female infant mortality, child marriage, teenage pregnancy, lesser wages for women, unsafe workplaces, domestic violence, maternal mortality, sexual assault and neglect of elderly women.

The average female life expectancy today in India is low compared to many countries, but it has shown gradual improvement over the years. In many families, especially rural ones, girls and women face nutritional discrimination within the family, and are anemic and malnourished. In India, the male-female sex ratio is skewed dramatically in favor of males. The gender ratio in India is at its most unbalanced since 1947, with 1000 boys for every 927 girls, and families should stop aborting girl fetuses. The chief reason being the high number of females who die before reaching adulthood. Ultrasound practice is the main reason for the change in the ratio of male to female children being born. In 1994 the Indian government passed a law forbidding women or their families from asking about the sex of the baby after an ultrasound scan.

Education is gradually increasing; the female literacy rate in India is less than the male literacy rate. Far fewer girls than boys are enrolled in school, and many girls drop out. In urban India, girls are nearly on a par with boys in terms of education. However, in rural India girls continue to be less well-educated than boys. According to the National Sample Survey Data of 1997, only the states of Kerala and Mizoram have approached universal female literacy. In most Indian families, women do not own any property in their own names, and do not get a share of parental property. Due to weak enforcement of laws protecting them, women continue to have little access to land and property. In fact, some of the laws discriminate against women, when it comes to land and property rights.

### 4. REPORTING OF VIOLENCE

A total of 3,09,546 cases of crime against women (both under various sections of IPC and SLL) were reported in the country during the year 2013 as compared to 2,44,270 in the year 2012, thus showing an increase of 26.7% during the year 2013. These crimes have continuously increased in reporting during 2009 - 2013 with 2, 03,804 cases in 2009 and 2, 13,585 cases in 2010 and 2, 28,649 cases in 2011, 2,44,270 cases 2012 and 3,09,546 cases in the year 2013. The rate of crime committed against women was 52.2 in 2013. Delhi UT has reported the highest rate of crime against women at 146.8 during the year 2013 as compared to 52.2 crime rate at the national level. If we talk in percentage terms the crime against women during the year 2013 has increased by 26.7% over the year 2012 and by 51.9% over the year 2009. Though there is an increase in reporting of violence cases yet there is not 100 percent reporting.

The amendments made to the criminal law are not yet comprehensive. Marital rape, for example, is still not considered a criminal offence. Rape by armed personnel (military and police), although under the purview of the law, is excluded if it occurs in several states of India (north-eastern states, Jharkhand, and Jammu and Kashmir) where the draconian Armed Forces Special Powers Act (AFSPA) deprives women from seeking legal recourse in such circumstances. The consequences of having separate law for Armed forces are many. For example, the alleged mass rape of 53 women in 1991 and the alleged rape and subsequent killing of Manorama Devi in the year 2000, both incidents involved armed forces personnel. Both cases are still in court and the verdict is yet to be delivered, decades after the crimes.

On one hand is the political apathy in formulating and implementing gender-sensitive policies. On the other is the lack of a clear protocol of action in these issues, care of victims of rape being one such example. Although a detailed directive was sent to all the state governments on establishment of Rape Crisis Centers (RCCs) and specialized Sexual Assault Treatment Units (SATUs) in 2009, no such units have been set up in the states even now, except in New Delhi. The law states that a female police officer should record the victim's statement, as well as assist her with medical and legal support. However, female police personnel account for only 6.5% of the police force, which makes it difficult to implement this. Further, the government health services in the country lack the infrastructure and resources needed to implement care for rape victims as specified by the law in most district and sub-district hospitals. It has been reported that traumatized victims often have to go from one hospital to another for forensic examination following rape. Victims often sit for hours in soiled clothes in the hospital and feel humiliated all over again in the course of insensitive history-taking by doctors and health workers. Judgmental attitudes and lack of privacy in government healthcare establishment worsens their trauma.

In other aspects of gender equality too, such as education or participation of women in the workforce, or representation of women in elected bodies, India falls short of international standards. It ranks 136 out of 186 among the nations of the world in the United Nations Development Programme's gender inequality index. Violence against women, either sexual or physical – wife beating is widely spoken of, but hardly reported – is an expression of power asymmetry between men and women. It seems to co-occur with other indicators of gender disparity. The dismal reporting rate of domestic violence can also be attributed to the attitudes of the victims. According to National Family Health Survey 3 (NFHS-3) data, 41% of women believed their husbands were justified in slapping them and 35% of the women even believed that a brutal beating is also justified if they neglected doing the household chores or looking after their children.

Studies have shown that the psychological damage is often particularly severe when sexual assault is committed by parents against children due to the incestuous nature of the assault. Incest between a child or adolescent and a related adult has been identified as the most widespread form of child sexual abuse with a huge capacity for damage to a child. Often, sexual assault on a child is not reported by the child for several

reasons like children are too young to recognize their victimization or put it into words, they are threatened or bribed by the abuser, feel confused by fearing the abuser but liking the attention, are afraid no one will believe them, blame themselves or believe the abuse is a punishment, feel guilty for consequences to the perpetrator

Coming forward in a culture that devalues female experiences of violence is extremely difficult, and if we really want to see a dramatic shift in how rape is dealt with as a crime we need to change our society's treatment of violence against women. But there are still so many women who are terrified of reporting violence because the institutions that ought to be helping them threaten, traumatize, vilify and ultimately fail them. The attitudes of institutions and the backdrop of popular culture leads victims to doubt themselves, internalize feelings of shame and guilt and to suppress their experiences.

### 5. STEPS TAKEN FOR WOMEN PROTECTION

The portrayal of societal themes in popular cinema could be considered as a reflection of popular societal attitudes. In Indian cinema, 'kissing' was not allowed on-screen on the grounds of modesty until the mid-2000s. However, rape or izzat lootna (dishonouring) of women has been a recurrent theme and sub-theme in mainstream Bollywood cinema for decades now, examples are movies like Insaaf Ka Tarazu or more recently Woh Lamhe. Rape and subsequently avenging rape often forms the central narrative of many films. Rape also appears as a sub-plot to reinforce the heroic role of male actors in films. The familiar portrayal of rape and sexual assault of women in cinema, however tacit, is disturbing in its lack of censorship (versus censorship of acts like kissing, for example) and its conflicting pervasiveness in a mainstream form of entertainment. However, this is not to deflect from the limited, but realistic representation of rape and forms of sexual abuse in alternate films such as Bandit Queen (Shekhar Kapur 1994) and Monsoon Wedding (Mira Nair 2001) which used the film media to bring the issues into mainstream discourse. Another genre of mainstream media the saas-bahu serials (translation: mother-in-law and daughter-in-law soaps) have been acknowledged for their role in featuring other forms of violence and discrimination within Indian households. At a time when the country is introspecting its treatment of women, it would be useful to remind ourselves that sexual violence in the popular media may be a way of highlighting issues of violence against women and may also, in many cases, be an echo of pervasive prejudices in

our society. Although the presence and acceptance of violence against women in mainstream media in India warrants further research, its existence as a reflection of societal attitudes is indeed indisputable.

If we talk in law terms several laws have been framed. A new section, 376A has been added which states that if a person committing the offence of sexual assault, 'inflicts an injury which causes the death of the person or causes the person to be in a persistent vegetative state, shall be punished with rigorous imprisonment for a term which shall not be less than twenty years, but which may extend to imprisonment for life, which shall mean the remainder of that person's natural life, or with death'. In the case of 'gang rape', persons involved regardless of their gender shall be punished with rigorous imprisonment for a term which shall not be less than twenty years, but which may extend to life and shall pay compensation to the victim who shall be reasonable to meet the medical expenses and rehabilitation of the victim. Newly introduced section 357B in the Code of Criminal Procedure stipulated that the compensation payable to the victim as per the section 357A shall be in addition to the certain changes has been introduced in the Criminal Procedure Code, 1973 and Indian Evidence Act, like the recording of statement of the victim has been made more friendly and easy, character of the victim is irrelevant for consideration, presumption of no consent where sexual intercourse is proved and the victim states in the court that there has been no consent. The age of consent in India has been increased to 18 years, which means any sexual activity irrespective of presence of consent with a woman below the age of 18 will constitute statutory rape. Although, the decision of death penalty for the most extreme rape cases was approved by the Indian Parliament. Section 53A of the Code of Criminal Procedure lays down certain provisions for medical examination of the accused. Section 164A of the Code of Criminal Procedure deals with the medical examination of the victim. The amendment has made it mandatory for all government and privately run hospitals in India to give free first aid and medical treatment to victims of sexual abuse covered under Sections 326A, 376, 376A, 376B, 376C, 376D or 376E of the Indian Penal Code.

The law in September 2012 directed all workplaces to set up committees to address such complaints. Sexual Harassment of Women at Workplace Act of 2013 allows for the ambiguity of sexual harassment cases by recognizing sexual assault as a civil offence. The mechanism for dealing with sexual harassment in the workplace had first been spelt out in 1997 in the so-

called Vishaka Guidelines. A study by the Associated Chambers of Commerce and Industry of India found that fewer than half of India's companies had set up cells to deal with cases of sexual harassment. While 49 per cent of companies in the Delhi-National Capital Region had done so, only 38 per cent in Mumbai, 42 per cent in Kolkata and 46 per cent in Bangalore had grievance mechanisms.

In rural areas, schools have been reported to have gained the improved sanitation facility. Given the existing socio-cultural norms and situation of sanitation in schools, girl students are forced not to relieve themselves in the open unlike boys. Lack of facilities in home forces women to wait for the night to relieve themselves and avoid being seen by others. In 2011 a "Right to Pee" (as called by the media) campaign began in Mumbai, India's largest city. Women, but not men, have to pay to urinate in Mumbai, despite regulations against this practice. Women have also been sexually assaulted while urinating in fields. Thus, activists have collected more than 50,000 signatures supporting their demands that the local government stop charging women to urinate, build more toilets, keep them clean, provide sanitary napkins and a trash can, and hire female attendants. [97] In response, city officials have agreed to build hundreds of public toilets for women in Mumbai, and some local legislators are now promising to build toilets for women in every one of their districts.

The government has promised to step up and take vigilant and preventive measures including: night patrols, supervision and checks on public and private bus drivers and their assistants, and the banning of vehicles with tinted windows or curtains. Government has set a committee for speeding up trials of sexual assault cases on women. Another committee has been appointed to examine the lapses that led to the recent incident in the city.

## 6. CONCLUSION

Gender-based violence, especially violent crime like rape, is a multifaceted problem. To address this, it is essential to tackle various other concurrent issues that act as contributing factors and thus play an equally important role. An example for this is the portrayal of women in Indian cinema. This bears evidence to the deep-rooted prejudicial attitudes towards women and other deeper societal issues that are contributory to these crimes. Although the incorporation of stringent laws and stricter punishments are important to deter people from committing such crimes, the solution to this is much more than just promulgation. Though the amendment to criminal law addresses a few of these

issues, it still falls short in many aspects. It is important to acknowledge that judicial reform is only one aspect; there is a more humane side to this whole issue. Legal solutions in the form of amendments to improve conviction rates could function as deterrents to such acts. However, in such a scenario health workers could play a key role in applying a gender lens to their work as healthcare providers, researchers and policymakers. In a country with gender discrimination operating at so many levels and in so many ways, bringing about the needed change requires dedicated and combined efforts of multiple agencies. While education and empowerment of women is a larger social process to which public health professionals may not be able to contribute directly, we urge health workers and public health professionals to facilitate improved access, utilization and coverage of women in the services that we study, plan, implement and evaluate. Doctors, nurses and other healthcare providers, researchers and public health professionals need to respond to this social predicament individually and engage with this problem in their own families, organizations and communities.

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# Death with Dignity: The Supreme Court of Canada's Recognition of the Right to Die

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## Session II: The Human Body as an Object of Law

On February 6<sup>th</sup> 2015, the Supreme Court of Canada, in a unanimous decision, affirmed that Canadians have the constitutional right to choose to hasten imminent or looming death by electing to have physician assistance in dying. The challenge was brought as a *Charter* infringement of Section 7 of the Canadian Charter of Rights and Freedoms which guarantees that 'everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice' by Section 241(b) of the Canadian Criminal Code prohibiting any person from assisting or counseling another to commit suicide. The court stated 'section 7 is rooted in a deep respect for the value of human life. But s.7 also encompasses life, liberty and security of the person during the passage to death. It is for this reason that the sanctity of life is no longer seen to require that all human life be preserved at all costs' (Rodriguez, at p. 595, per Sopinka J.). 'And it is for this reason that the law has come to recognize that, in certain circumstances, an individual's choice about the end of her life is entitled to respect' (Carter, at para 63)

The road to such a decision has neither been easy nor short. The first case in Canada to deal with the issue, triggering a twenty year legal and public debate on the matter, was *Rodriguez v British Columbia (Attorney General)*. In that case, the Supreme Court held that the provisions of the *Criminal Code* had not violated any *Charter* rights for three reasons, directly related to the three *Charter* protections raised in the challenge. The Court held, as per Justice Sopinka, that Section 7 had not been violated because the *Criminal Code* provision was not found to violate any principles of fundamental justice. The long history on the prohibition of suicide was examined and the court concluded that this continued prohibition reflected part of the fundamental values of society and therefore could not be in violation of the fundamental principles of justice.

Section 12 of the *Charter* (protection from cruel and unusual punishment) was also held not to be violated. This is because a mere prohibition of conduct was not sufficient to trigger the protections intended by s.12 against actual mistreatment.

Section 15 of the *Charter* was deemed not to be violated. As Justice Sopinka found that the issue at bar would best be resolved by use of other provisions. Section 15 states:

*'Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability'*.

For the sake of argument however, Sopinka considered the Section 15 right to have been violated, yet the *Criminal Code* provisions were saved under Section 1 of the *Charter*. Section 1 requires that only those limits which are 'reasonable and justifiable in a free and democratic society' be placed on the rights guaranteed by the *Charter*. In determining whether or not such a limit is reasonable, the courts consider whether the objective of the limit is 'pressing and substantial' in addition to being rationally connected to the end which it aims to achieve. Moreover, the end must not be attainable by any less restrictive means; this requires the challenger of provisions, in a Section 1 argument, to demonstrate that there exists a less restrictive means by which to achieve the 'pressing and substantial' objective.

Justice McLachlin and Justice L'Heureux-Dubé wrote a dissenting opinion in *Rodriguez*, in which they found that the right to security of the person enshrined in Section 7 had been violated and was not saved by Section 1. They wrote:

*'This right has an element of personal autonomy, which protects the dignity and privacy of individuals with respect to decisions concerning their own body. A legislative scheme which limits the right of a person to deal with her body as she chooses may violate the principles of fundamental justice under s. 7 if the limit is arbitrary. A particular limit will be arbitrary if it bears no relation to, or is inconsistent with, the objective that lies behind the legislation. When one is considering whether a law breaches the principles of fundamental justice under s. 7 by reason of arbitrariness, the focus is on whether a legislative scheme infringes a particular person's protected*

interests in a way that cannot be justified having regard to the objective of this scheme. The principles of fundamental justice require that each person, considered individually, be treated fairly by the law.

Fast forward a couple decades and we arrive at the decision which will change the framework of a Section 7 analysis for years to come. The Supreme Court, per McLachlin writing for a unanimous court, found that the Section 7 protected rights of life, liberty and security of the person were violated by Section 241(b) of the Criminal Code because the prohibition was too broad to survive the Section 1 analysis stated above. The objective was pressing and substantial, however, the means employed to achieve such ends were not rationally justifiable in a 'free and democratic society'.

Furthermore, it was determined that the deprivation of Canadians' rights to life, liberty and security of the person, especially those Canadians suffering from serious illness, is not in accordance with the principles of fundamental justice due to the prohibition on assisted dying being overbroad. Section 241 of the Criminal Code reads:

*'Everyone who (a) counsels a person to commit suicide, or (b) aids or abets a person to commit suicide; whether suicide ensues or not, is guilty of an indictable offence and liable to imprisonment for a term not exceeding fourteen years.'*

The criminal prohibition is overbroad because it applies to all Canadians, even individuals like one of the plaintiffs in *Carter v. Canada*, Gloria Taylor, who were competent, fully-informed, and free from coercion and duress. Moreover, the ban is not justified because Parliament could protect vulnerable people while still allowing competent, seriously ill and suffering adults the right to a physician-assisted death. This illustrates the balancing test that a court must undertake in evaluating the protected rights entrenched in the *Charter* and the reasonable limits safeguard within Section 1.

Although the decision has already raised some strong opposition, the court and defenders of the 'right to die' argue that the restrictions and protections attached to the application of this newly created right under Section 7 are sufficient to ensure that abuses do not occur. Such worries include the potential for vulnerable adults to be swayed by family members, friends or persons in positions of influence to induce the vulnerable adult to request their life be terminated by a physician. Another issue, which raises

considerable concern, relates to adults with severe mental or physical disabilities. The argument against the 'right to die' states that people living with and suffering from serious disability will be motivated to use the Section 7 right protecting security of person to end their life pre-maturely. An underlying concept in the aforementioned arguments against the 'right to die' is the worry of the devaluation or undervaluation of a person's life. By allowing adults with irreversible illness to choose to end their lives, it is argued that this choice represents society's view that the individual suffering from such disease has a life less worthy of being protected than that of a 'healthy' or 'normal' adult.

There is no significant commentary on these challenges against the decision in *Carter* to date, however the Court's decision is clear in laying out strict criteria for people wishing to engage their right to choose death. The Court wrote that individuals who meet the following rigorous criteria should be able to avail themselves of assistance in dying. An individual would need to *'be a competent adult; clearly consent to the hastening of death; have a grievous and irremediable medical condition (including an illness, disease or disability), and be suffering intolerably.'*

The Canadian Charter of Rights and Freedoms is regarded as sui generis among the nations of the world. No other country has constitutionally enshrined rights, freedoms and protections in the same way as Canada does. As such, it seems logical to begin by noting that prior to the 1982 enactment of the Charter all rights held by Canadians were codified in the Bill of Rights (1960) and prior to that in an 'implied' Bill of Rights (1867-1960). This historical desire to preserve and codify the rights of the citizenry show, among many other things, that Canada has always valued the individual within the group. As opposed to an American framework of rights protections, which have generally been litigated as pertaining to groups of people. For instance, an arguable equivalent to the Section 7 protection of 'security of the person' is found in the American Bill of Rights Due Process Clause of the Fifth Amendment. The Fifth Amendment reads:

*'No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property,*

*without due process of law; nor shall private property be taken for public use, without just compensation.'*<sup>1</sup>

Of the 45 states prohibiting physician assisted suicide in the U.S., the state of Oregon was among the first jurisdictions in the world to allow it. In 1994, Measure 16 established the *Oregon Death with Dignity Act*, which legalized physician-assisted death limited by certain restrictions. The measure was approved by general election, with a final tally showing 51.3% of voters in favour, and 48.7% voters in opposition<sup>2</sup>. In 2005, after several attempts by lawmakers at both the state and federal level to overturn the *Oregon Death with Dignity Act*, the Supreme Court of the United States, upheld the law in a 6-3 ruling in the case of *Gonzales v. Oregon*, 546 U.S. 243 (2005).

Notably, the *Charter* makes no explicit mention of the values of 'dignity' or 'autonomy' and yet the entire constitutional document is sprinkled with these concepts. It is clear that protecting 'security of the person' would logically include an individual's ability to make free choices; especially choices relating to their well-being and health. The true strength of constitutionally protected rights, like those enshrined in the *Charter*, is that the rights included are protected absolutely. A government could not legislate in order to get out of its duties and mandate to protect, uphold and respect the *Charter* rights enjoyed by 'everyone'. The decision in *Carter* affirms the view that above all else, an individual's autonomy and dignity during life must be of the utmost importance and it follows that choices concerning death be protected equally.

This begs the question, as to why the recognition of the right to die with dignity was delayed by nearly twenty years in Canada. In 1994, while the state of Oregon enacted legislation allowing for (human) euthanasia, the Supreme Court of Canada denied the same right to Sue Rodriguez, who in 1993 was told that her illness (Amyotrophic lateral sclerosis 'ALS' or 'Lou Gehrig's disease') would take her life in less than one year's time.

A crucial distinction between the Canadian judicial analysis on the issue and its American counterpart, is the examination of laws as being contrary or consistent with the principles of fundamental justice. It seems as though this was the sticking point in Sopinka's 1994 decision, while in 2015 the court found that to disallow the right to die with dignity would violate the principles of fundamental justice.

<sup>1</sup> [http://www.law.cornell.edu/constitution/fifth\\_amendment](http://www.law.cornell.edu/constitution/fifth_amendment), retrieved on February 10th 2015)

<sup>2</sup> <http://www.deathwithdignity.org/history/facts/oregontimeline>, retrieved on February 10th 2015

One might ask, 'What is a principle of fundamental justice?' They are those principles which protect both procedural and substantive rights. Generally speaking, the principles of fundamental justice are regarded as the legal principles that command 'significant societal consensus' as 'fundamental to the way in which the legal system ought fairly to operate'. (*R v. Marmo-Levine; R. v. Caine*, [2003] 3 S.C.R. 571 at para. 113). The amorphous nature of these principles allows for broad judicial interpretation and consideration when deciding on a particular issue. This seemingly flexible model of rights analysis would have therefore favoured the recognition of the right to die with dignity in the Rodriguez case. Nevertheless, the court was still reluctant to recognize such a right under the guise of Section 7.

The characterization of a fundamental principle of justice, as demonstrated in *Rodriguez*, supports the finding that the outcome of a Section 7 challenge may depend wholly or partially on the characterization of the right in question. Further, the consistency or contradiction of a right with the principle(s) of fundamental justice will also direct the outcome. In essence, the question pre-supposes if not, dictates, the answer. How then does *Carter*, lay a foundation for future questions arising under Section 7? What does it truly mean to be in line with the principles of fundamental justice? Justice McLachlin wrote:

*'Section 7 does not promise that the state will never interfere with a person's life, liberty or security of the person — laws do this all the time — but rather that the state will not do so in a way that violates the principles of fundamental justice...Section 7 does not catalogue the principles of fundamental justice to which it refers. Over the course of 32 years of Charter adjudication, this Court has worked to define the minimum constitutional requirements that a law that trenches on life, liberty, or security of the person must meet (Bedford, at para. 94). While the Court has recognized a number of principles of fundamental justice, three have emerged as central in the recent s. 7 jurisprudence: laws that impinge on life, liberty or security of the person must not be arbitrary, overbroad, or have consequences that are grossly disproportionate to their object....Each of these potential vices involves comparison with the object [emphasis added] of the law that is challenged (Bedford, at para. 123)' (Carter, at paras 71-73).*

In *Rodriguez*, Justice Sopinka seemed to have accepted the preservation of life as the object of S.241 of the *Criminal Code*. However, as clarified in

*Carter*, the object of the *Criminal Code* provision in Rodriguez was that ‘section 241(b) has as its purpose the protection of the vulnerable who might be induced in moments of weakness to commit suicide’ (p. 595)... [This purpose] is “grounded in the state interest in protecting life and reflects the policy of the state that human life should not be depreciated by allowing life to be taken’ (ibid.). His remarks about the ‘preservation of life’ in Rodriguez are best understood as a reference to an animating social value rather than as a description of the specific object of the prohibition’ (*Carter*; at para 76). This further illustrates that the outcomes is dictated closely by the characterization of the impugned law or provision.

Interestingly, at paragraph 79, McLachlin offers some guidance and insight into the Court’s Section 7 analysis. She writes ‘In determining whether the deprivation of life, liberty and security of the person is in accordance with the principles of fundamental justice under s.7, courts are not concerned with competing social interests or public benefits conferred by the impugned law’. It is obvious that the decision in *Carter* raises profound questions regarding the process by which cases such as these will be dealt with in the future. What does *Carter* actually say about the importance of the decision to those affected? Facially, it seems to say that the Courts will adjudicate matters without much, if any at all, consideration of the people whose lives will be fundamentally affected by the outcome. This may not be problematic per se however, when dealing with future issues, the exclusion of social and public interests will likely raise some controversy.

In conclusion, for patients awaiting their death at the hands of an irreversible disease, *Carter* represents their right to choose to die with dignity and with respect of their individual autonomy; values highly regarded in Canadian jurisprudence and the Canadian Constitution. Quite simply, *Carter* is a case which enshrines a human right, a right to choose to end one’s life, but more importantly, the human right to choose to do or not to do something. This clearly upholds both the concepts of ‘autonomy’ and ‘dignity’ by elaborating on what was intended to be protected by Section 7 of the *Charter*. In recognizing the right to choose to end one’s life, the Supreme Court of Canada has made a truly meaningful advancement in Canadian human rights jurisprudence. Only time will reveal the legal repercussions of the *Carter* decision in relation to future Section 7 litigation in addition to other *Charter* rights such as ‘freedom of religion’ or the current hot topic of ‘free speech’. The now constitutionally protected right to ‘die with dignity’

as encompassed by s.7, in my view, represents the ultimate recognition of what it means to have ‘free choice’ and by extension to be vested with absolute self-determination.

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## DNA Exonerations in the USA: A Lesson for Everyone

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## ABSTRACT

Innocent people have been – and continue to be – convicted of crimes they did not commit. The tireless efforts of organisations like the Innocence Project in the United States of America (USA) have helped to free 325 wrongfully convicted individuals through post-conviction DNA testing. This number represents the tip of the ‘miscarriages of justice’ iceberg. Although the media spotlight is focused on the cases emerging from the USA, these issues are not theirs alone. Several other countries have overturned the convictions of innocent people (e.g., the Chamberlain case in Australia); however, none are on the same scale as the USA. In this paper, I highlight factors associated with these known wrongful convictions, and explain how criminal justice systems around the world are susceptible to these risk factors. Rather than viewing the US-based cases as an anomaly, I argue that governments should learn from their lesson and proactively introduce reforms.

## 1. INTRODUCTION

Although not the first DNA exoneration in the United States of America, the case of Ronald Cotton is arguably the most well-known. On July 28, 1984, a young college student, Jennifer Thompson, was brutally raped in North Carolina. A man broke into her apartment during the night while she was sleeping and raped her. Jennifer reported that during the attack she studied the perpetrator’s face so she could later identify him if she ever had the opportunity (Innocence Project 2015).

The police interviewed Jennifer and she worked with a forensic sketch artist to produce an image of the perpetrator. Someone in the community thought it looked like a man by the name of Ronald Cotton. Cotton went down to the police station to clear his name and provide an alibi for that night. Unfortunately, he confused his weekends, which the police quickly discovered. Mistakes like this can happen – it is very difficult to accurately report what took place on a mundane night in your life (e.g., Olson & Wells 2012). As a result of Ronald’s error the police believed he intentionally lied about his whereabouts and interpreted this as an indication of guilt. Cotton

discovered his mistake and voluntarily returned to the police station to rectify the situation. That was August 1<sup>st</sup>, 1984. Cotton spent the next 11 years behind bars for a crime he did not commit (Stahl 2009).

During the investigation, the police showed Jennifer pictures of Ronald and a number of other non-suspect individuals (aka fillers). She picked Ronald. Then, the police showed Jennifer a live in-person lineup and she picked Ronald again. The police officer involved in the case told her that she picked the same man from both lineups. According to Jennifer, ‘So, in my mind I thought, ‘Bingo. I did it right.’ I did it right’. (Stahl 2009). Thompson testified against Cotton. He was convicted of rape and burglary based on the combination of circumstantial evidence and her convincing testimony (Stahl 2009).

While Cotton was in prison, other prisoners began confusing him with a new inmate, Bobby Poole. Poole had been convicted of a rape that took place around the same time and place as Jennifer’s attack. Armed with this information, Ronald Cotton won the right for a new trial. When Thompson saw Poole in court she did not recognise him as her attacker – in her mind, the rapist had Cotton’s face. Ronald Cotton was convicted again. In 1994, Cotton learned about DNA testing from the OJ Simpson trial. With his attorney’s assistance, Cotton fought for post-conviction DNA testing of the sample collected from the rape. The semen matched Bobby Poole, not Ronald Cotton (Stahl 2009). The governor of North Carolina officially pardoned Cotton in July 1995 (Innocence Project 2015).

Although his is one of many, Ronald Cotton’s wrongful conviction has received intense media attention. In part, this is because Jennifer did something incredibly special – she reached out to Ronald to apologise. To apologise for her error that sent him to prison and to ask for his forgiveness. The pair wrote a book together and now travel the world telling their story and raising awareness about issues with eyewitness evidence and the mistakes that can be made in investigations and prosecutions (Thompson-Cannino, Cotton & Torneo 2009).

## 2. WRONGFUL CONVICTIONS AROUND THE WORLD

### 2.1. The United States of America

Uncovering a wrongful conviction is a difficult task made possible by a confluence of factors. Although confirmed miscarriages of justice are not a new phenomenon (e.g., House of Commons 1967; Munsterberg 1908), DNA testing has largely removed lingering doubts about claims of innocence (Connors, Lundregan, Miller & McEwen 1996; Scheck, Neufeld & Dwyer 2003). In total, in the US alone, the Innocence Project – a not-for-profit organisation founded by Barry Scheck and Peter Neufeld at the Benjamin N. Cardozo School of Law – used DNA testing to establish 325 cases of wrongful convictions. These indisputably innocent individuals spent an average of 14 years behind bars – a total exceeding 4,000 years – for crimes they – did not commit. Each wrongful conviction represents two errors: (1) an innocent person is punished, and (2) the actual perpetrator remains free. Indeed, the perpetrator's freedom may extend beyond the innocent person's exoneration; unlike Bobby Poole, less than half of the actual perpetrators are brought to justice (Innocence Project 2015).

These DNA exonerations do not represent all of the innocent lives destroyed by miscarriages of justice. Of all possible crimes (e.g., hit and run, larceny, property crime), a limited few involve the perpetrator's DNA (i.e., rape, homicide). In some cases, even if DNA was left at the crime scene, it may not have been properly preserved to allow for subsequent testing. Furthermore, even if DNA is available for testing, the law in that country or state may not allow for post-conviction DNA testing (e.g., Steinback 2007). Taken together, researchers are confident that the DNA exonerations represent only the tip of the iceberg of wrongful conviction cases. Indeed, in a combined effort between Michigan Law and Northwestern Law, the National Registry of Wrongful Convictions (National Registry 2015) cites 1,560 cases of confirmed innocence to date. Whereas the Innocence Project relies upon DNA evidence to prove actual innocence, the National Registry includes any case that meets the following criterion:

*'A person has been exonerated if he or she was convicted of a crime and later was either: (1) declared to be factually innocent by a government official or agency with the authority to make that declaration; or (2) relieved of all the consequences of the criminal conviction by a government official*

*or body with the authority to take that action. The official action may be: (i) a complete pardon by a governor or other competent authority, whether or not the pardon is designated as based on innocence; (ii) an acquittal of all charges factually related to the crime for which the person was originally convicted; or (iii) a dismissal of all charges related to the crime for which the person was originally convicted, by a court or by a prosecutor with the authority to enter that dismissal. The pardon, acquittal, or dismissal must have been the result, at least in part, of evidence of innocence that either (i) was not presented at the trial at which the person was convicted; or (ii) if the person pled guilty, was not known to the defendant, the defense attorney and the court at the time the plea was entered. The evidence of innocence need not be an explicit basis for the official action that exonerated the person.'*

Despite increasing the number of exonerations reported by the Innocence Project (2015) fivefold, the National Registry claims that, 'the exonerations we know about are just a fraction of those [wrongful convictions] that have taken place' (National Registry 2015).

### 2.2. Around the World

With only a few exceptions (e.g., the Lindy Chamberlin case in Australia), very few wrongful convictions outside of the USA have received significant coverage by the mainstream Western media. Nonetheless, the lack of media attention does not mean that other countries have not experienced their own miscarriages of justice.

The Innocence Network connects independent Innocence Projects around the world, including those in the USA, Canada, France, Ireland, Israel, Italy, the Netherlands, New Zealand, South Africa and Taiwan. For brevity, I highlight only a few countries' miscarriages of justice. Canada's Association in Defence of the Wrongly Convicted [AIDWYC] reports 19 wrongful convictions, with the first exoneree spending more than 50 years in prison (AIDWYC 2015). The Project Innocence France has not yet contributed to an overturned conviction (although the Court of Revision has independently overturned convictions during appeals); nonetheless, they are lobbying the National Assembly to propose a bill that will facilitate additional criminal conviction reviews. Although not part of the Innocence Network, Japan has uncovered 167 wrongful convictions, some on death row (Johnson 2015). Like in the USA, the numbers presented above are unlikely to represent

the totality of the innocent persons convicted by those countries' criminal justice systems.

In contrast, my research team was unable to obtain any information about wrongful convictions in several G20 countries: Argentina, Brazil, India, Indonesia, Mexico, Republic of Korea, and Russia. The lack of readily-available information on confirmed wrongful convictions in those countries should not be taken as evidence that none exist. Rather, many countries may not have suitable processes and procedures in place to uncover and/or officially overturn a wrongful conviction. Organisations around the world are arguing for reform on a number of fronts to prevent, correct, and compensate for the convictions of innocent persons. The justice system will be better served if organisations like the Innocence Project are put in place to provide pro bono services to individuals claiming innocence. The legal system needs to ensure the proper long-term preservation of DNA evidence, provide individuals with access to post-conviction DNA testing, and appropriately compensate exonerees. Without proper infrastructure and responsive criminal justice systems that address known risks and issues, innocent individuals will continue to be convicted of crimes they did not commit.

## 3. RISK FACTORS FOR WRONGFUL CONVICTIONS

Regardless of whether one examines DNA or non-DNA exonerations emerging from the USA, the same factors emerge as increasing the risk of wrongful convictions. Some factors are more or less prevalent than others depending on the type of crime; thus, I resist ranking them according to risk or prevalence in wrongful conviction cases. For example, the Innocence Project (focused exclusively on DNA-based cases with crimes such as rape and homicide) cite mistaken eyewitness identification evidence as the largest risk factor present in 72% of the 325 cases (Innocence Project, 2015). In contrast, the National Registry (2015) includes additional crimes such as child abuse and other non-homicide and non-sexual assault crimes. Although eyewitness evidence is present in nearly 80% of their stranger sexual assault cases, less than 20% of the child sexual abuse wrongful conviction cases cite a mistaken identification by a stranger. Thus, rather than discuss them in order of risk, I present them according to the amount of psychological and legal research dedicated to the factor. This non-exhaustive list does not include all of the issues that may contribute to wrongful convictions; rather it focuses on the three factors

that have received substantial research attention. In addition to the factors discussed in the following sections (mistaken eyewitness identifications; false confessions; false or misleading forensic evidence), three additional factors warrant attention by those seeking reform: government misconduct; bad lawyering; and perjury, false allegations, or the use of informant snitches (Innocence Project 2015; National Registry 2015). Given the constraints of the current paper, I focus my discussion on only three factors, but I contend that criminal justice systems around the world need to understand all of the various factors that increase the risk of miscarriages of justice.

### 3.1. Mistaken Eyewitness Identifications

Mistaken eyewitness evidence is arguably the most researched wrongful convictions risk factor. Munsterberg (1908) highlighted the fallibilities of human memory at the turn of the last century; however, Elizabeth Loftus' pioneering work (e.g., Loftus & Palmer 1974) brought the field of eyewitness memory to the forefront. In the past few decades, researchers have pinpointed factors that affect the quality of an eyewitness' memory (e.g., how long they saw the criminal event, their view of the perpetrator, the age of the eyewitness; for a review see Beaudry, Bullard & Dolin 2014), factors that influence their recall of the event (e.g., the format of interview questions; Garven, Wood, Malpass & Shaw 1998), and factors that affect an eyewitness's identification decision (e.g., instructions provided to the eyewitness before the lineup; Malpass & Devine 1981) and the reported confidence in that decision (e.g., information from the lineup administrator; Wells & Bradfield 1998).

Contrary to popular belief, our memory does not function like a video camera; we cannot rewind and play back an important event as it actually occurred. Instead, when we try to remember an event our memory reconstructs the pieces, filling in missed or forgotten details and incorporating information from other sources. As a result, an eyewitness' testimony should be treated like any other kind of trace evidence (e.g., fingerprints) that needs to be preserved and protected from contamination (Wells et al. 2000). Unreliable eyewitness memory, in general, can substantially affect the course of a police investigation (e.g. Memon & Wright 1999). Nonetheless, perhaps the most convincing piece of eyewitness testimony is when an individual points to the defendant and says that s/he is the person the eyewitness saw commit the crime (e.g., Boyce, Beaudry & Lindsay 2007). Unfortunately, eyewitnesses make mistakes, and the real-world rates of selections of known innocent

lineup members (i.e., in real cases, approximately 35% of eyewitnesses who made an identification selected a filler; e.g., Wells, Steblay & Dysart 2015) raise questions about the reliability of an eyewitness' identification of a stranger. Whereas the selection of a filler has limited forensic relevance (apart from discrediting the eyewitness as having a poor memory for the culprit), a mistaken selection of an innocent suspect (i.e., someone that the police believe may have committed the crime, but who is actually innocent of the crime in question) has the potential to lead to further investigation and potential prosecution of that innocent individual. As stated by Wells (Stahl 2009), the criminal justice system needs eyewitnesses; we cannot and should not abandon this evidence. Rather we must develop procedures and institute policy to increase its reliability.

### **3.1.1. reforms**

Efforts to improve the reliability of eyewitness identification evidence are focused on factors that are within the control of the criminal justice system (e.g., Technical Working Group for Eyewitness Evidence [Technical Working Group], 1999; National Academy of Sciences [NAS], 2014; Wells et al. 1998, a White Paper by the American Psychological Association). These recommendations include (but are not limited to) separating eyewitnesses so each can give independent pieces of information, informing the eyewitness that the culprit may or may not be in the lineup; constructing the lineup such that all lineup members fit the general description provided by the eyewitness and none stand out in the lineup as unique or different; having an independent person who does not know the suspect's identity show the lineup to the eyewitness; prohibiting the administrator from giving any information to the eyewitness about their selection; and asking the eyewitness for a statement about the certainty of their selection. Furthermore, the officers should retain a video record of the interaction between the eyewitness and the lineup administrator; however, emerging research suggests that this video record has the most utility if combined with uncontaminated and properly conducted identification procedures (e.g., Beaudry & Sauer 2015; Beaudry, Sauer & Blanksby 2015). Finally, eyewitness researchers argue that a case should not be prosecuted based on eyewitness identification evidence alone; instead, it should only be pursued if there is independent corroborating evidence of the suspect's guilty (Wells et al. 2000). The main goal of these recommendations is to ensure that any lineup selection made by an eyewitness is guided by their memory for (and recognition of) the selected lineup member rather than the result of

social influence (intentional or otherwise). Given the space constraints, I cannot discuss the extensive recommendations (and the empirical evidence supporting them) in great detail; however, I point interested readers to the readily-accessible reports mentioned previously.

### **3.1.2. risk factors beyond the USA**

The fallibility of eyewitness memory is a consequence of the human condition. As a result, no country is immune from the risk of mistaken identifications. Like the USA, several countries have undertaken reforms of eyewitness identification procedures (e.g., International Association of Chiefs of Police 2010; Police and Criminal Evidence Act 1984, Home Office 2010; Cory 2001). Other countries, however, appear to have overlooked or are unaware of the empirical evidence supporting eyewitness reform. Given the prevalence of eyewitness identification evidence, its potential to be easily and effortlessly contaminated, and its persuasiveness in court, it is crucial that criminal justice systems around the world incorporate the empirically-supported best practice recommendations into their police practices. The majority of the recommendations require minimal resources and can be effortlessly implemented with nominal training (Technical Working Group 2003).

### **3.2. False Confessions**

People seem to inherently understand that an eyewitness can make an error perhaps because they have experienced their own memory slips on occasion. In contrast, it is more difficult to comprehend why an innocent person would falsely confess to a crime they did not commit. People struggle to place themselves in the position of the accused – as the subject of intense suspicion – and tend to underestimate the influence of external factors (e.g., pressure from the officer) on the person's decision to confess (Kassin 2008). General incredulity notwithstanding, the Innocence Project established that 27% of DNA-exonerated individuals made false confessions or admissions during the time of the investigation or during prosecution (e.g., pleading guilty for a lighter sentence). These cases demonstrate that confessions are not always prompted by internal knowledge or actual guilt, but are sometimes motivated by a combination of external and internal influences.

When you imagine the type of interrogation that might lead to a false confession you might think of 'third-degree' techniques in which the interrogator tortures the suspect into confessing (i.e., the types of

techniques released in the 'CIA Torture Report' by the Senate Select Committee on Intelligence 2014). Third-degree methods, however, are the exception rather than the rule in traditional US-based interrogations. Instead, American police use invisible, but effective, psychological interrogation techniques, which rely on increasing pressure, manipulating the suspect, presenting false evidence, feeding details of the case to the suspect, and deceiving the suspect (Kassin et al. 2010). The interrogation's focus on obtaining an admission of guilt, rather than on obtaining information, creates a situation in which the suspect is the focus of intense scrutiny, isolated from others, and made to feel anxious. While the suspect is in this state of duress the interrogator—if following the Reid Technique, the most popular interrogation technique in the USA (Inbau, Reid & Buckley & Jayne 2001) – proceeds through a nine-step process tailored to maximise the costs associated with not confessing (e.g., discomfort; a harsher charge) while minimising the costs associated with confessing (e.g., getting to leave the interrogation room; a more lenient sentence). These maximisation and minimisation techniques increase the likelihood of an innocent person making a false admission (Kassin et al. 2010).

Suspects may be under interrogative duress for hours (some of the wrongful convictions cited interrogations of more than 12 hours; Innocence Project 2015), placing the suspect in a food- and sleep-deprived state, which increases their vulnerability. Furthermore, some dispositional characteristics can increase individuals' vulnerability in an interrogation setting. Some of the DNA exonerees were younger adults or adolescents, some had limited mental capacity (i.e., low IQ scores), and some suffered from substance abuse or mental health issues. Teina Pora's ongoing case in New Zealand is a perfect example of a vulnerable person making a false admission in response to interrogative pressure. Pora was 17 years old at the time of the 1993 interrogation, but suffered from Fetal Alcohol Syndrome Disorder and 'was thinking and acting like a much younger child of about eight to ten years of age' (Pora v. The Queen 2015, p.14). As of March 3, 2015, Pora is free after the Privy Council panel overturned his conviction; however, the prosecution can still retry him (Taylor 2015). Beyond dispositional factors, Kassin (2005) contends that innocence actually puts innocent people at risk of making a false confession because they are more likely to waive their rights, talk with the police, and be the target of intense pressure from the police if they assume that the suspect is deceptive rather than innocent.

Beyond being persuasive to courts, false confessions are particularly damaging because they taint other aspects of the case. That is, compared to non-confession cases, the wrongful conviction confession cases included more errors in other aspects of the case, such as improper forensic evidence and mistaken eyewitness evidence, falsely creating an appearance of corroborating evidence (e.g., Kassin, Bogart & Kerner 2012). Findings from laboratory studies and analyses of wrongful conviction cases call into question the fundamental presumption that various pieces of evidence obtained during an investigation are independent. Worse, in several states, the costs of a false confession are particularly high: individuals who provide a 'voluntary' confession lose the right to post-conviction DNA testing.

### **3.2.1. reforms**

Interrogation practices in the USA have received significant attention in the past decade, particularly in response to the report by the International Committee of the Red Cross (Danner 2009) and the so-called CIA torture report (Senate Select Committee on Intelligence 2014). Both reports highlight the continued use of third-degree techniques and they open the door to conversations about the most effective way to obtain reliable information from persons of interest, regardless of whether they are suspected of petty larceny or large-scale terrorist activity. Recommended reforms propose moving from an accusatorial approach – where the goal is to get a confession – to an information-gathering approach that relies on building rapport and establishing empathy (Kassin et al. 2010, a White Paper by the American Psychological Association). Besides condemning third-degree techniques, various psychological techniques (e.g., lying about incriminating evidence and minimising the consequences of crimes in exchange for a confession) are prohibited. In addition, the recommendations include limiting the interview length and video-recording the interaction between the suspect and interrogator. Approaching an interrogation as an interview is already commonplace in the UK (Kassin et al. 2010) and Australia where investigative interviewers agree that these reforms have merit (Sivasubramaniam, Goodman-Delahunty, Fraser & Martin, in press).

### **3.2.2. risk factors beyond the USA**

Minimal information is available about interrogation practices around the world; however, the existence of the European Court of Human Rights and the United Nations Convention against Torture

(for example) suggests that the USA is not alone in their use of coercive techniques. In fact, one scholar described the use of torture in China's police stations as 'a widespread problem' (Li 2014, p. 128). In a particularly outrageous case in Japan, police and prosecutors interrogated Hakamada Iwao for more than 264 hours over a period of 23 days (Carney & Johnson 2015); Iwao spent 48 years in prison after confessing to four murders and was on death row when his conviction was overturned. There is little reason to expect that the citizens of other countries would be less susceptible to the powerful interrogation techniques used by police, regardless of whether they rely on torture, 'enhanced' interrogation techniques, or psychological tactics. Criminal justice systems around the world must move away from interrogations toward information-gathering techniques that maintain the rate of true admissions while decreasing the risk of false confessions (Meissner et al. 2014).

### 3.3. False or Misleading Forensic Evidence

DNA testing was developed through rigorous scientific procedures; however, other types of forensic testing were developed in the police station and have not been scientifically validated. Some of the problematic and unreliable evidence includes matching one hair to another (hair microscopy), bite mark comparisons, firearm and tool mark analysis (e.g., does the rifling from this bullet match one found at the scene of the crime?), and shoe print comparisons. It is not hard to imagine how these forensic science errors occur. When a crime scene analyst (who, typically, works for the government) is presented with a sample she/he knows it belongs to the suspect and may believe that it is their job to try to find a match. Of course, their job is not to find a match, but rather to determine if it is a match. This mindset contributes to the forensic confirmation bias, one of the risk factors that increases the likelihood of a wrongful conviction. The forensic confirmation bias is particularly problematic when the interpretation of evidence is subjective and ambiguous (Kassin, Dror & Kukucka 2013).

In their examinations of wrongful convictions, the Innocence Project (2015) revealed that even some properly-validated techniques (e.g., serology [blood type testing] and DNA testing) had been improperly conducted or inaccurately conveyed by the analysts in their testimony. The most heinous case of forensic misconduct uncovered thus far is that of Fred Zain. Zain failed a number of forensic science courses (including one offered by the Federal Bureau of Investigation [FBI]). He then lied about his credentials

and had a long career as a forensic scientist, proffering testimony for the prosecution in 12 states, including West Virginia and Texas. One of the first wrongful conviction cases overturned through DNA evidence (Gerald Davis) revealed that Zain had lied about the match between the defendant and the sample taken at the crime scene (Innocence Project 2015). According to one estimate, Zain's testimony contributed to the conviction of over one hundred defendants charged with violent offences; many of these convictions were eventually overturned because the reliability of his evidence and credibility of his testimony was brought into question (West Virginia Innocence Project 2015). Although Zain's behaviour is unusual and most certainly the exception to the rule, it serves to highlight the imperfect science underpinning some convictions.

#### 3.3.1. reforms

The unreliability of forensic scientific evidence is the focus of a 350-page report released by the National Research Council of the National Academies in the USA (NAS 2009). In addition to identifying the challenges and issues with the field, the NAS discussed, in great detail, the agencies' findings and put forward thirteen clear recommendations to improve the reliability of the forensic evidence entered in court. The report points to the fragmentation of the forensic science disciplines as a major issue facing the field and many of their recommendations focus on increasing national oversight of the laboratories and agencies as well as standardizing the testing and reporting of forensic tests. Again, for brevity's sake, I will not rehash their report, but rather I direct interested readers to the National Academy Press website where the report can be easily obtained. In addition to increasing the standards for forensic scientific evidence, researchers are trying to develop new ways of conducting forensic tests that remove the influence of confirmation bias, reduce the risk of false positives for suspects, and provide an estimate of error rates (e.g., Wells, Wilford & Smalarz 2013).

#### 3.3.2. risk factors beyond the USA

The problems facing the American system are not unique, but rather have been brought to light through the DNA-exoneration cases and their current attempts to overhaul the system by developing the National Institute of Forensic Science (NAS 2009). Several countries, including Australia (e.g., Edmond, Thompson & Tangen 2013; Heyer & Semmler 2013) and China (e.g., Na 2014), are also calling into question the reliability of forensic science evidence

in investigations and the courtroom. Given the subjectivity – and apparent implied credibility – of many forensic tests, it is unlikely that any country whose legal system relies on forensic evidence is immune from the issues facing the US. Thus, it is critical that all countries, regardless of whether they rely on the adversarial or inquisitorial justice system, revisit their approaches to forensic science.

## 4. CONCLUSION

Criminal justice systems will never be perfect. Nonetheless, the considerable efforts of organisations like the Innocence Projects around the world are making great strides in the pursuit of justice. Academics have an important role to play in this regard and should collaborate with organisations and governments as much as possible. Psychological researchers arm these organisations with the empirical evidence outlining the risks associated with current criminal investigation procedures and the potential solutions. If governments around the world adopt the proposed reforms citizens will be able to place greater confidence in the police and courts. Ideally, raising awareness of the large numbers of wrongful convictions emerging from the USA and elsewhere will prompt other countries to proactively introduce reforms to curb the known risk factors associated with wrongful convictions.

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## **World Politics and International Relations**

### *Session I: Overcoming Obstacles in the Path to a Global World*

#### **1. INTRODUCTION**

Researchers in many fields have grappled with the question of how to make research 'count' (Head 2010), especially when related to issues of injustice and human suffering. Indeed, there has been an upsurge in calls by governments and academics alike for evidence-based policy, particularly in areas of social policy (Nutley, Walter & Davies 2007). This has fuelled a growth in scholarship designed to understand the functions of research in policy discussions. This paper contributes to this debate by analysing the uses of evidence regarding alternatives to immigration detention in the policy development of two countries.

#### **2. THE USES OF RESEARCH IN POLICY – MAKING PROCESSES**

There is no single explanatory model for understanding the ways in which research can guide policy-making (for an overview see Nutley, Walter & Davies 2007, pp.92-111). Trostle, Bronfman and Langer (1999) – building on Weiss – suggest there are three major approaches: rational, strategic and diffusion. More recent scholars have built on these conceptual foundations. In a strong contribution, Haynes et al. (2011) identify four broad models of research utilization by policy makers. These models are the:

- *Instrumental*, whereby policy makers use research to answer questions about policy problems and to identify potential solutions;
- *Opportunistic*, in which policy makers and advocates make use of evidence from an existing pool of knowledge in response to opportunities that demand a swift policy response;
- *Rhetorical*, in which research is used to buttress predetermined policy objectives; and
- *Conceptual*, in which ideas emanating from research permeate the policy-making community, shaping knowledge and perspectives that consequently influence broad approaches to policy matters.

Despite the growth in this area of study, there is a shortage of work specialising on the role of

research in migration policies, with one notable exception (Boswell 2008, 2009a, 2009b). Christina Boswell's work is set against the growing dominance of instrumentalist accounts of research-to-policy processes. Boswell (2009b) argues the interest in evidence-based policy has largely been framed by an instrumentalist understanding of policy-making, in which governance is dominated by technocratic concerns rather than ideological debates. In this framework, policy makers use research to fill a gap in knowledge and to assist in choosing effective mechanisms for service delivery. Any failure to take up relevant expert knowledge is seen to be due to political pressures, lack of organisational capacity to engage with research, or irrelevant and poorly communicated research findings (Boswell 2009b).

Boswell challenges these instrumentalist accounts. In contrast, she argues that research performs several important symbolic functions for groups engaged in migration policy negotiation. Her arguments stem from her detailed work on migration policy organisations involved at the national and EU level (2008, 2009b) and, to a lesser extent, on public immigration policy debates in Germany and the United Kingdom (2009a). She contends expert knowledge is used and valued by organisations for both instrumental and symbolic reasons. She finds expert knowledge is not only used by organisations to help them achieve their goals by providing evidence of what will work. It is also used to provide legitimacy to an organisation as a credible authority and to substantiate claims by lending authority to particular policy positions (Boswell 2008, 2009b). Organisations that are vulnerable to criticism and competition from rival agencies are more likely to use expert knowledge to secure greater legitimacy and credibility (Boswell 2009b). In addition, expert knowledge can substantiate existing policy positions by lending authority to one position and destabilising others. This is particularly relevant in policy areas that are highly contested, such as migration (Boswell 2009b). Boswell further concludes there is little evidence that politicians and their advisors use research in the development of policy positions. This paper extends Boswell's work by examining the use of research in the development of alternative to detention policies in two countries.

### 3. A COLLABORATIVE RESEARCH PROJECT ON ALTERNATIVES TO IMMIGRATION DETENTION

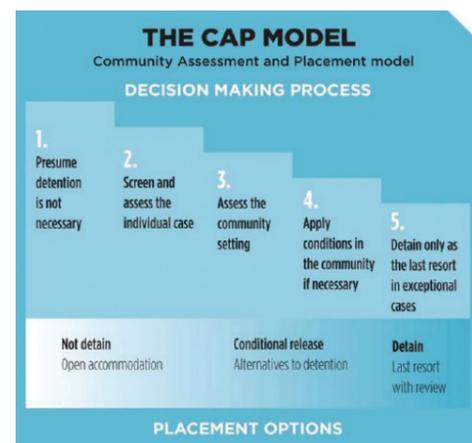
Immigration detention has become an integral policy in the governance of borders, with many thousands of migrants detained each day. Detention has increased exponentially in recent years, as countries have introduced more stringent detention policies and expanded detention capacity. Detention as a policy has flourished despite well-established evidence that detention has a serious and negative impact on the mental and physical health of detainees (Robjant, Hassan & Katona 2009) and regularly contravenes human rights (Edwards 2011). Further, incarceration in a place of detention is arguably a disproportionate response to the administrative issue of migration status.

Notwithstanding the global growth in detention numbers, governments have also recently shown an interest in alternatives to immigration detention (Sampson & Mitchell 2013). Alternatives to detention allow a migrant to live with freedom of movement in the community while a migration matter is resolved. The author undertook research on alternatives to immigration in order to provide up-to-date expert knowledge for these policy debates. This research was undertaken in partnership with an international advocacy organisation called the International Detention Coalition (the 'IDC'). The IDC is a coalition of more than 300 members in over 70 countries working on the issue of immigration detention.

The research involved a comprehensive international comparison of alternatives to detention through an extensive literature review, an internet-based survey and international field work in eight countries. Fieldwork included in interviews with 57 participants and eight site visits. I used this data to develop a new model on alternatives to immigration detention, called the Community Assessment and Placement model (the 'CAP model') (see Figure 1). The CAP model provides a framework for policymakers, non-governmental organisations and members of the public to consider the potential for alternatives to detention to be applied in local contexts. The CAP model was published in 2011 under the title *'There are alternatives: A handbook for preventing unnecessary immigration detention'* (the 'Handbook'). It was launched at the Global Roundtable on Alternatives to Detention hosted by the United Nations High Commissioner for Refugees ('UNHCR') and the Office of the High Commissioner for Human Rights in Geneva in May 2011. A detailed

description of the model, including eighteen detailed case studies, is available elsewhere (Sampson, Mitchell & Bowring 2011).

Figure 1. The Community Assessment and Placement Model (the 'CAP Model')



### 4. APPLICATION OF THE RESEARCH FINDINGS BY GOVERNMENTS

The Community Assessment and Placement model was designed to provide the IDC with a framework for presenting the research findings to governments, IDC members and other audiences. The publication and presentation of the findings in the form of the CAP model has resulted in a surprisingly powerful and positive response from governments and international bodies. The CAP model has since been presented to over 50 governments and used by several countries (including Belgium, Japan, the Netherlands, Taiwan, Thailand and the United States) to develop alternatives to detention in their context. In addition, the Handbook has been translated into Japanese, Spanish and Chinese.

This section will describe the uses of the research findings in the policy discussions of two governments. These case studies provide the basis for my analysis of the functions of expert knowledge in migration policy in the following section.

#### 4.1 The Ad Hoc Release of Refugees from Detention: Thailand

On Monday 6 June 2011, 94 refugees and two asylum seekers, including 34 children, were released from an immigration detention centre in Bangkok, Thailand. The released detainees were Ahmadiya people from Pakistan who had been detained since December 2010 in overcrowded and inhumane conditions despite being recognised as refugees by

UNHCR. A full description of the developments leading to release is available elsewhere (International Detention Coalition 2011b).<sup>1</sup> This remarkable achievement of Thai civil society advocacy was underpinned by the information on alternatives to detention generated through the collaborative research with the IDC.

Members of the IDC in Thailand approached the director of the IDC in late February 2011 for information on models they could use to discuss with the government and UNHCR. The Immigration department had expressed interest in exploring release options and asked Thai non-governmental organisations ('NGOs') for proposals in writing. These NGOs then turned to the IDC director for assistance. Drawing from the research, the director and I brainstormed the types of mechanisms used in similar contexts and provided the Thai NGOs with a proposal which combined aspects of programs in Hong Kong and Malaysia, along with other relevant examples.

The information we provided was used by the NGOs in their report to the Prime Minister's office and provided the basis for the final negotiated model of release. The success of the model relied on civil society banding together to form the Refugee Freedom Fund to pay bond and to provide for the refugees' accommodation and basic needs after release until resettlement could be secured. The government made use of an existing release mechanism, with a bond and reporting requirement attached.

The successful outcome led to high hopes for a future reduction in the detention of refugees and vulnerable groups such as children:

[The Asia Pacific Refugee Rights Network] believes that the release of the 96 detainees is the first step towards the achievement of the goal of ending arrest and detention of refugees and asylum seekers in Thailand and the region (International Detention Coalition 2011b).

Indeed, a year later two stateless children and their family were released from detention in Bangkok after having been detained for more than 18 months (Asia Pacific Refugee Rights Network 2012). This second release used the same release model described above and was used to advocate for legal reforms that would limit the detention of minors and their families and

<sup>1</sup> The release was also reported on Thai television, which can be viewed at [http://www.youtube.com/watch?feature=player\\_embedded&v=r0MSAkONDE0](http://www.youtube.com/watch?feature=player_embedded&v=r0MSAkONDE0)

create a national legal framework to protect refugees in Thailand. This advocacy is ongoing.

#### 4.2 Release of Vulnerable Groups and Policy Change: Japan

The most extensive application of the research in policy development has been in Japan. The Japanese government first engaged with alternatives to detention at the Sub-Regional Roundtable on Alternatives to Detention held in Seoul, Korea in April 2010. This meeting sparked the interest of the government in alternatives to detention and provided an opportunity for government and civil society groups to meet and discuss these issues for the first time. The government feedback to the conference organisers was that our presentations on the research were most beneficial. An important step during these meetings was that they identified an existing avenue through which detainees could be released which had been underutilised.

After the meeting, the government and civil society organisations started to meet regularly to pursue alternatives to detention. As a first step, they focused on pursuing an alternative to detention for minors. The government subsequently released all minors from detention and deflected new unaccompanied minors who arrived at the airport from being placed in detention. This has since resulted in an official change in policy to no longer detain minors. Further developments included a reduction in overall detention numbers; an on-going working partnership between government and key NGOs; and the establishment of a Detention Monitoring Committee (International Detention Coalition 2011a).

In October 2011, the director of the IDC joined the government and civil society for a four day *Roundtable on Alternatives to Detention* in Japan during which they discussed the development of an alternative to detention pilot. In preparation, a Japanese NGO translated the entire Handbook into Japanese. One concrete outcome of those meetings was a pilot project to enable the release of vulnerable groups. This pilot is being funded by the NGOs, with the government paying for research and providing a key contact within the immigration department. Another outcome was a new policy to review the cases of those detained for a year or longer to try to prevent long-term detention.

## 5. THE USES OF THE CAP MODEL IN POLICY-MAKING PROCESSES

The developments in Thailand and Japan provide the basis for my discussion of the functions of research in policy-making settings. This section will analyse the ways in which the CAP model has been used by governments in light of the literature on the functions of research in policy development. The section reinforces the range of ways in which research is put to use by institutions and associated actors engaged in policy debates. However, I argue that the use of research as a tool for stimulating new policy ideas has been underestimated in much of the literature on research-to-policy processes, particularly with regards to migration policies.

In this section I will discuss three of the four uses of research by policy makers identified by Haynes et al. (2011) – instrumental, opportunistic and conceptual (or enlightenment) – as tools for describing the processes at work in relation to this research. Although Haynes et al. (2011) also identify a fourth use of research – the rhetorical or ‘substantiating’ function – this was not evident in the examples I review. This is not to say that governments have not used the CAP model in this way, but rather that my perspective and the processes of change I encountered meant I was not aware of those uses. This is something that could be explored in more depth in the future.

### 5.1 Instrumental Uses of CAP

One of the most immediate uses of research is when it is used in an instrumental fashion by officials who are working to fulfil policy directives (Boswell 2009b, Haynes et al. 2011). In these situations, research is used to provide technocratic input and detailed evidence regarding the best way to implement established policy. Research is thus seen as a tool to assist with problem solving. It is not surprising, therefore, that the countries in which CAP has had the most immediate engagement and influence are those in which a policy decision had already been made to pursue alternatives and detailed information about modes of implementation were needed. This was apparent in Thailand, where the government had expressed interest to Thai NGOs in finding a way to release the Pakistani Ahmadiya group from detention but wanted a proposal on how this could be achieved. Similarly, once a policy decision had been made in Japan, this too created a need for detailed discussions on how such alternatives to detention could be implemented on-the-ground. This resulted in the director of the IDC attending a four-day meeting to

discuss options. In another example, the government of Mexico asked the IDC for a detailed proposal on alternatives to detention for children after first encountering the research at the global roundtable. In a further example of its instrumental uses, many NGO members of the IDC have sought detailed advice about potential alternatives to detention for their own country leading to a number of small pilots by NGOs in conjunction with government.

Although these instrumental uses of the research are significant, they do not capture two other uses of the CAP model identified during this process; namely, its use in response to political opportunities that arise and as a tool for exploring new policy ideas.

### 5.2 Opportunistic Uses of CAP

The opportunistic use of research in policy making refers to the role of research when a political moment emerges in which substantial policy change becomes possible (Haynes et al. 2011, p.567). In these moments, advocates and policy makers make use of the ‘reservoir of knowledge’ (Hanney et al. 2003, p.14) to drive their policy position forward. This coincides with Matthew Taylor’s (2005) advice to researchers to remain aware of their political context and to look for opportunities for their research to be brought to bear on policy discussions.

As an international network with global reach, the IDC secretariat is well positioned to respond to opportunities to advocate for policy change in response to critical incidences or emerging trends. The use of the CAP model with the Japanese government could arguably be framed as an opportunistic use of research, in that the government was experiencing a crisis in detention management and was looking for resources to help. The IDC secretariat and its local members identified this opportunity and ensured the government was invited to the regional roundtable. In another example, the United States decided to release hundreds of detainees from detention in February 2013 as a result of federal budget cuts connected to the country’s economic downturn (Zakaria 2013). Although the IDC had already been a lot of work done with the government in relation to alternatives to detention, this political moment created another opportunity to press the issue further. The Director responded by going to the United States to support the IDC’s local members and meet with government to further explore and support the expansion of release options in the context of these developments. The CAP model and the research findings were used in

this process to provide evidence of what works in other contexts.

### 5.3 The Use of CAP for Enlightenment

A final way in which research can influence the policy making process is through the slow, gradual infiltration of concepts and ideas into the policy field or ‘enlightenment’ (Haynes et al. 2011; Nutley, Walter & Davies 2007). Through this process of insinuation (Pawson 2006) or galvanisation (Haynes et al. 2011), ideas developed by researchers are used to expand the conceptual horizons of policy makers and stimulate new ways of thinking. This has been underestimated in much of the literature, perhaps because of the dominance of work on evidence-based policy, which focuses attention on instrumental applications of research findings. Indeed, Boswell (2009b) concluded politicians and their advisors rarely use research to develop policy positions.

The CAP model was seen by many as a fresh approach to the issue of detention and alternatives, prompting discussion in many circles about the ways in which we can re-frame detention decisions and increase use of community management options. This perspective was evident during discussions at the various roundtable meetings. These forums provided an important opportunity to expose policy makers to new ways of thinking about detention and its alternatives and proved a significant and productive avenue by which such an enlightenment process could be facilitated. Although the Handbook may well have fulfilled this function independently of these roundtables (such as through a policy-maker reading the Handbook independently), it is much harder to gauge this kind of influence.

The development of alternatives to detention in Japan was kick-started by their exposure to the research findings at the roundtable held in Seoul in April 2010. Due to the existing problems the government was experiencing with detention and the prior lobbying work by local IDC member organisations, the government was perhaps open to this topic (certainly enough to attend a roundtable). However, according to the NGOs, there was no major prior interest and no commitment to policy change before that event. At the roundtable in Seoul, the representatives from the migration department were exposed to a new way of thinking about detention and migration management through the presentation of the CAP model. The ideas in the model were reinforced by presentations from the countries of Hong Kong, Australia, and New Zealand on their alternative to detention policies. The IDC

secretariat were told by their Japanese members that the government was struck by the research and this started them on a pathway of exploring alternatives both within the department and in collaboration with local NGOs and the IDC secretariat.

The government of Mexico similarly expressed considerable interest in the research at the global roundtable in 2011 held in Geneva and has since embarked on a process of exploration for options in their country. As part of this process, the IDC established a secretariat office in Mexico City and the Handbook was translated into Spanish. The outcome of those meetings has been a request from the Mexican government for a detailed proposal on an alternative to detention for minors (thus moving from enlightenment to instrumental uses of research). The IDC have since undertaken a feasibility study for alternatives to detention in Mexico, including for children (International Detention Coalition 2013). Further, in response to concerns that the CAP model does not fully reflect the challenges of the Mexican context, the IDC has undertaken a follow-up study to focus on alternatives to detention in transit contexts (due to be released in mid-2015).

These country examples show that research can, indeed, introduce new ideas or concepts into policy discussions. Once accepted, these ideas are tested at a small scale – such as through piloting – before expanding to wide scale application and, sometimes, a formal change in policy. This differs from the instrumental uses of research in which a policy decision is made first and this then leads bureaucrats to seek out information to achieve that policy.

This is not an either/or scenario. For instance, the exposure to new ideas as offered at the roundtables does not always result in interest or uptake of the research findings by all parties. Many governments have not pursued alternatives to detention since attending such a meeting. However, there is evidence that exposure to new ideas continues to infiltrate thinking in the months and years afterwards. For example, one government advisor who attended a meeting in Australia told us a year later that the exposure to the ideas was very helpful for her to think about the policy area from a new point of view, although it wasn’t possible to implement any of the ideas at the time. However, she explained one particular idea became relevant some months later after a court decision required a shift in government policy on a particular issue. This demonstrates that the influence of research on policy processes is not necessarily immediate but can be the result of a more

diffuse and elongated process of enlightenment in which ideas are carried into future contexts.

## 6. CONCLUSION

This paper has explored the role of research in the development of alternatives to immigration detention. By focusing on the specific functions of research in policy development in several contexts, I have shown that the impact of research can be extensive. However, these impacts are not concentrated solely at the point of policy decisions but are much more dispersed in nature. The research was found to have instrumental, opportunistic and enlightening functions for organisations involved in policy discussions.

My findings reinforce the foundations laid out by the literature on the functions of research in policy making. However, I extend the work undertaken by Boswell (2009b) on the functions of expert knowledge in migration policy by demonstrating the significant role research can play in introducing new concepts into policy discussions. In particular, I found policy makers can be open to new ideas regarding their area of policy and that exposure to such ideas has the potential to lead to significant change. Migration policy scholars have underestimated the conceptual model of expert knowledge usage, also known as galvanisation or enlightenment. While the paper confirms research is used in instrumental and opportunistic ways in migration policy debates, it also demonstrates that research can introduce novel ideas into the policy arena. Through my observations of the uses of the CAP model in international and domestic policy forums, I show that expert knowledge can be an important tool by which policy makers are stimulated to think about their area of policy in new ways and to take policy in new directions. This coincides with Pawson's conclusion that 'policies are born out of the clash and compromise of ideas, and the key to enlightenment is to insinuate research into this reckoning' (2006, p.169). I have shown that research can contribute to substantial policy change, even in the highly sensitive and politically charged area of detention policy. The value of active participation in policy structures and debates is thus affirmed in a most uplifting manner.

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# Maintaining More Inbound Tourism Income: The Visa, the Infrastructure and the Exchange Rate Taking China, Japan and EU For Example

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## 1. OVERVIEW

It has long been an impression that developing countries with abundant tourism attractions were dream places for foreigners to travel. In fact, they were, especially for China. During the past 10 years, Tourism income in China has played more and more important part in China's GDP. However, in recent years things have undergone a subtle change. Though there was a huge increase in the outbound tourism of China in 2014, inbound tourism went oppositely.

According to the statistics of the World Tourism Organization, the number of inbound travelling people was 116.9 million in the first 11 months of 2014, which decreased by 1.1% on year-on-year basis of 2013. The appreciation of the RMB, the serious contamination and the crowd all account for the decline, but to our surprise, the tedious process of getting Chinese Visa plays the leading role of preventing foreigners from coming to enjoy the wonderful scenery. This paper is inspired by the author's own experience when travelling around Europe and communicating with local people. Given the successful example of Japanese and EU, some actions must be taken and these cases will be the textbook for those countries that aim to increase the tourist income and optimize tertiary industry.

## 2. STATISTICS FIGURE

Let's take the situation of China as an example. Below is a figure of inbound tourism income of China (data form Chinese National Bureau of Statistics) since 2004.

The total income is going up steadily all these years, except for the period between 2007 to 2009, when, as we all know, Financial Crisis started from the Wall street stroke the whole world economy. But this result takes inflation into consideration and thus the conclusion is a little puzzling – it seems that China is getting more money from the foreigners' pocket. To see the real developing condition of tourism, let's take a look at the number of people.

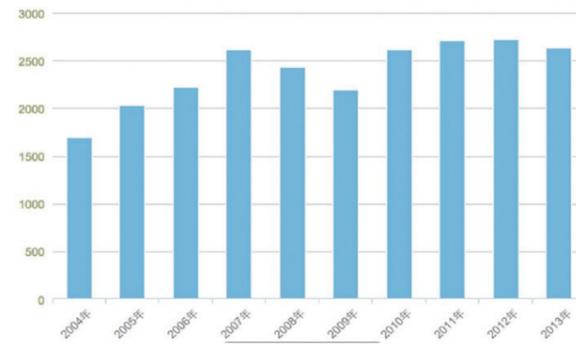


Figure 1. The Foreign Currency Income of Inbound Tourism in Past 10 Years of China(100 Million Dollars)

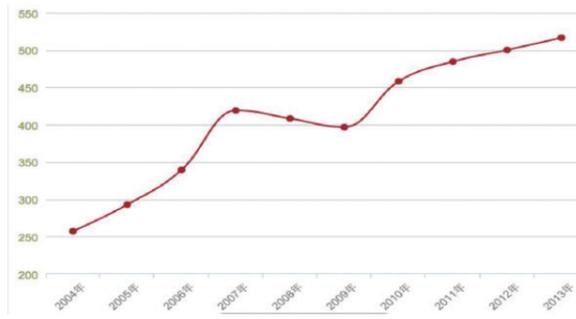


Figure 2. The Number of Inward Passengers in Past 10 Years of China (10 thousand)

When concentrating on the number of people, the statistics are more convincing. In theory, as China is more open to the world and the average real income of all the countries is increasing, it follows that the number of inbound tourists should also increase. But surprisingly, beginning from 2012, China seems like a less attractive destination for foreign tourists. And following table lists the detail information of tourists' deduction in 2014.

REGION	(10000 PERSON)	GROWTH(%)
ASIA	1636.15	1.70
AMERICA	310.65	-0.55
EUROPE	548.41	-3.11
AFRICA	59.69	8.00
OTHERS	0.18	-16.52

Table 1. The Detail Composition of Inward Passengers in 2014 of China (by Region)

Though people from Asian countries compose most part of the inward tourists and this column

is increasing, they are mostly from Hong Kong or Taiwan. On the contrary, tourists from Japan, Indonesia and Thailand are decreasing by more than 5%. Meanwhile, the western countries are taking main responsibility for this phenomenon – the decrease in number of inbound tourists.

Now it's clear: Apart from the inflation, the overall situation of inbound tourism is getting worse, no matter in western countries or in Asia.

## 3. REASON ANALYSIS

### 3.1 The Visa

The first and the most important factor is the prolix and time-consuming process of getting a Visa. Tom, a Norway photographer I encountered who is crazy about Chinese culture and interested in making new acquaintance said that applying a Chinese visa is not that easy. Though he has been to China twice, he has to pay extra 75 Euros to third party in addition to 60 euros visa fee because there is no consulate in the city where he lives. Tom is one of the people who will change the plan once they get recommendations from people during the trip. But the tourist visa requires the sightseers to provide the schedule both in detail and in advance as well as other complex documents. This requirement limits the freedom of travelling. As a result, he started to visit other Asian countries, including Vietnam, Japan and Thailand, which carry out more convenient travelling policy in recent years.

David Rand, another example is an American teacher, who works in Yunnan province, China. According to his experience in Asia, many countries offer Landing visa, some can even waive the visa. However counties such as China ask the individual to submit the air ticket receipt and accommodation reservation for 3 nights, or the invitation letter provided by the residence of PRC. 'I love to see the wonderland, but I really don't like to waste so much time collecting the files' he said.

Jinglong Li, a professor of Anhui University, has claimed in his paper that, the government should spare no efforts to simplify the procedure otherwise it will keep the potential tourists away. And actually it is a bidirectional influence. For me when I typed this paper, I was preparing for my visa at the same time. I got a list of 23 documents that I need to get the Visa to enter Deutschland, which is a touch task. And as students, we also need files such as authentic act of kinship and studying certificate sealed by home

institution. This process is little annoying and truly it is blocking tourists going inside or outside.

### 3.2 The Infrastructure

The second aspect is about infrastructure. It may sound a little abstract. So I explain the using three specific examples: Credit card, Internet and Couchsurfing.

Credit card is a method of payment allowing the cardholder to pay for goods and services based on the holder's promise to pay for them. In a word, it can free the tourists' burden of carrying too much cash. But in some places the credit card systems are not so perfect. And to make things worse, one can never find ATM when he or she is in desperate need on the trip. That's the reason why people have to carry a load of cash with themselves. Apparently, more cash means more risk. I remembered when I was in Porto, my eyes were caught by a pair of bling shoes. But point of sales terminal in that shop served neither Visa nor MasterCard, but only local credit card. Awkwardly I was just out of cash at that time. I loved those shoes so much that I ended up crossing the whole district to find one ATM. Obviously an easy approach to paying the money will add to the advantage to the tourist attraction.

The second is about the Internet. As the dean of China Tourism Academy, Bin Dai said in one interview the current management system of Internet may scare away the travelling customers from other countries. In that short talk, he pointed out that visitors used to focus on just scenery. But since the growing popularization of DIY tour, tourists are more willing to equip themselves with strategic Apps, such as Yelp, TripAdvisor or Uber. And as our lives are more and more connected to the social network site, people, for instance, would like to upload pictures taken on the trip and mark the location on Facebook or Instagram. So, establishing good working Internet condition for the tourists, including more Wi-Fi port and available VPN, is a must.

Now come to the last, the Couchsurfing. This may be a little unfamiliar to some people. Couchsurfing is a hospitality exchange and social networking platform which provides the members to 'surf' on couches by staying as a guest at a host's home, host traveler. I mention this because I really had great time with the help of Couchsurfing. I contacted the local people and communicated with them, cooked the tasty Chinese food for them while they warmly welcomed me by showing me around, taking me to try local specialties

and even lending me the museum card, which of course, saved me a sum of money. What I want to say is that travelling is not only about beautiful scenery, the people and the incidences we meet can also have strong influences. We look for wonderful moments and experiences, and such platform will enrich the memories. Yes, it may be dangerous cause we are entering a stranger's home, especially for a girl, but as the saying goes 'you can never be too careful', so just see the profile and the rating comment cautiously, they can increase the possibility of choosing the right place. I am not here to advertise, the truth is these kinds of platform are completely blank in the Asia and I think there is a huge potential market. Some travelers go to a place just with the aim of getting involved in local circumstances, and with the help of this trust-based platform they can better communicate with homestay family and better understand the culture. The Airbnb is now getting more market shares in China. As far as I am concerned, if more platforms like Couchsurfing or Airbnb gain popularity in China, more foreign tourists with cultural communication preference will come.

### 3.3 CNY Appreciation and Diplomatic Policy

The factors above pay much attention to microcosmic aspects. Let's turn to the other point of view to see what else may keep foreigners from going to China?

Figure 3. The Exchange Rate of USD against CNY

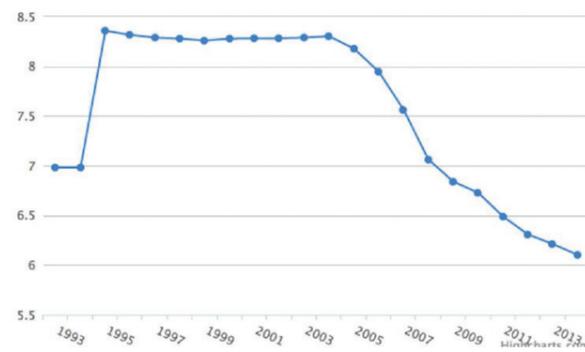
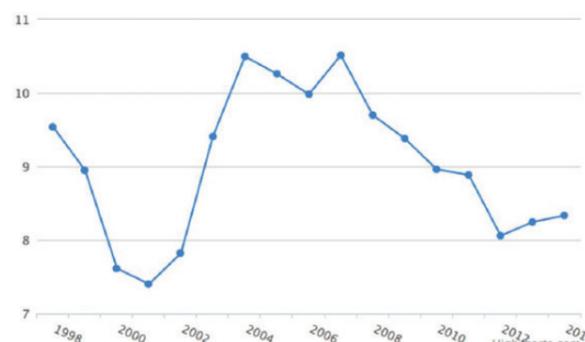


Figure 4. The Exchange Rate of Euro against CNY (before 2001 Is Not Included)



CNY is appreciating, through all these years. In theory, CNY is stuck to USD, but in last 10 years, CNY is appreciating more than 20% in a fast pace. In 2004, 1 USD was equal to 8.2 Yuan, but now this figure falls to 6.2. Two months ago, the exchange rate of Euro against CNY plummeted below 7. More valuable CNY means foreigners tourists have to pay more domestic currency. As a result they will search for substitute goods – Asian countries with more mature service industry seem like good places to go. According to the data of World Tourism Organization, though China is still No.1 in the rank of most wanted to go Asian countries, up to the first 10 months of 2014, its speed of inbound tourism has slowed down while the Korea, Taiwan, Japan all get the double-digit increase speed. Even Hong Kong as the second most favourite, got 9% rate of increase.

Also the diplomatic policy is the very factor that can affect the inward or outward tourism between certain countries effectively. As two countries get involved in territorial dispute, or some of which even becoming a fierce fight, the inbound income will decline instantly.

### 3.4 Others

Last part of the analysis is more minor, for example, the environmental element. It's so called the soft power of Tourism. When I stayed in Florence, the couple of homestay told me they had been to Chengdu, China in 2007. The city impressed them a lot. The delicious food, leisurely lifestyle and friendly local people all made them feel at home. In 2011, they went there again for business reason, but things changed so much. There seemed no bicycle-riding any more, instead, the cars were everywhere, roaring and bustling. The couple said they used to love the city because of its nature and purity, but now it is fast developing in a way like every other metropolis did. Burning gasoline definitely worsens air condition which is already in a poor state.

## 4. PROPOSED COUNTERMEASURES

As the reasons why inbound tourism is decreasing are listed above, it's time to find solutions and some experiences are universal and can be applied elsewhere.

### 4.1 EU Schengen Visa

The visa policy of the Schengen Area is set by the European Union and applies to the Schengen Area and to other EU member states without opt-outs. With

this powerful visa, the tourists can enter any countries that belong to EU. There is no doubt that this high cost performance visa has process effects: People travel around countries just like around provinces. In fact, most travel agencies offer the package tour that contains different countries and different routes within Europe. After all these years, the countries which benefit from this policy get massive income in inbound tourism, thus encouraging others to follow the example. Last October the APEC summit was held in Beijing, China, and during the meeting many agreements were reached to simplify the Visa procedure. China signed the mutual Visa-free agreement with more than 90 countries and unilateral Landing Visa with 37 countries. To make things better, Tourist Visa will be prolonged from 1 year to 10 years in certain countries and there are special privileges for students. Though it may take a while to produce the desired result, we should have faith in the government.

### 4.2 Japan

In 2011, the nuclear power plant in Fukushima exploded, thus Japan has suffered a lethal hit in the national tourist industry. But as years passed, the inbound tourism of Japan is flourishing again and we know this time it's hard to get even one ticket to Japan to admire the beauty of oriental cherry. What's the secret? Part of the reason is the management system of tourism. The Ministry of Tourism helps to recover the industry by compensating the scenic spots and ports which were ruined by the tsunami, relaxing the restriction of Tourist Visa check and reducing the contamination. There is even a monumental museum, nuclear research center and some accommodation in the distance of 20 km of remains. The experts say that establishing this 'dark tourism' will help to promote the post-disaster reconstruction and to show the confidence in pollution abatement.

### 4.3 Develop Own Advantage

Every place has its own peculiarity. There is no such universal things that can be applied anywhere. The very universal lesson is It's local Tourist Administration's duty to spot their own advantages and make most use of them.

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# Why Has Africa Integrated Slowly? Placing Africa's Economic Integration in Perspective

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## 1. INTRODUCTION

The integration of the continent of Africa both economically and politically has been a long term aspiration of its people and their leaders. This drive for solidarity and unity in action was first formalised at the continental level through the establishment of the Organisation of African Unity (OAU) in 1963 and has evolved through the years culminating with the creation of the African Union in 2002. However after more than five decades of systematic cooperation, Africa has made little progress in becoming a politically and economically integrated continent. It still faces a series of challenges related to under development, including widespread poverty, a heavy disease burden and persistent conflicts. Even though the promised benefits of economic and political integration ought to be an incentive for African economies to own and drive the integration agenda forward, the integration of the continent still faces a number of challenges that must be addressed in order to increase its pace and capture its associated benefits. It is common knowledge that Africa's institutions of integration like the African Union Commission and its regional economic communities are still significantly externally financially supported even in whilst hosting economies that have the means to fund the regional organisations from own resources (South Africa in SADC, Nigeria and Ghana in ECOWAS, Kenya and Tanzania in EAC and all of the above countries as members of the African Union). Why should an agenda of such developmental significance (like the economic integration of the continent) have little local ownership and be largely externally driven and could this also explain the slow pace of integration of the African continent? And what should African economies and its institutions of integration, particularly the RECS and African Union Commission do to improve the pace of integration on the Continent? This paper attempts to answer these questions and to raise some of the questions that African policy makers and their partners should perhaps be addressing if they must turn around Africa's pace of integration. The promise of a successful economic integration lies in the developmental benefits that would accrue to the continent, and this constitutes a sufficient reason why a sense of urgency ought to accompany the accomplishment of this objective of

increasing the pace of integration and harnessing the associated benefits. The paper is divided into five sub sections; in section 1.2 A progress report of Africa's integration is presented. Section 1.3 revisits some of the explanations offered for slow integration. Section 1.4 puts Africa's slow integration into perspective and section 1.5 summaries and concludes the paper.

## 2. PROGRESS REPORT ON AFRICA'S INTEGRATION

The integration of the Continent of Africa gained significant momentum in the 1960s as part of an effort to rid the continent of colonialism and apartheid. It was less than a century since the 1884 Berlin Conference had created artificial boundaries to define African countries into arbitrary territories and more than six decades of European Colonisation had left behind a patchwork of economic entities (with no prior logic of a systematic planned development) into which the seed of nationhood had been planted. Coming from this background, African leaders perceived the importance of being united in their action to rebuild the continent. And so they formed the Organisation of Africa Unity in 1963 and began thereafter to articulate their vision of a United Africa with a growing and prospering population. What started off as a political vision was given an economic twist as it soon became evident that practical steps needed to be taken to concretize their shared vision of an integrated continent. So the member states of the OAU came together in 1979 and released the *'Monrovia Declaration of Commitment of' the Heads of State and Government of the OAU on the guidelines and measures for national and collective self-reliance in economic and social development for the establishment of a new international economic order'*; (OAU 1979). This declaration articulated their vision for economic cooperation and the development of the continent with the following objectives:

- to promote the social and economic development and integration of African economies with a view to achieving an increasing measure of self-reliance and self-sustainment;
- to promote the economic integration of the African region in order to facilitate and reinforce social and economic intercourse;

- to establish national, sub-regional and regional institutions that will facilitate the attainment of the objectives of self-reliance and self-sustainment; (OAU 1979).

They took for granted at this stage that their individual and country level efforts at social and economic development would be naturally reinforced by their efforts at economic integration. This was more a statement of intent than a well measured assessment evaluation of the implications of pursuing economic development and integration at the same time, since integration came with the benefits of increased efficiency associated with larger markets. These leaders also embraced a solidarity principle of mutual dependence and economic cooperation in a whole range of areas with the emphasis of the use of Africa's resources for the benefit of their citizens. They further articulated their desire to pursue sub-regional integration as a building block for continental integration. At the sub-regional level they were to set up institutions to pursue industrial development and co-operate in natural resources control, exploration, extraction and use for the development of their economies and for the benefit of their citizens (OAU 1979).

The initial plans at Monrovia were concretized through the Lagos Plan of Action (LPA), which outlined a model of African regionalism involving six mutually interdependent processes:

- i) the integration of the physical, institutional and social infrastructure;
- ii) the integration of the production structures
- iii) market integration
- iv) resolution of inter country conflicts and prevention of acts of political destabilisation;
- v) ensuring stability and security, both at nation-state and inter-country levels
- vi) the creation of an enabling environment for initiative and enterprise as well as facilitating cross-border factor movements. (Adedeji 2002)

The implementation schedule that emerged from the LPA was to proceed in two stages of ten years each. African leaders consequently committed themselves in the first ten years running from 1980s to 1990 to:

- strengthen the existing regional economic communities and establish other economic groupings in the other regions of Africa, so as to cover the continent as a whole (Central Africa, Eastern Africa, Southern Africa, Northern Africa);

- strengthen, sectoral integration in the fields of agriculture, food, transport and communications, industry, and energy;
- promote co-ordination and harmonisation among the existing and future economic groupings for a gradual establishment of an African Common Market.

These measures were to be consolidated in the next ten year period through further harmonisation of their strategies, policies and economic development plans, the promotion of joint projects in the abovementioned fields and the harmonisation of their financial and monetary policies. All of the above identified as initial steps towards the establishment of an African Common Market.

So the vision for the integration the continent and its strategy of accomplishment seem to have been clear from the very beginning. African leaders had clearly articulated the Africa that they wanted and how they intended to get there through greater harmonisation of their policies, and collaboration in a range of sectors. Besides the desirability of the outcome of an integrated continent, not much effort was put into assessing the feasibility of these initiatives, the possible obstacles that needed to be overcome given the continent's unique history and current endowments (of physical and human capital). Instead more planning was done and steps taken towards the establishment of the African Common Market as concretized through the Abuja Treaty. The Abuja Treaty made provision for a gradual integration of the Continent through the progressive integration of its existing Regional Economic Communities (RECs). It once again recognised the coordination, harmonization and integration of Africa's RECs as a prerequisite to their serving as building blocks for the creation of an African Common Market by 2028. Under this Treaty the creation of a fully-fledged African Economic Community was set to be accomplished over a period of 34 years (1994-2028) in six stages, ending in an economic union with a common currency, full mobility of factors of production and free trade among the continent's 53 countries (UNECA 2006).

In response to plans and between the period from the 1960s to the 1980s, over 200 intergovernmental and multi-sectoral economic cooperation organisations were established on the African Continent alongside another 120 single-sectoral multi-national and bilateral organisations (Adedeji 2002). According to UNCTAD (2009) these regional agreements in Africa generally sought to amongst others:

Objectives	Target Date	Achieved	Not Achieved
1st Stage: (5 years) Strengthen RECs	1999	All 7 RECS	
2nd Stage (8years). Coordinate & Harmonize activities & Progressively eliminate tariff and non-Tariff barriers	2007	6 RECS	IGAD
3rd Stage (10 years) Free Trade Area& Customs Union in each REC.	2017	COMESA, EAC, ECCAS, ECOWAS & SADC have set up FTA	CEN-SAD and IGAD still in the process of setting up FTA.
3rd Stage (10 years) Free Trade Area & Customs Union in each REC.	2017	COMESA launched Custom Union 2009 EAC fully operational Custom Union	
4th Stage (2 years). Continental Custom Union.	2019	In Progress	
5th Stage (4 years). Continental Common Market.	2023	In Progress	
6th Stage (5 years). Continental Economic and Monetary Union	2028	In Progress	

Source: UNECA, 2012.

Table 1. Africa's Integration Progress Relative to Abuja Treaty Objectives.

- i) Expand the growth of intraregional trade by removing tariffs and non-tariff barriers.
- ii) Strengthen regional development, through the promotion of economic sectors, regional infrastructures and the establishment of large scale manufacturing projects.
- iii) Remove barriers to the free movement of production factors.
- iv) Promote monetary cooperation.

So there has been some progress in response to the call for Africa's economies to integrate. The milestones that were set out in the Abuja Treaty were certainly ambitious but the number of initiatives undertaken thus far to promote more cooperation between African economies is certainly an indication of progress towards the accomplishment of this objective. As can be expected some RECs have registered more progress than others and gone ahead to accomplish significant outcomes in specific sectors (See Table 1).

Table 1 indicates that there has been progress in attaining the first stage objective of strengthening the institutional frameworks of existing RECs and creating others where they did not exist. There has also been progress in the second stage related to the coordination and harmonisation of certain activities and elimination of tariffs and non-tariff barriers though not in all RECS. Some RECs are more advanced in the attainment of one of the stage three objectives, that of establishing a Free Trade Area (FTA), these

are COMESA, EAC, ECCAS, ECOWAS and SADC. COMESA and EAC have gone a step further and initiated the establishment of a Customs Union, whereas EAC like SACU have a fully operational Customs Union (UNECA 2012, p.14). The CEMAC region has formed a monetary and customs union, harmonized its competition and business regulatory framework and made moves towards macroeconomic convergence. COMESA has managed to simplify its custom procedures and eliminated some non-tariff barriers (in particular import licensing), the removal of foreign exchange restrictions, and the removal of import and export quotas (UNCTAD 2009, p.14).

So there has been progress on the continent towards fostering the objective of integration, though admittedly slow given the timeframes built into the Abuja Treaty. It seems unlikely for example that all the RECS would have attained the objective of becoming full customs unions in two years (by 2017) as per schedule. A number of reasons have been offered to explain this slow pace of integration, some of which are examined in the section that follows.

### 3. REASONS FOR AFRICA'S SLOW INTEGRATION

The story of regionalisation on the African continent is often described as one in which political rhetoric and commitment to regional integration have not always been matched by implementation reality, as the objectives and targets set have not always been met (Olivier 2010; Draper 2012). African economic

integration is said to suffer from a litany of problems, ranging from overlapping memberships (Dinka & Kennes 2007; Draper et al. 2007; UNECA 2006 & 2008), through unfulfilled commitments, to unrealistic goals. The simple measure used to ascertain the slow progress of integration in Africa is the failure to meet the objectives set out in policy documents like the Lagos Plan of Action and the Abuja Treaty. Some blame this outcome on the initial conditions prior to the integration of African countries, including the lack of complementarities among regional partners in goods and factors of production, and potentials for product differentiation between regional partners emanating from differences in income levels and consumption patterns (UNCTAD 2009, p.14). There is also the case of the absence of requisite infrastructure to build economic linkages between these economies coupled with weak (or lack of sufficient) capacity of regional and continental institutions, or simply the inappropriateness or inappropriate adoption of the EU's model of integration through the creation of EU styled institutions (Fioramonti 2013). Draper (2010) argues that *'Many States in Sub-Saharan Africa do not have the capacities to manage development processes, never mind engage in complex institutional forms of economic integration along the lines of the EU model'*.

Other reasons put forward for the lack of progress in regional integration efforts in Africa include an unwillingness of African governments to surrender the control of macroeconomic policy making to a regional authority, or to face potential consumption costs that may arise from importing from a high cost member country, or accept unequal distribution of the gains and losses that may follow an integration agreement and an unwillingness to discontinue existing economic ties with non-members (Geda & Kebret 2007, p.359). Oyejide et al. (1999) have further argued that African integration schemes have suffered from endemic implementation lapses emanating from a lack of political will to carry out agreed commitments in the face of ensuring loss of national sovereignty, absence of adequate technical and management expertise, expectation of loss of fiscal revenue on trade taxes, and uncertainty over the distribution of the gains and losses of integration.

Hartzenberg (2011) criticizes Africa's pursuit of the paradigm of linear market integration marked by stepwise integration of goods, labour and capital markets, with eventual monetary and fiscal integration. Suggesting that a focus on supply side constraints through a deeper integration agenda that includes services, investment, and competition policy

(other than border issues like tariffs) may prove to be a more effective route for the promotion of integration. Motsamai and Qobo (2012) on their part identify three actors that limit regional integration processes in Africa and constrain its potential to be used as a vehicle for development in national economies, beneficial integration into the global economy and facilitating Pan-African Unity. These are centred on: institutions of governance including the structure of domestic politics, structural conditions of poorly developed economies and their dependence on one or two primary products, as well as the capacity to assert policy preferences in international economic relations. Of all these explanations, the most compelling one seems to be the unfavourable structural conditions that characterise African economies, such as the competitive nature of primary production (including volatility of world market prices), their extremely small sizes, general low per capita income, very limited manufacturing capacity, weak financial sector and a poor (interstate and intra-state) transportation and communications infrastructure. These structural difficulties produce economies that have little to trade with each other giving rise to regional arrangements that have the lowest levels of recorded intra-regional trade of all integration experiences (McCarthy 1999, p.21).

It can therefore be safe to assume that addressing these structural challenges should result in significantly different integration outcomes on the Continent. If more African economies diversified their production structures into more advanced manufactured products (adding value to their current largely primary products production), strengthened their financial sectors, improved their transport and communication infrastructures and grew their economies to increase per capital incomes and be more wealthy, integration would be more meaningful, evidently beneficial, assumingly less competitive and would progress at a faster pace. This analogy implies that all the other explanations offered for the slow pace of integration on the African continent are not integration failures but economic development failures. It goes further to suggest that the benefits associated with the economies of scale argument of regional integration require a minimum threshold of economic advancement to be significantly beneficial before which the very objective of further integration may be at variance (in conflict) with the aspirations for economic advancement (development). And when faced with this conflicting situation countries naturally default for the pursuit of domestic development (what some have termed their unwillingness to give up national sovereignty) instead of meeting (agreed upon) integration targets.

This in our sense is the reason why Africa has integrated slowly thus far but raises a number of other questions that merit further investigation. Should Africa's economic transformation (interpreted as the economic transformation of its individual economies that will sum up to a joint and collective continental transformation) be pursued as a collective continental agenda (as part of the integration agenda) or should the current integration targets be given second place in favour of a continent wide economic transformation agenda. And what would such an agenda look like? Answering these questions should put Africa's slow integration into perspective, indicating what needs to be done to increase its pace of integration if desirable.

#### 4. AFRICA'S SLOW INTEGRATION IN PERSPECTIVE

For a continent that assembles a good number of the worlds under developed economies, the benefits of economic integration are often put forward as amongst the many solutions to Africa's multifaceted and seemingly intractable developmental challenges. As the 2009 Economic Development in Africa Report argues:

*'... regional integration, when designed and implemented within a broader development strategy to promote economic diversification, structural changes and technological development, could enhance productive capacities of African economies, realise economies of scale, improve competitiveness and serve as a launching pad for African economies' effective participation in the global economy.'* (UNCTAD 2009).

The association of regional integration within a broader development strategy that aims at promoting economic diversification and structural transformation is identified here as the prerequisite for African economies to benefit from the meaningful integration of their economies. This goes beyond the efficiency gains associated with the neoclassical economic arguments for regional economic integration (sometimes referred to as trade integration or market integration) and advances a development friendly integration model. Development integrationists claim that the rationale of regional co-operation and integration amongst less developed countries is not to be found in attaining marginal change and economic efficiency within the existing structure, particularly not in a comparison between trade creation and trade diversion. Put plainly, Africa would not benefit from a model of integration that only focuses on the integration of its markets (similar to the objectives

built into the Abuja Treaty) without a commensurate emphasis on the transformation of its economies. The benefits of trade creation or diversion that comes from eliminating further barriers to trade are not nearly as important as the fostering of structural transformation and the stimulation of productive capacities, investment and trading opportunities between African countries. This gives a different orientation to the creation of supranational institutions and makes their creation to be needed earlier than in orthodox theory to ensure the success of commonly defined plans for investments and production (Biswaro 2011, p.89).

African integration has however thus far focused on the benefits associated with economies of scale and the disadvantages of small economies being uncompetitive in a global context. Pursing economic integration as a means to help overcome the disadvantages of small size, low per capita incomes, small populations, and narrow resources bases that typify African economies. While this argument seems very compelling, it shouldn't be difficult to see that an emphasis on the economic transformation of the economies of African countries prior to an active and meaningful pursuit of integration should be considered a priority. If we assume for a moment that this argument associated with economies of scale were to be successful and prevalent, and that Africa was to become one unified market, with a single currency and a single political authority, what would that mean in today's figures and how much cloud Africa really wield in global terms? If we use the Gross Domestic Product (GDP) and Gross National Incomes (GNI) as proxies for the sizes of African economies with respect to the rest of the world, and treated Sub-Saharan Africa (SSA) as a single economy (in a simplistic and static fashion), then a completely integrated African economy (SSA+ five North African economies)(2217.4 \$ billion) in 2012 with a population of close to 1.1 billion people will only be equivalent to the economy of Brazil (\$2248 billion) with a population of 200 million people. This will make all of Africa smaller than the economies of France (\$2686.7 billion) with 66 million people, Germany (\$3533.3 billion) with 80.6 million people, and the UK (\$2614 billion) with 64.1 million people. Using 2012 figures, a united African economy will be six times smaller than the Euro zone economy (\$12 620 billion) with 334 million population and eight times smaller than the USA economy with 316.1 million people.

Simplistic as this analysis maybe and failing to factor in the dynamism and spill overs associated with elimination the current costs of operating as standalone

	Population (2013)	GDP 1 (2000)	GDP 2 (2012)	Growth 12yrs		GNI
	millions	\$ billions	\$ billions	Growth	% Growth	\$ billions
Brazil	200.4	644.7	2248.8	3.48813402	248.813402	2,342.6
Canada	35.2	739.5	1821.4	2.46301555	146.301555	1,835.4
China	1,357.4	1198.5	8229.5	6.86649979	586.649979	8,905.3
France	66	1368.4	2686.7	1.9633879	96.3387898	2,869.8
Germany	80.6	1974.2	3533.2	1.78968696	78.9686962	3,810.6
India	1,252.1	476.6	1858.7	3.89991607	289.991607	1,960.1
Italy	59.8	1142.2	2091.8	1.83137804	83.1378042	2,145.3
Japan	127.3	4731.2	5954.5	1.2585602	25.8560196	5,899.9
Russian Federation	143.5	259.7	2017.5	7.76857913	676.857913	1,987.7
United Kingdom	64.1	1548.7	2614.9	1.68844838	68.8448376	2,671.7
United States	316.1	10284.8	16163.2	1.57156192	57.1561917	16,903.0
Euro area	334	6471.8	12620	1.94999845	94.9998455	13,228.7
Sub-Saharan Africa	936.1	356.7	1527.3	4.28174937	328.174937	1551.3
SSA plus	1107.5	603.7	2217.4	3.6730164	267.30164	2164.9

Source: Compilation from World Development Indicators, The World Bank.

Table 2. Comparative Size of Africa's Economy

economies, it none the less makes a compelling case for economic transformation objectives to be pursued in priority ahead of simple market integration objectives. If the Abuja Treaty objective of attaining an African Economic Community by 2028 were accomplished in 2012 the resultant 'United States of Africa' will not be amongst the World's top ten largest economies. With a population of 1.1 billion people the welfare implications of such an eventuality will be even less significant. If Africa were to learn from the experience of economies that have experienced phenomenal growth in the last two decades (China, India) it will realise that growing the size of its economies is a faster pathway to attaining global significance and such growth must be preceded by significant economic transformation. For example, between the years 2000 and 2012, China and Russia succeeded to increase their economies almost 7 times 12 years (China 6.8 times, Russia 7.7 times), while India and Brazil increased the size of their economies by almost 4 (See Table 2).

While the examples presented in the above table are mostly amongst the G8 industrialized economies, and they are many years ahead of an average African economy, they are however at the frontier of World progress and the definition of global significance. G8 and European countries still dominate the world

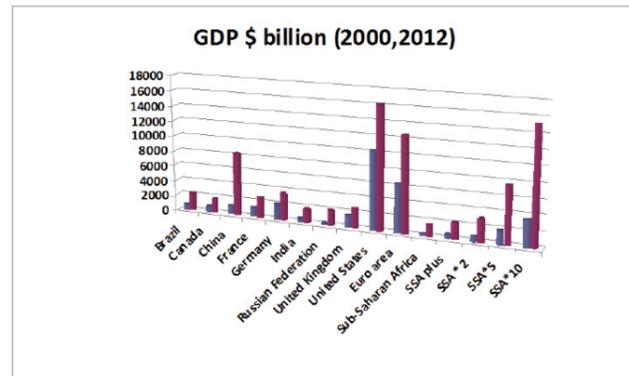
and even with these phenomenal growths records of some emerging economies, most of them (apart perhaps from China) have not significantly shifted their position of influence on the global scene. The implication of this reality for Africa's effort to gain significance through the integration of its economies means that it needs to seek to increase the size of its economy by four and by almost 8 for the size of its United Economy to be comparative to that of the USA and the Euro area in absolute terms. (See Figure 1 below).

When a further distinction is made between SSA and North African countries, the need for expansion is exacerbated to five and ten times respectively to attain comparative levels with the USA and Euro area, even before translating such an economic expansion into significant welfare improvements for its 1.1 billion plus population. This shall certainly not be accomplished by pursuing the noble objectives of pure market integration without the commensurate insistence on the transformation of its economies.

Emphasizing on the transformation of African economies ahead of a meaningful and successful economic integration could bring about the kinds of expansions of outputs anticipated above through the promotion of structural transformation of production structures that see African economies ascend higher

on global value production chains. This can be done through the pursuit of a development integration model that make use of distributive instruments, compensatory (transfer tax system, budgetary transfers, preferential tariffs) and corrective mechanisms (planned industrial strategy, regional development banks or funds and common investment codes (Biswaro 2011, p.89).

Figure 1. Global Comparison of an Integrated African Market



Source: Graph Drawn from World Development Indicators figures.

The African Union's Agenda 2063 policy document advocates for the transformation of African economies to create shared growth, decent jobs and economic opportunities for all Africans. It advocates for the modernisation of agriculture for increased production, productivity and value addition that would contribute to farmer and national prosperity and Africa's collective food security. It further envisages that by 2063 the necessary infrastructure will be in place to support Africa's accelerated integration and growth, technological transformation, trade and development. This will include high-speed railway networks, roads, shipping lines, sea and air transport, as well as well-developed ICT and digital economy, articulating these in the following manner;

*'A Pan African High Speed Rail network will connect all the major cities/capitals of the continent, with adjacent highways and pipelines for gas, oil, water, as well as ICT Broadband cables and other infrastructure. This will be a catalyst for manufacturing, skills development, technology, research and development, integration and intra-African trade, investments and tourism. The world-class infrastructure accompanied by trade facilitation will see intra-African trade growing from less than 12% in 2013 to approaching 50% by 2045. African share of global trade shall rise from 2% to 12%. This*

*will in turn spur the growth of Pan African companies of global reach in all sectors.'* (AU 2014).

By articulating it thus, it clearly indicates that the question of economic transformation and economic integration can be clearly mutually self-reinforcing. It however fails (like previous policy documents) to outline a clear strategy of how these desired developments will be paid for. And also fails to answer the question of whether the desired economic transformation will be accomplished by individual African countries pursuing transformation resulting in collective transformation or by economic transformation being driven at the continental levels through the strengthening of existing supranational institutions. These questions merit a thorough answer that should go ahead to inform the way institutions like the African Union conduct their business. Political, democratic and legal legitimacy at the continental level still lie with the nation states, they own the resources capable of feeding into a meaningful development process and to most of them a simply thrust to integrate their economies with neighbouring economies will continue to be at variance with their developmental objectives and democratic duty to their own nationals who elected them to effectively manage their national resources. Until an approach and a model of integration is found that succeeds to marry the objectives of national and continental development, the integration of Africa's economies will remain slow and the enormous benefits that could accrue to African economies remain a missed opportunity. Africa has no doubt over the last decade experienced sustained levels of growth, greater peace and stability and positive movements on a number of human development indicators. Sustaining this path and pace, though positive, is not sufficient for Africa to catch up with the rest of the world and thus the need for the radical transformation of its economies at all levels and in all spheres is imperative.

## 5. CONCLUSION

This article has broadly argued that the promulgation of treaties and signing of conventions with ambitious integration targets has produced little implementation results because of a broad conflict between the objectives of economic development and market integration that the continent is currently pursuing. It has further demonstrated that the success of market integration before a significant transformation of Africa's economies leading to a united economy will not automatically become a major global player making it imperative for an emphasis to be placed on transforming Africa's economies either as a

prerequisite to meaningful integration or as a priority aspect of the integration process. Changing the focus of the integration agenda to dwell on economic transformation will help diffuse the dichotomy that currently exists between national and continental development agendas. Such a change will also bring about a change in the focus of continental institutions of integration from focusing on developing a supranational political identity/influence to playing a facilitating role for the transformation of Africa's economies. An approach that will contribute to increase the pace of integration on the continent.

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# Europe, Free Trade Agreements and Labour Standards: Increasing Contestation of Linkages

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## 1. INTRODUCTION

The incorporation of behind-the-border issues, regulatory harmonisation including in intellectual property rights and competition policy, similar rules for trade in services and public procurement processes are integral to the EU's recent Free Trade Agreements. Apart from the USA, which pursues similar broad objectives in its FTAs, EU FTA partners, particularly in Asia, have offered resistance to the breadth of European negotiation aspirations. However, beyond the conflict due to different competitive advantages and interests in the negotiations, Asian states object more fundamentally to the EU's 'deep' and comprehensive approach to FTAs and to the linkage of trade and non-trade issues such as rule of law and environmental and labour sustainability. A unique characteristic of EU FTAs is that they are accompanied by a Framework Agreement or a Political Cooperation Agreement which creates the legal framework for the bilateral relationship, and includes a 'paserrelle' or 'linkage clause' whereby breach of EU fundamental values can result in suspension of trade preferences. Such conditionality has been a major tool of the EU's foreign policy, leveraging its market appeal to externalise its values and vision of global society. This approach is increasingly challenged by partners, not least allies with similar values (Australia, New Zealand, Canada), creating a strong tension between the EU's legal imperative as incorporated in the Lisbon Treaty to encapsulate its values in all its policies, and the realities of international negotiations. This paper addresses the question of whether resistance to EU values abroad (including the issue of sustainability in FTAs) is leading to a weakening of the EU's position on these matters, and suggests that indeed, external rejection of EU mechanisms for norm extension have led to less binding approaches. It does so by analysing FTAs, official documents and materials from elite interviews with officials and stakeholders, to assess the level of commitment achieved in recent FTAs on non-trade issues in terms of procedures for implementation, and also instances of implementation in FTAs that are in effect. Section 2 summarises the debates surrounding the linkage of non-trade issues in trade negotiations. Section 3 focuses on the EU's legal commitment to the externalisation of its values and the methods through which it operationalises

this. Section 4 assesses the challenges in recent FTA negotiations of gaining acquiescence to its approach. A final section concludes by suggesting that the current FTA negotiations have heightened the tension between a legal obligation to pursue linkage and a pragmatic approach to trade negotiations.

## 2. LINKING TRADE AND LABOUR

GATT Article XX limits itself to permitting restrictions on the importation of goods from convict labour. Successive attempts by the USA and EU to establish a linkage between labour standards and trade at the WTO have likewise failed.

Academic debates on the matter and between policy-makers have been inconclusive regarding the desirability of explicit linkages between trade and labour standards. Concerns have been voiced as to the potential pitfalls for developing economies' abilities to compete globally if forced to comply with the costly high standards of developed states. The ability of small and medium enterprises, particularly in developing states, to comply with higher labour standards and their implicit costs has also been highlighted by opponents of linkage (IOE 2006), as has the fact that most violations of human rights and labour standards occur in non-export sectors (Edgren cited in van Liest 2004). Although, as Kevin Kolben (2006) demonstrates the controversy has often pitted developing versus developed states in policy circles, with developing states opposing linkages invoking claims of Western protectionism, and with the West attempting to export high labour standards and costs to developing states thus limiting the outsourcing of jobs, and limiting job growth in developing states; civil society groups have also been actively involved. Trade unions, especially in higher regulation jurisdictions, have been key proponents of linkage, however development NGOs, and even some trade unions in developing states have opposed linkages (ibid.). Others have expressed fears that the enforcement of labour standards through trade sanctions could increase labour market inequalities through a shift of jobs towards the informal sector where those labour-standards would not be applied (Kaber 2004).

Such divergent views have impeded the incorporation of labour standards into the WTO regime. Instead at the 1996 WTO Singapore Ministerial it was agreed that the appropriate forum for labour standards should be the International Labour Organisation (ILO), where in 1998 the Declaration on Fundamental Principles and Rights at Work was adopted, introducing minimum labour principles. The key difference lies in the binding nature of WTO commitments, with the dispute settlement mechanism and Appellate Body as institutional instruments for compliance, which contrasts with the more voluntary and non-binding character of the ILO Conventions.

States with an interest in extending certain social labour regulations have sought binding linkages through bilateral trade regimes. The General System of Preferences (GSP) of the USA and EU, both grant preferential access to their significant markets to imports from developing states, and both set conditions regarding labour rights (typically right of association), the absence of which can invoke a reversal of trade preferences (Kolben 2006, p.230). The EU's GSP was originally developed in 1971 under the aegis of the Lome Conventions, but did not include a linkage to labour standards until the 1994-5 reform. Increasingly, labour rights are also being linked to trade through bilateral and regional preferential trade agreements (PTAs). A review of PTAs conducted by the International Labour Organization for the ILO (ILO 2013, p.18), researchers found that whilst this linkage of trade and labour provisions in PTAs has been led by developed states (particularly, North American states), increasingly labour clauses feature in South-South PTAs, with 16 PTAs between developing states containing labour clauses. The study makes a distinction between conditional elements of labour provisions which are linked to economic consequences for lack of compliance (which they find in USA and Canadian PTAs), and promotional elements which do not include economic sanctions and punitive mechanisms but rely instead on cooperative activities, dialogues, monitoring and information sharing. They find characteristics of the later in most PTAs, and in particular in the EU's (more on this below) and New Zealand's approach to labour standards in PTAs.

## 3. SOCIAL STANDARDS IN THE EU'S EXTERNAL POLICY

Externally, labour and social standards were absent from EU policies until the 1990s<sup>1</sup>, when they

<sup>1</sup> Within the context of the Eastern enlargement, candidate states had to adopt the entire 'acquis' including social legislation and norms.

came to the fore in the context of the reform of the GSP system. Jan Orbie et al. (2005) have traced the incorporation of social clauses, in particular the demand that states ratify and implement the ILO fundamental conventions, into EU external commercial policy. They argue that as the WTO engaged labour standards in the failed Millennium Round, and in the Doha Round negotiations, these too featured more prominently in the EU's trade policy, and suggest that increased international concern with this issue, coincided in time with a series of social-democratic governments in Europe in the 1990s more sympathetic to these issues, and who were also faced with increased civil activism in favour of fair trade and concerns over rising European unemployment and social dumping effects of trade. Within the revised GSP system, a punitive mechanism was introduced that allowed the temporary withdrawal of trade privileges if the state breaches the ban on the use of forced labour, creating a binding link between trade and some basic labour standards. Through the GSP Plus system the UE also introduced further standard promotion mechanisms, whereby developing states would benefit from enhanced access to the EU market if they acceded to the ILO fundamental conventions.<sup>2</sup> The unilateral nature of the GSP scheme allowed the EU to introduce both incentives and coercive mechanism in the system to encourage behavioural changes in partners that coincided with its normative objectives and particular economic interests.

There are few instances in which the EU has implemented trade sanctions on the basis of breaches of labour rights (in particular forced labour) under the GSP system.<sup>3</sup> There have also been a few instances when sanctions have been considered but not implemented. In 1997 the European Commission dismissed a request for an investigation into China lodged by the European Parliament on the technical grounds that at the time the Parliament did not have authority to demand an investigation. The case of Pakistan is particularly remarkable, as although no sanctions were imposed, a change in behaviour was effected, unlike in the cases above. As Emile Hafner-Burton (2005, p.610) explains the Trades Union Confederation in 1995 mobilized against the

<sup>2</sup> Subsequent reforms of the GSP scheme have pushed the emphasis from ratification to effective implementation of the standards and have also included conventions on human rights and on sustainable development (see Portela & Orbie 2014).

<sup>3</sup> For examples see Portela and Orbie 2014. Sri Lanka was downgraded from the GSP Plus to GSP scheme in 2010 after an investigation into its non-compliance, not with ILO standards, but with the Covenant on Civil and Political Rights, the Convention against Torture and the Convention on the Rights of the Child, in the context of its government's actions against the Tamil Tigers. Cancelling trade benefits on the basis of breaches of human rights by Russia in 1999 in the context of the Chechnya conflict, and over Indian nuclear tests in 1998 was considered but not implemented.

Pakistani government's use of forced child labour, and the European Parliament requested an immediate investigation, but the European Commission after considering a ban on Pakistani imports, chose to pursue influence through the threat of a ban coupled with positive incentives for Pakistan's active participation in the International Labour Organization's (ILO) program for the eradication of child labour (IPEC). Pakistan introduced legislation against child labour and acceded to the ILO fundamental conventions. An interesting feature of the cases in which sanctions were considered and finally implemented is that they coincided with ILO investigations into the perpetrators of breaches, suggesting that the EU would only proceed to withdrawal of trade preferences for breach of labour standards when the ILO confirms that the breach has occurred and been persistent and serious (Orbie & Tortell 2009, p.679). The 2012-2013 GSP reform implemented as of January 2014, has reduced the number of beneficiary states from 176 to 90, so as to focus on the least developed states, although in the case of some less developed reciprocal Economic Partnership Agreements with the EU have superseded the GSP scheme (European Commission 2013). As states reach higher levels of income and 'graduate' out of the GSP this limits the already questionable potential impact of the GSP as a tool for the diffusion of labour standards.

#### 4. STANDARDS IN FREE TRADE AGREEMENTS

Given the delays and reduced ambition of negotiations at the Doha Round, many states, and the EU, have turned to bilateral preferential trade agreements (PTAs) as mechanisms to expand trade and investment opportunities and to extend a preferred model of liberalisation and economic governance. The USA has included binding commitments to labour clauses in its PTAs. Although its PTAs do not require the parties to sign the ILO fundamental conventions, the labour clauses do require the signatories to enact domestic laws that ensure that the elements covered in the ILO fundamental conventions are adhered to.<sup>4</sup> These clauses are an integral part of the PTA and therefore subject to the PTA's dispute settlement mechanism which allows for financial or equivalent recompense in case of breaches of any part of the PTA.

EU PTAs address the matter of labour standards very differently. Under the sustainability chapter of the EU's new generation PTAs (Korea, Central

<sup>4</sup>The exact wording has been checked against the USA-Korea and USA-Singapore PTAs.

America, Peru, Colombia, Singapore, Canada-pending completion), the parties agree to cooperate in various ways in labour and environmental matters (information and expertise exchanges, considering joint training, technical assistance...), reflecting the EU's promotional approach to these standards. Parties also commit themselves to not lowering domestic labour and environmental legislation, and:

*'Reaffirm their commitments to respect, promote and realise internationally recognised labour and social standards, as laid down in particular in the ILO Declaration on Fundamental Rights and Principles at Work' (Art. 22.3, EU-ROK FTA, European Union 2011b, p.36).*

The promotional and cooperative nature of the sustainability chapter is reinforced by the fact that it is not subject to the general PTA dispute settlement mechanism, but to its own dispute settlement regime. This regime determines that complaints regarding breaches of labour or environmental standards can be notified to the PTA's implementation Joint Council by civil society, businesses or government representatives of any of the signatory parties. Once a claim is brought forward the Joint Council will appoint a three member expert panel to investigate and produce a report with non-binding recommendations for action and plans for benchmarking. The expectation is that through benchmarking processes, and a dispute mechanism based on naming and shaming, voluntary measures will be adopted to ensure high standards. To date no complaints have been brought forward using these mechanisms, thus, it is impossible to assess their effectiveness.

What is clear is that the mechanism stands in contrast with the coercive linkages in the GSP system and to the conditionality through which the EU extends its democratic and human rights values through its trade agreements. As the world's largest trading entity, the EU has long used the attraction of access to its market and leveraged it in its trade policy in exchange for other foreign policy aims, thus using trade as a genuine foreign policy tool exerting its 'market power' (Damro 2012). Since the 1990s the EU has subordinated its agreements with third parties to respect for human rights, democracy and the rule of law. EU negotiations of PTAs, in particular, are accompanied by the negotiation of overarching Political Cooperation Agreement (PCA) or Framework Agreement (FA) that establishes the overarching legal basis for the relationship with the EU. PCAs/FAs encapsulate the EU's core values of democracy and respect for human rights and make the

entire relationship (including the PTA) conditional on these values, as this clause is included as an essential element of the agreement that gives the EU a possibility to cancel trade preferences if these core values are breached.<sup>5</sup> PCAs also incorporate many of the EU's more recent broader normative concerns, including sustainability, nuclear non-proliferation, counter-terrorism cooperation, support for multilateral organisations, but are included in non-binding terms (Horn et al. 2010), and as mentioned earlier, sustainability clauses are introduced in a voluntaristic manner in PTAs as they are not mentioned as 'essential' elements.

The dichotomy in the mechanism by which human rights, democracy and rule of law values, on the one hand, and social and environmental values, on the other, are exported in agreements is striking, particularly as the Treaty of Lisbon (2011), elevated some of the later to core EU values under the rubric of equality, and in Article 21.1 enshrined the legal responsibility of the EU to ensure that:

*'The Union's action on the international scene shall be guided by the principles which have inspired its own creation, development and enlargement, and which it seeks to advance in the wider world: democracy, the rule of law, the universality and indivisibility of human rights and fundamental freedoms, respect for human dignity, the principles of equality and solidarity, and respect for the principles of the United Nations Charter and international law.'*

The European Commission (2010, p.4) has also acknowledged the importance of these values and reiterated its commitment to 'insisting on the promotion in trade negotiations of sustainable development (i.e. decent work, labour standards and environmental protection)' (European Commission 2010, 4). The promotional mechanisms created in recent FTAs fulfil the European Commission's commitment to promotion of these values; however, their effectiveness will have to be proven with time.

One important reason for the more voluntary approach taken comes from the fact that in reciprocal negotiations, the will and position of the other party will have an impact on the final outcome. Unlike the GSP scheme, the EU cannot impose its conditions unilaterally. Developing states' opposition to binding

<sup>5</sup>Human rights conditionality became an essential element of EU agreements with third parties in 1995 when the Council agreed to a Commission proposal on the matter to ensure the principle of coherence across its policies. A full history of can be found in Miller 2004.

labour standard and trade linkages was explained in section two, and is applicable to bilateral PTAs.

Objections to this comprehensive approach by the EU have been raised in particular by all its Asian partners, a region that has held non-interference in domestic matters as a centre-piece of 'Asian values'. Thus, even a developed and highly competitive state like Singapore has lengthened FTA negotiations with the EU. Although negotiators from both sides insist on Singapore's acceptance of the EU's proposed sustainability chapter, Singapore was reluctant to the human rights linkage clause in the PCA. Significantly, when the conclusion of negotiations with Singapore was announced in December 2012 (pending legal team oversight before signing at the time of writing) no announcement was made on the conclusion of the PCA that was being negotiated alongside the FTA, which was only finalised in June 2013. Prior to this, FTAs and PCAs had either been completed simultaneously, or FAs had preceded FTAs, as the EU used its most powerful foreign policy tool, the 'carrot' of trade, to gain acquiescence for broader regulatory and normative aims in the PCAs, by making market access conditional on acceptance of a broad FA. As Singaporean officials admit, they only signed the PCA, as the EU made it clear that no FTA would be signed without that, however, they object to the methodology of linking human rights to trade. South Korea, which was the first Asian state to conclude a FTA and FA with the EU, notwithstanding its final acquiescence, also had important internal debates about the FA, the EP and the EU's general FTA/FA approach.

Singapore and South Korea both complied with EU requirements in the end, despite disagreement with the human rights linkages. In part, both were more concerned with reaching an overall FTA with the EU. Both states have been pursuing aggressive FTA strategies to position themselves as hubs for the Asian markets. Both states had also signed FTAs with the USA by the time the EU began negotiations with them, therefore they had already implemented (in Singapore's case) or agreed to (in South Korea's case) much of the market liberalisation and regulatory changes that the EU would demand in a FTA negotiation (see Garcia 2012b). They had also agreed with the USA to the labour standards that the EU would demand. The difference lay in the fact that the USA does not require accession to the ILO fundamental conventions even though it requires that domestic legislation be in place so as to ensure that the conventions are implemented in practice. The USA's approach in FTAs creates a stronger linkage to between labour standards and trade than the EU's as

its labour chapters are subject to the dispute settlement mechanism of the FTA. In this way, any objection to this linkage that Korea and Singapore may have had had already been weakened by negotiations with the USA. Unsurprisingly, then their objections focused more of the human rights linkage that the EU PCA/FAs create.

EU FTA and PCA negotiations with Malaysia and Vietnam which were launched in 2010, only entered the real negotiation stage in late 2012 (DG Trade 2013), again due to differences over the EU's mandated comprehensive approach to FTAs, covering WTO-plus liberalisation, as well as objections to the human rights PCA linkage clause, and different understandings of sustainability and environmental matters. Negotiations with India, which began in 2007, reflect this tension clearest, even though as a democratic state with a Constitution that guarantees the fundamental values that the EU wishes to extend, this would be the state with which the normative agenda ought to resonate. Being consistent to its position at the WTO, The Indian government has objected to the inclusion of labour and other matters in FTAs, as it sees these as a form of European protectionism (Paulus 2009, p.7). When referring to the incorporation of human rights (including social and labour rights) in FTAs, India 'is of the opinion that such an issue does not belong in a market opening agreement' (Sen and Nair 2011, p.434). This opinion is shared by large sections of civil society in India. Kevin Kolben's (2006) analysis found wide-spread opposition to the inclusion of labour standards in FTAs (with the exception of trade unions), as civil society groups feared that they would protect Western markets from cheap goods, thereby adversely impacting trade and employment in India.

Unlike the cases of Singapore and South Korea, India, Malaysia and Vietnam have displayed a stronger rejection of the EU's methodology for weaving values into FTA negotiations. The later states had not concluded FTAs with the USA at the time of negotiations with the EU, and had not already agreed to the mixing of labour standards and trade. Singapore and South Korea are also more developed and technologically advanced economies than are Vietnam, Malaysia and India, without large export textile sectors (where labour standards have been called into question), and which are less likely to fall foul of ILO standards.

## 5. INCREASING TENSION OVER LINKAGES

Even when approached in a non-binding manner, the extension of EU norms remains questioned by partners as seen in the cases above. In the first round of EU-India negotiations in 2007, the issue of human rights was not raised (Business Standard India 2007) given the tensions between the parties, but the EU subsequently incorporated the issue as part of its global approach to FTAs, as well as the result of domestic pressure by civil society citing labour abuses in India (European Union 2010b). Fears have also been expressed in India that the European Parliament's greater trade supervisory powers since the Treaty of Lisbon, will result in human rights being used as a 'trade weapon' by the EU (Business Standard India 2010). In a Resolution dated 11 May 2011 on negotiations with India, the Parliament argued in favour of the inclusion not only of 'legally binding clauses on human rights' as is already the custom under the linkage clause in the PCAs/FAs, but also of 'social and environmental standards and their enforcement, with measures in the event of infringement' (EP 2011). This view was reiterated by the European Economic and Social Committee (2011). The Council of the EU and European Commission pursue a non-binding, dialogical approach to social standards as evidenced above, and the European Commission has re-assured partners that social provisions will be non-binding and are driven by 'soft' incentive-based approach (Bossuyt 2009, p.720).

There is clear evidence of this 'soft' approach in recent EU FTAs. The EU has signed (pending ratification) the FTA and PCA with Singapore, including the human rights essential clause in the PCA, despite the fact that Singapore maintains the death penalty (although it has not been used since 2009) in its statute books, and has a system of government that differs from the EU's definition of a liberal democracy. Likewise, in the case of the FTA with Colombia, the FTA went ahead despite controversy surrounding the government's dubious human rights record regarding the treatment of trade unionists, reaffirming arguments regarding the importance of economic competition with the USA as a motivational factor for EU FTAs (Garcia 2012b, 2013) and the competitiveness and economic agenda embedded in EU FTAs (Siles-Brugges 2014). Regarding Colombia's trade unions, the European Parliament expressed its concerns over the matter on several occasions.

In its 2010 resolution on Human Rights, Social and Environmental Standards in International Trade, the European Parliament (2010) supported the European

Commission's approach in its new generation FTAs, and insisted on the need to gain acquiescence with ILO fundamental conventions and other human rights and environmental conventions in trade agreements in all agreements. Parliamentarians also insisted on the need to focus more on oversight of implementation of these measures. In its 2012 resolution on the signing of the agreements with Colombia and Peru, the Parliament raised the matter of trade unions in Colombia and expressed its condemnation of trade unionist murders; however it also supported and commended the Colombian governments' efforts to resolve the situation, and called for an action plan to accompany the FTA. In essence the European institutions accept that the promotional measures in the FTAs and associated agreements should create mechanisms and an environment conducive to respect for the core social values enshrined in the agreements, without needing a complete *a priori* overhaul of other state's systems or policies. In its negotiations with third parties the European Commission reiterates to partners the fact that its binding human rights clauses and non-binding sustainability clauses will only be enacted if there is a severe deterioration of the situation. Reluctance by partners to accept binding mechanisms in negotiations helps explain the EU's soft approach.

Even in the case of the essential 'passerelle clause' between the Political agreements and FTAs linking human rights to the FTA, the EU is facing increased opposition. Although Asian partners reject this linkage, those that have agreed to enter into PCA and FTA negotiations with the EU, are willing to acquiesce so as to reach their objective of concluding a FTA with the EU, as they understand this to be *a sine qua* non requirement on the part of the EU. However, even this linkage is under increasing pressure, and from the EU's closest allies. In the case of the negotiations between the EU and Canada (still pending final signatures), the Canadian government has openly expressed its opposition to the human rights clause in the political agreement being sufficient to cancel trade benefits. European officials have been keen to stress to other democracies, who argue that as democracies sharing the same core values it is a denigration to have to sign such linkage clauses, that such clauses are there to ensure consistency between all EU agreements with third parties. Embassy Magazine (2013) in Canada cited the a member at the EU Delegation in Ottawa, explanation 'the idea is that in countries other than Canada where the human rights situation or the situation as far as weapons of mass destruction are concerned are not as crystal clear as they are with Canada, in those cases we have

a variety of tools including the suspension of existing agreements at our disposal.' The article also cited an unnamed European diplomat, who in reassuring the Canadian government of the EU's willingness not to invoke the clause, allegedly claimed that 'the human rights language in the Canada-EU deal would likely never apply to "funny issues" like First Nations or the seal hunts'. Notwithstanding the uncertain and sensationalist nature of the claim, it does seem to be in line with the EU's pragmatic approach to adapting its normative demands, and the mechanisms by which these are articulated, to what might be acceptable to partners. On 18 October 2013 the EU and Canada reached a political agreement on the key elements of a trade agreement. The actual texts of the FTA and political agreement have not been signed yet, nor made public, however interview sources suggest that the human rights clause may have been drafted with slightly different wording to other agreements so as to make it acceptable to the Canadian government, which marks a contrast to the situation in 1997 when the EU ended discussions for an agreement with Australia over Australia's refusal to sign a democracy and human rights essential clause.

Given the aforementioned cases, Singapore, Canada, Colombia, but also the few instances of sanctions based on social standards even under the unilaterally punitive mechanisms of the GSP scheme, it would appear that partners' fears over potential suspension of trade preferences under FTAs over social issues are unwarranted given the nature of the procedures. Even under the human rights linkage clause, it appears the EU is reluctant to invoke this unless a gross breach of rights takes place. However, some partners remain cautious in their willingness to accept these measures and sustainability clauses, and have expressed fears that the European Parliament may take it upon itself to investigate practices in their states and invoke sanctions, even though the mechanisms in the sustainability chapters do not allow for sanctions. However, this is not matched by the reality of the provisions in FTAs, and it is unlikely that the EU will deviate from the mechanisms established in recent FTAs in future FTAs, especially given the animosity that even its current sustainability clauses have attracted from partners.

## 6. IMPLICATIONS

All this reflects an underlying tension in the EU's trade policy, with regard to FTAs, that is encapsulated in the admission by EU negotiators that 'partners will make us pay with other concessions for the human rights linkage clause and sustainability chapters'

(Interview Brussels October 2013). Commentators have honed in on this tension between the EU's economic aspirations of FTAs with crucial emerging markets and expansion of a particular economic model and its normative commitments and aspirations in terms of development or value promotion (True 2009, Siles-Brugges 2014, Bailey & Bossuyt 2013, Garcia 2012, 2013, Masselot & Garcia 2014). David Bailey and Fabienne Bossuyt (2013, p.572) explain the tension as derived from the fact that the EU trade policy is largely driven by pressures to achieve market expansion, accompanied by a discourse of legitimation. They argue that scholars assume that the EU's normative agenda is viable but as yet unrealised, and instead suggest that the EU's trade policy is designed to perpetuate 'mechanisms of domination' through its market extension. Chad Damro (2012, p.686-9) has also argued that rather than being normatively constituted and thus predisposed to act normatively, the EU is in its essence a market that is bound to externalize its market norms. Material, interest-based and institutional factors determine the extent to which the EU is successful in promoting its market norms (Damro 2012, p.686-9). These conceptualisations resonate with the empirical cases of EU social values in FTAs, where the objective of market expansion, trade liberalisation, and the export of certain market regulations can have a bearing on the soft approach to norm export chosen by the EU. Interestingly, in the face of increasing opposition to its norms, the EU has chosen, for now, to 'pay' for the inclusion of some of its core values in agreements. In reality this reveals the impossibility of separating norms from interest in the context of the EU's trade policy- the promotion of social values reflects material interests (safeguarding of some aspects of EU social model) and the expansion of its market norms abroad, but it is also part of a discourse of self-legitimation, regarding the intrinsic nature of the EU as more than a market.

Increasingly we are witnessing a softening of the EU's approach to its normative clauses in FTAs and PCA/FAAs. The incorporation of sustainability clauses in its new FTAs follows a voluntary, rather than the conditionality approach it has used for human rights. It well may be the case in the long run that the EU's proposed mechanisms in the sustainability clauses achieve in more effective results in terms of standards, given that the implementation of sanctions, as seen in the cases discussed earlier, are marred with political complications and do not necessarily lead to the desired outcomes in terms of behavioural change. A more significant test of whether the EU's economic agenda is being disassociated from the values agenda

will be the wording of the EU-Canada agreement, and more crucially, the Transatlantic Trade and Investment Partnership negotiations with the USA, where there has been no mention, to date, of requiring the USA to sign an 'essential' human rights clause. It is likely that the European Parliament will demand respect for the principle of coherence and request that the EU apply the same logic that it has been applying to the Canadian case with regards to the human rights linkages, but it is still too early to venture any guesses regarding TTIP. If no linkage clause appears, and it does seem unlikely that the USA would ever agree to that, this could mark a fundamental rethink in the way the EU frames its foreign policy, and in turn some modification of theoretical conceptualisations of the EU as a foreign policy actor, but it would lend support to what the narrative in this paper has hinted at: the need to take into account the interaction with others as a factor in conceptualisations of the EU as foreign policy actor, as its actorness and effectiveness is in part dependent on the extent to which other actors are willing to acquiesce to its preferences.

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# On the Happiness of Lifestyle Based Rural Tourism in China

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## ABSTRACT

Along with the rapid economic development, many Chinese urban residents are under pressure and feel depressed. At present, increasingly more people are seeking happiness and inner peace through experiencing rural lifestyle and leisure by rural tourism. In this paper, the author discusses tourism oriented happiness connected closely with various aspects of rural lifestyle in China, including happiness resulting from eating organic and exotic rural foods; dressing and making local costumes; working like farmers; living in farmhouses; as well as hiking and walking in rural areas. This paper may contribute to enrich researches associated with improving happiness of Chinese urban residents by engaged in tourism activities associated with returning to rural lifestyle, which is more environmental friendly and harmonized with nature.

**Keywords:** Happiness; Harmonized with Nature; Rural Tourism.

## 1. INTRODUCTION

In the past decades, the Chinese government promotes the so called 'fast economic growth with high quality' development paradigm. In consequence, many people live in China's towns and cities are unhappy due to long working time and fast paced lifestyle with high pressure resulting from the rapid economic development. In seeking relaxation and inner peace, increasingly more urban residents try to slow down their life paces through going back to rural lifestyle and experience simple and easy happiness for a certain period by taking part in rural tourism activities.

Besides living in areas locating outside cities and towns, the core of rural lifestyle can be regarded as the ruralization of daily life. In this context, rural tourism products should be designed with respect to rural lifestyles which can meet the demands of tourists in terms of leisure, experiencing rural daily life, and taking part in rural tourism activities with

local characteristics. In other words, by pursuing tourism oriented rural lifestyle, tourists can dress, travel, amuse and live in similar manners as people live in rural areas.

## 2. LITERATURE REVIEW

With the coming of the experience economy era, increasing more Chinese people take part in rural tourism. However, researches on rural tourism in China are still at the beginning stage. Up to date, there are 1410 Chinese articles about rural tourism development from CNKI, which is the most popular academic database similar with SCI or SSCI from Thomson Reuters. Among these articles, sustainable rural tourism development attracts wide attention. DU J. and XIANG P. conducted researches on sustainable Chinese rural tourism development, greatly promoting the study of sustainable rural tourism development in China. Jingming, H.E., Zezhong, M.A. and LI Huixia, a case study in Chengdu, discussed the countermeasures and suggestions for the sustainable development of rural tourism. WU C. H. conducts a case study in Liucun town, Changping district of Beijing and analyzed the path of rural tourism development in Beijing suburbs areas. YU Ping discussed rural tourism development in China from the perspective of community empowerment.

Duan, D. and Zhang, R. discussed the exploitation of rural tourism resources with specific local characteristics, and proposed several suggestions on promoting tourism development in Liuzhou. Du P. and Li Q. discussed rural tourism from the 5E experience oriented marketing strategies and pointed out that effective marketing contribute to facilitate not only rural tourism development, but also the protection of local folk customs as tourism resources. Bai, N. (2009), Wang, Y. F. (2008), and Liu, T. L. (2006) all studied rural tourism development and the protection of rural tourism resources. Li, G. H. and Wu, Z.J. (2006) stressed that rural tourism resources are non-renewable resources, which will be exhausted and even disappear in case of being over-exploited. By taking the Hongyaocun from Guangxi province

as an example, they discussed the application of the bio-economic model of maximum sustainable yield on the exploitation of original tourism resources. Their researches provide reference for the protection of rural tourism resources and contribute to promote sustainable tourism development.

Many scholars share the opinions that a series of problems, e.g. low quality of tourism products, similar tourism products, ecological environment deterioration, lack of fairness for the rural tourism income distribution, lower satisfaction with community residents, will restrict the sustainable development of rural tourism. Hjalager analyzed the concept of leisure life style and their impacts on rural tourism development in the Randers Fjord region from Denmark; he stressed the importance of rural tourism development from the aspects of social culture and the lifestyle of local residents and tourists, which is considered to be the most critical factors in rural tourism development. Since tourism products based on rural lifestyle is highly welcomed by most Chinese tourists, increasingly more Chinese scholars are getting interests on lifestyle based rural tourism products, which may be an important factor for sustainable rural tourism development.

## 3. BASIC CHARACTERISTICS OF LIFESTYLE BASED RURAL TOURISM PRODUCTS

### 3.1 Similar to Real Rural Tourism Products

Despite designed specifically for tourists, tourism oriented rural lifestyle should be similar to rural lifestyles of farmers. In comparison with normal daily life in towns and cities, tourists pursuing rural lifestyles should eat, dress, travel, and live in similar manners like local farmers. In fact, 'Nong Jia Le' has become one of the most popular tourism products in China. 'Nong Jia Le' can be translated as enjoying the happiness of farmers by having farmhouse meals and live in local farmyards (which has become family hotels) for a couple of days. In addition to 'Nong Jia Le', tourists can have fun by putting on dresses of local farmers, as well as walking or riding on small country roads across fields. Most of all, tourists can even take part in agriculture works. This is because being engaged in agriculture works, e.g. planting, weeding, watering, and adding fertilizer, urban tourists can have different experiences. In other words, agriculture works as an important part of real rural lifestyle can be interesting and help tourists to relax and have fun.

### 3.2 Agriculture Associated Rural Tourism Products

As mentioned previously, tourism oriented rural lifestyle must be agriculture associated, i.e. living and working in farms or gardens. In other words, tourists who seek leisure and agriculture experiences should be engaged with agriculture works for a certain period in farms or countryside. Up to date, there are many agriculture tourism programs designed especially for tourists or urban residents who want to seek leisure or work in farms or fields. For example, tourists can feed animals, milk the cows, and make cheese in cow farms, just to experience daily life of cow farmers.

In order to attract more tourists, many farms offer special workshops for children and teach them knowledge about planting, farming and food making, which may help them to love nature from childhood. Such workshops are highly welcomed both by parents and children. Another example associated with tourism oriented rural lifestyle is renting farms for vegetable and fruit planting, which even becomes fashion for urban residents from big cities. By renting a piece of land, urban residents can plant and obtain organic vegetable and fruit themselves. Besides eating more organically, they must work regularly in their field which makes them physically healthier. Here, agriculture works, e.g. vegetable and fruit planting, has similar functions like regularly take part in sports for most Chinese urban residents who seldom have opportunities to get close to nature.

### 3.3 Interest Driven Rural Tourism Products

To a certain extent, one can say that interest or happiness should be the core rural tourism products. In other words, most rural tourists seek happiness by consuming rural tourism products, which need to be at least interesting. By taking part in rural tourism programs, tourists do not want to simply live or work as farmers. They are actually seeking interesting rural life experiences, which are different from their daily life. Without interesting experiences, traditional rural lifestyle cannot be attractive to tourists. For example, weeding or hoeing as normal agriculture work could be interesting experiences for rural tourists. Thus, most tourists may feel happy and work actively in the field just because such works are far from their daily work, which seems to be boring for them. In contrast, farmers live on agriculture works always feel boring and tired about weeding and hoeing, since such works are important and unavoidable parts of their daily life. From this aspect, we can see that tourism oriented

rural lifestyle is different from normal rural lifestyle of farmers.

#### **4. HAPPINESSES RESULTING FROM LIFESTYLE BASED RURAL TOURISM**

##### **4.1 Happiness of Eating Organic and Exotic Rural Foods in Farms**

Going through the agricultural society, most Chinese people still believe that food is the first necessity for humans. Therefore, tourism agencies need to provide fresh and organic foods for tourists, who want to eat different kinds of meals with different quality and flavor in different way. Besides eating healthy, most tourists think self-planted foods or self-picked fruits are safer and taste much better, since they invest more time and emotion, and they can experience the so called tourism oriented rural lifestyle.

Meanwhile, most tourists feel happy and excited when they eat specific foods, e.g. snacks or cuisines cooked in traditional methods with strong local flavor, or fruits produced in certain regions or farms. For example, jackfruits pies cooked by local people with local jackfruits leaves from Leizhou Peninsula in China have very special local flavor. Thus, many tourism agencies provide rural tourism programs associated with jackfruits and leaves picking and jackfruits pies cooking which are highly welcomed by tourists. Another example is Kongfu tea cooked in tea farms from Fujian province with interesting and complicated ceremony, which can not only present daily lifestyle of tea farmers, but also provide exotic feeling for tourists from other regions and countries. It is important to note that rural foods provided for tourists are important parts of rural tourism products and local culture, thus, such foods should have strong local characteristics, e.g. cooked by specific local ingredients and materials with traditional cooking or eating methods.

##### **4.2 Happiness of Dressing and Making Local Costumes**

Besides eating rural foods, many tourists, especially female tourists like to put on local costumes like rural people. Generally speaking, traditional costumes with vivid color or national characteristics are highly welcomed by tourists. Most female tourists like to wear bead-work, applique and embroidery clothes and scarves. Many tourists feel happy and interesting by dressing local costumes, especial ethnic or exotic costumes, with unique styles, which help them better

experiencing local culture and getting closer to the nature. For example, female rural tourists who travel to villages of Miao people usually like to wear traditional Miao costumes with embroidery blouse and skirt made of cotton or linen; especially a set of complicated but exquisite silver jewelries including, ear rings, bracelets, necklace and head wears. In addition to dress like local people, some rural tourism products even provide workshops for female tourists who want to learn how to make homespun, sew, knit, and embroider. To a certain extent, women working at looms are an important part of traditional rural lifestyle, which seems to be exciting and interesting for ladies live in big cities far from rural areas. Meanwhile, a lot of tourists to Miao villages and farms are very interested in learning batik, which is a traditional Chinese folk art combining painting and dyeing. By taking part in batik workshops, tourists can design and make batik clothes themselves. Obviously, they feel happier by wearing clothes made by batik products designed by themselves.

##### **4.3 Happiness of Working like Farmers**

In order to attract more rural tourists, many villages and farms provide the so-called 'new farmer' programs, which allow tourists and urban residents to be engaged into the production and distribution processes of organic foods. There is also an organization, which is called 'the NEW FARMER ASSOCIATION' ([www.nongshijie.com](http://www.nongshijie.com)). The organization provides a platform for tourists and local residents who are interested in agriculture works, e.g. planting and picking vegetable or fruit; hoeing and weeding in rice field; transportation and distribution of organic foods. The association even organizes open-air bazaar or fairs for organic food trading. Besides selling self-plant vegetables and fruits, many members also sell self-cooked cuisine made of organic materials for local residents and tourists. There are organic foods with specific local characteristics designed especially for tourists as souvenirs. In several cities and towns, big bazaars and fairs even become important tourist festivals or events. In order to take the advantages of mobile and information technologies, many organic foods have QR codes on the packages. By scanning the codes, tourists can retrace the whole life cycle of foods from the planting field, to organic fertilizers and production. In doing so, tourists and buyers feel more convenient and safer.

As mentioned previously, agriculture works as an important part of rural lifestyle may lead to happiness and exotic experiences for rural tourists. This is because tourists do not need to make their lives

from agriculture works, which may help them relax and forgetting about unhappy things. To a certain extent, most tourists regard agriculture works as kind of entertaining sports and interesting experiences for them. For example, tourists who take hoeing as a new kind of sport may have fun by bowing to the ground and waving a hoe rhythmically to hoe up soil in vegetable farms. In other words, hoeing is just interesting sport for many rural tourists just like weightlifting and playing golf.

At present, agriculture works have been developed into various rural tourism products. In China, picking fresh fruit and vegetables in organic farms are highly welcome by family rural tourists. In holidays with good weather, many parents bring their Children to pick strawberry, cherry, and apples in orchard. Meanwhile, many tourists like to visit and work in wine yards. They like pick grapes, make wine by self-picked grapes, and buy self-made wine with high price. By visiting and working in stud farms, tourists can learn riding and enjoying themselves with horses.

##### **4.4 Happiness of Living in Farmhouses**

In the mind of many Chinese people, the most popular rural tourism product is still 'Nong Jia Le', which refers to having fun by living in farmhouses and eating farm foods as mentioned previously. In comparison with living in noisy and air polluted cities, tourists can enjoy fresh air and quiet environment in farmhouse, which help them to rest well and be more harmony with themselves and the nature. It is important to note that farmhouses, especially farmhouses in ethnic areas, are important parts of local culture. By living in farmhouses, tourists can experience different customs and appreciate the beauty of traditional architectures.

Most farmhouses from ethnic areas with strong local characteristics are developed into tourism products which can well reflect ethnic culture and rural lifestyle. For example, the soil building from Fujian province, which displays the material, system and spiritual culture of the Kejia people, has become of the most popular tourism products in China. Another famous farmhouse based rural tourism products is the so called Diaojiaolou from Miao ethnic regions, which is usually translated into English as stilted houses. Diaojiaolou are wooden houses supported by wooden pillars, which were generally built on hills besides rivers or pools. Being practical and beautiful, Diaojiaolou were built to be harmonious with its natural environment. In other words, every Diaojiaolou integrates perfectly with its

environment. According to a survey from the authors that most rural tourists feel peaceful and happy to live in Diaojiaolou distributed in beautiful scenic areas in Miao ethnic regions. Even living in Diaojiaolou for a short time, most rural tourists were still touched by the harmonious relationship between man and nature reflected by perfectly by local ethnic culture.

##### **4.5 Happiness of Hiking and Walking in Rural Areas**

For most urban tourists who love nature, hiking and walking in beautiful rural areas in good weather are very attractive. It was stressed in the most famous traditional Chinese medicine book 'Inner Canon of Huangdi' that people should dress in loose clothes and stode with untied hair in spring weather in order to be healthy by keeping the same rhythm with the nature. This is partly because people can easily feel poetical and happy by hiking and walking in quiet small country roads with beautiful scenes. As a very popular rural tourism product, hiking has already become of a fashion for a lot of urban residents. One of the most famous website for hiking in China is 'China walking' ([www.chinawalking.net.cn](http://www.chinawalking.net.cn)). The website provides a good platform for people, who love hiking and walking in suburb and rural areas, to organize activities and events regularly, and exchange experiences and happiness resulting from hiking and walking in nature.

In comparison with walking in parks, rural tourists can enjoy the beauty of original ecological scenes by walking along country roads. For example, tourists walking in tropical country sides have opportunities to recognize various wild tropical plants and insects, they can seldom see even in tropical plants gardens in big cities. By walking in various tropical vegetable or fruit garden, they can not only see various plants, e.g. banana, pineapple, sugar canes, cassava and durian; but also pick vegetables and fruits and bring them to home as souvenirs. At present, one of the most welcome rural tourism products is walking and making pictures in various blooming flower fields in spring, e.g. yellowing rape flower fields and sun flower fields, purple lavender fields, wild peonies fields with various colors.

Besides seeing beautiful scenes and integrated themselves in natural environment, rural tourists can also have fun by hearing songs of birds and insects, the sound of river flowing, and even the sound of their footsteps or heartbeat along their hiking trips in quiet rural environment. For example, tourists can walk in country roads with traditional clogs and enjoy

the sound of their footsteps in Hainan. They can also enjoy the leisure of sitting on an ox cart with the speed even lower than walking as well as hearing local songs from cart drivers. In case living in farmhouses besides water, rural tourists can have fun by sitting on a boat or rowing along small rivers or lakes. In doing so, tourists can enjoy fresh air, warm sunshine and quiet environment.

It is important to note that increasingly more rural tourists are favorable of exploitation oriented hiking in remote and undeveloped rural areas. For example, many tourists go hiking to the so called 'wild great walls', which refer to the heritages of great wall not open to public yet. In most cases, wild great walls were broken and are not under good status for tourist visiting. With the rapid increase of tourists, wild great walls may deteriorate rapidly and disappear in the near future. At present, the Chinese government takes efforts on promoting voluntarily protection of wild great walls by farmers living along the walls. Meanwhile, hard and complicated geographic conditions restrict the numbers of tourists to a certain extent. Volunteer farmer protectors of wild great walls may also be tour guides for hiking tourists. For example, Zhang heshan is a farmer protector of the 'Chengziyu' wild great wall from Hebei province. Being officially authorized by the local government as great wall protection monitor, the 60 years old farmer owns a three layer building which opens to tourists coming throughout the world. He is also a tour guide for hiking tourists, who are not familiar with local environment and usually get lost in surrounding mountains without good mobile phone signals. To a certain extent, such farmers contribute largely to promote sustainable rural tourism development of rural areas by guiding tourists to know better and engage in the protection of rural tourism resources and traditional rural lifestyles.

## 5. SUMMARY

With the increase of pressure resulting from rapid economic and technological development, more and more Chinese people start to retrace the meaning of life by returning to traditional rural lifestyle as their ancestors. By taking part in rural tourism activities and spending a short period in farms and rural areas, many tourists can relax better and feel happy by come near to nature. It is important to note that lifestyle based rural tourism products should be similar to real rural lifestyle, agricultural work associated, and interest driven. In other words, most rural tourists can escape from their daily life and have fun by living in mountains, forest, and farms for a short period by

consuming rural tourism products and experience similar lifestyle for local farmers. Through engaged in agricultural works, e.g. planting, fishing and hunting, many tourists feel much better by going back to nature. Several of them learn how to stay harmony with themselves and the nature, and even find new meaning of life and the value of traditional culture. In this context, one can say that lifestyle oriented rural tourism products as an important part of life exploitation for tourists contribute to enrich their life and enhance their living standard both in physical and spiritual level.

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## *Session II: Political, Economic, and Cultural Conflicts in the International and National Arenas*

# The Ethics of Sanctions as a Diplomatic Tool and their Humanitarian Implications

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## 1. BACKGROUND OF SANCTIONS

The idea of economic sanctions as an avenue of dispute resolution is commonly seen as an alternative or precursor to outright war. This is where one or a group of states place economic restrictions on a country or territory in the hope of placing pressure upon the government to prevent a particular action or behaviour from occurring or worsening (Hakimdavar 2013, p. 2). Sanctions are often a shot in the dark for an often sought for diplomatic tool in trying to coerce a state to meet the demands of another state or international community. Meisels (2011, p.104) illustrates three major points about the deployment of sanctions. Firstly, that there is no guarantee that restricting or preventing the sales, imports and exports of a country's commodities is in anyway likely to dissuade the target state or government from continuing an unwanted course of action; Secondly, the necessity of sanctions to be utilised must meet their sufficiency as a measure of behaviour change; and finally, that with sanctions being deployed, there comes the immediate risk that should they ultimately not be effective in changing the state's behaviour, the destruction and damage done to the civilian's is in no way justifiable, and that any loss of life or deterioration of the standard of life was entirely unnecessary. While this paper will not be examining the efficacy of sanctions, it is important to understand the mechanics of why sanctions may not work, in order to understand their ethical controversy.

### 1.2 Ethics of Sanctions

There has been great divide over sanctions as a foreign policy tool, and the division over their use is over efficacy and their ethics. This is an exploration of their ethics in recent history, and exploring their place moving forward. This paper will evaluate the impact that sanctions have had on human life, in the pursuit of securing peace and prosperity. Rarick and Duchatelet (2008, p.49) examined the ethics of sanctions through the three conceptual frameworks of consequentialism, deontology and contractualism. It is through these perspectives that the examples of Iraq, Haiti, and Israel will be discussed.

#### 1.2.1 consequentialism theory

Consequentialism states that the determining factor of an action being ethical or non-ethical is the ultimate consequence and whether it has brought the most beneficial outcome for those involved (Rarick & Duchatelet 2008, p.50). In a case study by Hufbauer, Schott and Elliot (2007, p.158) of 204 sanctions, only 34% were deemed partially successful. These findings argue a single point, that there is a low success rate of sanctions throughout modern human history. As stated, it is important to understand why sanctions might fail, as their effects are intertwined with the ethics of using them. This said 'the effect of sanctions does not meet consequentialism's definition of an ethical act. Due to the limitations upon their economy, the quality of life within a sanctioned state does not continue to grow but rather it degrades. With sanctions restricting the economics of a state, its healthcare and education follow suit in diminishing in quality' (Rarick & Duchatelet 2008, p.49). While it could be argued that the sanctions final outcome may result in the achievement of the state changing its undesired behaviour, the weakening standard of life and pressure upon the population ultimately make the sanctions unethical, particularly when partnered with the fact that economic sanctions rarely meet their original goals (Rarick & Duchatelet 2008, p.49).

#### 1.2.2 deontology theory

When taking the view that sanctions are designed to place economic pressure upon the population of the targeted country in order to cause internal discontent and change from within, it can be argued that sanctions are inherently unethical. Deontology's perspective states that the consequences are not the focus and do not constitute the ethical nature of the act, but rather the act itself and its impact upon others in its pursuit of a goal (Rarick & Duchatelet 2008, p.50). Understanding this, the act of placing sanctions aims to 'cause as much pain as possible to the people' in the hope that the population grows tired of its governments policies and seeks change from within (Rarick & Duchatelet 2008, p.50). How can institutions and states who act in the name of maintaining peace and security justify a policy, which subjects hundreds of thousands to a damaging

quality of life? Deontology's perception of sanctions demonstrates a policy that is disturbingly inhumane. Although, it can be argued that it is impossible to apply ethics to economic sanctions, particularly when placed there by organisations and governments as it is inconceivable for a multifaceted and bureaucratic body to demonstrate ethical reasoning (Rarick & Duchatelet 2008, p.50). Nevertheless, the purpose of the United Nations Security Council (UNSC) is to use democratic debate in order to discuss all aspects before and after any action undertaken by the United Nations, in order to make the most ethical decision in line with the Charter of Human Rights, which is their charge. This measure should act as checks and balances, as is the purpose of democratic debate.

#### 1.2.3 contractualism

Contractualism does not place ethical value to an act based on reasoning or intention, but compares the proposed action against the social norms of rational actors, operating under a constitutional contract. Through this, contractualism looks at a deed as qualifying as ethical if it is a course of action that benefits the least advantaged members of the population. Therefore, the Iraq sanctions of 1990-1999 were entirely unethical, as the burden of punishment fell unto the population instead of the privileged Hussein Government, whom were not targeted via smart sanctions individually until the second half of the decade (Hufbauer et al. 2007, p.132). Through this framework, the United Nations who are to act in the interest of preserving the peace, security and human rights, acted outside of their charter in placing stress upon if not removing, the equality, healthcare and safety of the Iraqi populations.

## 2. SANCTIONS AGAINST IRAQ

United Nations Security Council (UNSC) Resolution 660, acting under Chapter VII of the Charter, implemented sanctions against Iraq for its 1990 invasion into Kuwait. The UNSC demanded that Iraq 'withdraw immediately and unconditionally all its forces' lest they impose restrictions on exports and imports of all commodities into Iraq, under the Hussein Ba'athist regime (United Nations 1990, p.19). In the pursuit of fulfilling Article 24 of the UN Charter of maintaining peace and security, sanctions were placed that were so devastating to the Iraqi population, that UNSC Resolution 661 was designed in 1995 specifically to alleviate the humanitarian devastation that Resolution 660 itself had caused (Farall & Rubenstein 2009, p.173). Continued sanctions were in place against Iraq by the UN from 1991 through

to 2003 for the renunciation of weapons of mass destruction, and by the U.S. to destabilise the Hussein government, however it was not until 1995 that the sanctions became more targeted (Hufbauer, Schott & Elliot 2007, p.132). The United Nations realised that the sanctions that had been imposed upon Iraq from 1990-1995 were affecting the innocent population and chose to impose smarter and concise sanctions including weapons embargoes, travel restrictions of the Hussein government and targeting the assets of the officials themselves, procedures recognised today as smart sanctions (Hufbauer et al. 2007, p.132). The initial financial sanctions failed in removing Iraqi forces out of Kuwait and in the removal of the Hussein government. Following this, there developed an outburst of public fatigue of sanctions due to the immense humanitarian impact that they held upon the women, children and the elderly (Hufbauer et al. 2007, p.133). It grew so terrible that Denis Halliday, the coordinator for the United Nations Oil for Food Program (OFFP) resigned in a controversial manner, shedding light upon the humanitarian devastation that the Iraq sanctions had performed, despite alleviation attempts by the OFFP (BBC 1998). To Halliday, the sanctions were a foreign policy tool that 'satisfied the definition of genocide', his resignation marking the clash of ethics that he stood for within the United Nations (Pilger 2000).

### 2.1 Iraq Sanctions through Consequentialism

When one examines the Iraq sanctions under a consequentialist lens, it is evident that they were unethical due to the effect that the sanctions held upon the population of Iraq, as well as the effects of the damage that the country is still facing today. UNICEF revealed in 1999 in return of the mortality surveys that there was an estimated 500 thousand deaths of children under five, between 1991 and 1998 (UNICEF 1999). They elaborated that removing the small contribution that external factors would provide, the conditions of life that the population of Iraq were living under were thanks to the sanctions in place by the United Nations. This further involved a drop into the bottom 20% of country's state of wellbeing (Pilger 2000). Examining these fatalities gives a single clear message, that the sanctions themselves wrought a disturbingly large number of casualties, while having a minimal effect upon the government they were meant to be pressuring. Considering the greatest number of the population did not benefit from the consequences of the Iraqi sanctions, the requirements of utilitarianism that consequentialism calls for were not met, and therefore unethical (Rarick & Duchatelet 2007, p.50).

## 2.2 Iraq Sanctions through Deontology

The use of sanctions to pressure the people into changing the policy of their government is a precarious and morally unethical practice, particularly when there is no payoff. The Iraq sanctions failed in pressuring the target government in meeting the demands of the UNSC, and systematically punished the citizens instead of the intended Hussein regime. Actively allowing the population of a country to atone for the sins of the government is a poor practice ethically and diplomatically. Halliday argued that the sanctions themselves did not target the government effectively in a way that caused any pressure from below, but rather strengthened the leadership over a weakened population (Pilger 2000). This is supported through Hufbauer et al's studies of sanctions, which argued that the comprehensive sanctions caused enormous collateral damage to the target's populace as well as surrounding countries, and that often the targeted government officials emerged untouched (Hufbauer et al. 2007, p.138). From an ethical standpoint, the Iraq sanctions were morally void, as they allowed the suffering of the people as a means to an end.

## 2.3 Iraq Sanctions through Contractualism

The Iraq sanctions cannot be viewed as ethical when inspected through contractualism, as they were put in place by an institution that champions the sanctity of human rights, liberties and wellbeing. Halliday (BBC 1998) argued that the sanctions imposed by the UNSC were ironically violating the Human Rights Charter and that the standard of life for small towns in Iraq had severely been changed. It must be the inherent responsibility of any State, institution or alliance to ensure that the practice of sanctions must be done so in a way that does not punish the lives of the citizens of the country with whom they target, and to seek dispute resolution methods that do not encourage the archaic practice of comprehensive and broad. For the United Nations to act outside their Charter of Human Rights, inflicting pain upon the civilians of a country demonstrates an act that does not align with the requirements that contractualism requires necessary for ethical behaviour.

## 3. SANCTIONS AGAINST HAITI

The Haitian-targeted sanctions were the result of the United States reacting to the military coup of President Aristide in 1991, initially freezing assets within the U.S. as well as the cessation of all foreign aid into the newly established Government. These sanctions expanded into the embargo of arms and

energy shipments, the placement of travel restrictions and most imports and exports (Gibbons & Garfield 1999, p.1499). It is important to note that such comprehensive sanctions put in place by a large and powerful State onto a small and poor nation is overdramatic, by far excelling the punishment that should have fit the crime. From the beginning of the sanctions, Gibbons and Garfield (1999, p.1499) found that industry employment fell from 44,000 down to 8,000 within three years, many of who were women and family holders. This further expanded to 200,000 jobs in the formal sector, close to a 15% of the entire Haitian population. Energy restrictions of fuel meant that approximately one gallon of gasoline would total US \$10. The agricultural sector itself fell at 20% per year, between 1991 and 1994, instead of the projected 5.2%. Unemployment had increased from 50% to 75% despite countermeasures to soften the blow of the sanctions effects. The number of children dropping out of school and onto the streets reached 4000. Disturbingly, 7.8% of all children were acutely malnourished between 1991 and 1995, which also accompanied an extra 4400 deaths per year occurred for 1-4 year old. In the discussion of their report, Gibbons and Garfield (1999, p.502) found that the sanctions only contributed to the devastated situation that the military coup had initially caused. From the statistics provided, it is hard to argue that the Haitian sanctions were both ethical and justifiable, as the collected data show the harmful impact that the sanctions had upon the citizens of Haiti.

## 3.1 Haitian Sanctions through Consequentialism

The Haitian sanctions did not bring about the best consequences possible for the citizens of Haiti, as consequentialism dictates it is necessary for an act to be ethical. While the Haitian coup d'état was ultimately defeated by a U.S intervention, the sanctions themselves were seen as a precursor to a greater step, rather than a successful measure of enforcing international desires. The consequence of the sanctions - post intervention, were a staggering additional four years of per capita income still not improving, falling employment rates and ineffective government (Gibbons & Garfield 1999, p.1503). It could be argued that the sanctions were not designed to pressure the *de facto* Haitian government into adopting more democratic procedures, and were rather a precursor to a military intervention. However the ramifications of the broad and comprehensive sanctions demonstrated a clear violation of ethical standards that should be upheld when reviewing the possibility of sanctions as a diplomatic tool.

## 3.2 Haitian Sanctions through Contractualism

When looking through contractualism:

The Haitian experience reveals the conflict between the UN Charter's Article 41, in which the Security Council is authorized to impose sanctions in the interest of international peace and security – which the coup had disrupted – and Article 55, in which the UN is charged with promoting higher standards of living, social progress, solutions to health problems, educational cooperation, and respect for fundamental human rights (Gibbons & Garfield 1999, p.1502).

It is clear that the actions of the United Nations, Organisation of American States and the United States, while acting with the good intention to pressure the *de facto* government to practice democracy and facilitate the Charter of Human Rights, they caused an acceleration of deterioration within Haiti both indirectly and directly, despite external humanitarian assistance. Contractualism dictates that an act is ethical providing it benefits the lesser-advantaged members of the population. In the case of Haiti, it clearly did not qualify as ethical.

## 3.3 Haitian Sanctions through Deontology

Deontology sees the Haitian sanctions as unethical for a single and major reason. The sanctions systematically worsened the already fragile humanitarian within Haiti, allowing the people's suffering as a means to an end. Considering the underlying principle of an action's ethics depends upon the effect it has upon the people in the pursuit of its goal (Rarick & Duchatelet 1999, p.50). It is not justifiable for States to target an opposing State with comprehensive and ill-planned sanctions that attempt to inspire pressure from within, as it only brings desolation.

## 4. THE RESPONSIBILITY OF THE CITIZEN'S WELFARE

As an inhumane form of foreign policy, sanctions often forgo the responsibility of the populace onto the government being targeted. The hope of sanctions is that they will decrease the quality of life for the populace enough to encourage pressure from within to force change, either via revolution of the people, fear of the government, or financial stress, it is commonplace to blame the loss of life of the citizens onto the target government. Whether it is the collapse of infrastructure within Iraq, falling standards of living within Haiti or even the reduction of medical practice

and healthcare within the longest running case of economic sanctions, Cuba (Rarick 2007, p.69), it is time that sanctions took the value of Human life and harboured it as a responsibility of the sender, rather than the receiver. For example, it is poor judgement to assume that an autocratic State, with no democratic maneuverability will simply allow the people to usurp its own government, nor will they concede power voluntarily. Rather, they will often consolidate their power and insulate themselves from the pain that the citizens feel. Furthermore, it is wrong for the sender to place blame on the recipient government for the loss or neglect of their population's lives. While there may be truth to an autocratic government neglecting their citizens, continuing sanctions to actively prove this is a far cry from effective diplomacy.

## 4.1 Responsibility of Citizen's Welfare, in the Case of Israel and Gaza

Amidst sanctions against Gaza, Israel cut the electricity to the strip, however they did so in a way that they said gave Hamas the responsibility and ability to direct the energy where they see fit, causing a shortage of energy for the Palestinian strip (Meisels 2011, p.101). The Israeli Supreme Court in 2008 was faced with a petition calling for the alleviation of such energy restrictions, arguing that it would cause a humanitarian crisis within Gaza pertaining to the lack of energy supplied to hospitals and water installations. The Israeli Ministry of Foreign Affairs (MFA) (2008) in turn justified the energy restrictions as reasonable, because the responsibility of the citizens of Gaza lies not with the Israeli Government, but with the Hamas host. The Israeli Supreme Court argued that the energy cuts were done so in a way that enabled the Hamas Government to prioritise where they flow the energy but that they choose to reroute it towards continuing their 'terror machine' (Meisels 2011, p.101). The MFA's response to the petition explicitly stated that the humanitarian responsibilities that Israel holds has been met by allowing enough energy to be accessible to prevent such a crises from occurring if properly diverted. They further elaborated that they are not collectively punishing the people of Gaza, but are placing pressure on the Hamas Government to cease aggressive action towards Israel, and tend to its responsibility towards its own citizens.

This example demonstrates Israel placing blame on the Hamas government for the degrading humanitarian situation within Gaza. While Israel's long standing conflict with Hamas shows a willingness to give Hamas the opportunity to prove itself as an aggressive and selfish government to its people and

the international community, it is wrong for Israel to neglect all the responsibility. Countless examples, some of which have been previously stated within this article, have shown cases where the sanction-targeted country's government has allowed the effects of the sanctions to weather their people. Yet still the senders chose to pursue the restrictions for several more years, seeing the impact it was having. It is unethical to place sanctions on a government with an aggressive or poor humanitarian reputation, and expect the situation to improve, or for the targeted body to change their course of action.

## 5. ALTERNATIVE TO SANCTIONS

The comprehensive and broad sanctions that riddled the later 20th century period seems to almost be behind policy makers, and a preference towards carefully targeted restrictions commonly known as smart sanctions is emerging. Smart sanctions that target the officials responsible for the unwanted behaviour have proven thus far in contrast to comprehensive sanctions to be more sensitive towards the populace of the targeted state and the humanitarian concerns.

Unfortunately, there is no guidebook on how states should deal with other States in dispute, and the purpose of a wide diplomatic tool belt is that there is variety in how States can respond with a flexible measure. But perhaps it is time for greater practice in 'positive sanctions', adopting a carrot instead of the stick approach. Rarick and Duchatelet (2008, p.51) have recommended that rather than restricting the ability of a state for social change from within, it could be better to open the State up to greater trade, information and inclusion. The principle being that the population within the targeted State with this knowledge would become restless with their governments restrictions and push for change. This of course would not prove fruitful in a state such as North Korea, which has heavy censorship of information and control over the media. However the concept may have potential to change social dynamics in sanctioned states, as younger populations growing under economic sanctions will have a negative view upon the institutions and countries that have restricted the commercial and humanitarian situation of their country (Hakimdavar 2013, p.3). Positive sanctions could have a greater room for efficacy than economic sanctions if given the chance, as it encourages the targeted state to take steps more favourable by the senders, for a beneficial outcome for both parties (Hakimdavar 2013, p.148). These sorts of programs have demonstrated interest from particular targeted states. Particularly North Korea, which has raised

interest to proceed with a deal with the United States for food shipments in exchange for freezing their Uranium enrichment program, thereby slowing or preventing the achievement of a nuclear weapon in North Korean hands (Harlan 2012). Of course the skepticism behind such movements remains high, as there is no procedure in place or guarantee to ensure that the state follows through on its deal. It is time nonetheless to start experimenting, performing greater research and reforming sanction policy at the highest level to find the best outcome ethically and for efficacy.

## 6. CONCLUSION

While the approach towards smarter, targeted sanctions is laudable, there are still circumstances and examples of these applied restrictions turning more comprehensive, as seen with Iran (Hakimdavar 2013, p.1). These sanctions, however targeted they may be, may also harm the economy of the State suffering beneath them, which in turn affects the lives of the populace, currently being demonstrated by the Russian economy under Western sanctions causing the ruble to sink to its lowest value since the Russian Financial Crisis of 1998 (Winning & Abramov 2014). From the ethical frameworks viewed within this article, comprehensive and broad sanctions are an ill thought out practice with little regard for humanity, progression and a terrible practice. The emergence of smarter targeted sanctions has been praiseworthy since the 1990s. It is important for the United Nations to continue to reform the practice of sanctions, and develop more preparation and experimentation with other applications, especially the use of positive sanctions.

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# Falling Behind in the Globalised World: Australia's History of Negativity towards Immigration and Multiculturalism

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## 1. INTRODUCTION

Australia is no doubt a part of the modern and global world. It is a nation that is ethnically, culturally and religiously diverse. However, it would seem that when it comes to the arrival of foreigners seeking safety, the national mantra of giving all a 'fair go' seems to all but disappear. Australia receives only a small portion of asylum seekers each year in comparison to countries with both higher populations and smaller land mass, yet seems to be amongst the front runners world wide of practicing harsher systems of detention policies (Raper & Brennan 2002, p.31). The shocking contrast between the famed ideals of camaraderie, inclusiveness and progress, against the treatment of refugees, asylum seekers, immigrants and general lack of promotion for foreign cultures is so stark that it can often be hard to believe that these are all coexisting realities within one nation. With such a strong history of incredibly conservative policy in regards to immigration and asylum seekers, it is clear that this history has remained deeply ingrained within the collective psyche of some of the population, and certainly within the ongoing political employment of harsh detention centre systems. The concern is that a positive approach towards embracing multiculturalism, whilst present and a reality for many, is hard to truly foster when it is being blocked at several levels.

## 2. A HISTORY OF BACKWARDNESS

### 2.1 The White Australia Policy

The 'White Australia' policy, identified with the immigration restriction act of 1901, was central to the politics and identity of Australia for over half a century (Day 2000). It had its foundations with the influx of immigrants to Australia during the gold rush of the mid 1800s, however the policy officially came into fruition in 1901, and remained the leading ruling on Australian immigration until 1973. The basis of this policy was to essentially restrict immigration to the new Australian federation to those of European nationality or descent, to preserve the 'European civility' of the nation from 'aliens, Asiatic, criminals, paupers and the undesirable classes' (Kingston cited in Day 2000). The policy was used to not only

restrict who was able to immigrate to the country, but furthermore aimed to 'weed' out those who were deemed 'undesirable' who had already taken up residence within the community.

Running for over seventy years, the policy was hugely discriminant on who exactly would be considered 'Australian' and who would not (Day 2000). The policy certainly became a staple of Australia's highly conservative and discriminative approach to immigration. The nature of which would then continue to echo down the generations of political change, to find its way into the absurd notion that still exists for many Australians who believe that people have the right to construct a very narrow view on what gives someone the right to be Australian is based on one's race. This policy was still in effect for the parents of many young adults in Australian society, it is not ancient history; rather it is a not too distant reality that still has a hold on the collective mindset of some of the nation, particularly for those that grew up on the policy being in effect.

### 2.2 The Stolen Generation

The Stolen Generation refers to the estimated 100,000 young Indigenous Australians who were forcibly taken from their families in the name of assimilation. The policies that affected this process of assimilation in Australian states ran roughly between the late 1880s through to 1971, the rough initial start date is due to the different periods over which the Australian states all began implementing assimilation acts. The primary focus of the policy was to essentially 'breed out' Indigenous Australians by assimilating children with lighter coloured skin into 'civilised' society, and believing that the remainder of the population was destined to eventually die out (McCarthy 2000). This episode was one of Australia's bleakest in all of its history, the emotional and psychological effects left upon the children and families affected by the assimilation policy were both devastating and long reaching (Garkawe 1997). Numerous cases of abuse, both emotional and physical, were reported by the children who were placed forcibly into care in white foster families and mission housing. Most of the stolen children were simply lead to believe that their parents were dead,

and that they were orphans, consequently discovering decades later that they had family members still living, or else that had passed away whilst they were being raised far away from their homes to forget their cultural heritage (Garkawe 1997). It took the Australian government nearly two decades after the assimilation policies were abolished to begin making proper amends for the hardship caused as a result of the years of persecution towards Indigenous Australians and the forcible destruction of thousands of families. From 1980 onwards there were several developments in the area of attempting to repair the damage caused by the assimilation policies. Link-up Aboriginal Corporation was an important service offered from 1980 that assisted in reuniting those who were separated with their families. In 1995, *the National Enquiry into the Separation of Aboriginals and Torres Strait Islander Children from their Families* was officially established, amongst several other reconciliation steps. However, perhaps one of the most important steps towards reconciliation was the long anticipated governmental apology, which was made by then Prime Minister Kevin Rudd on the 13<sup>th</sup> of February 2008. Whilst it is clearly a long way from ever making amends for this dark time in Australian governance, it is positive to see steps towards reconciliation being taken nonetheless.

### 2.3 Immigration Detention Centres

Mandatory detention for illegal immigrants came into being in Australia in 1992, under the leadership of the Labour government under Prime Minister Paul Keating. It was in May of the aforementioned year that the migration amendment bill was passed, making it compulsory for any asylum seekers arriving in the country by methods deemed illegal to be detained in detention regardless of situation (O'Brien 2011). The bill originally stated that no person could be held in mandatory detention for a period greater than 273 days (O'Brien 2011). However, seven months after the bill was first issued, it was revised without the time limit, as such this gave way to the idea of 'indefinite mandatory detention', which became increasingly popular with the government under Prime Minister John Howard, and several of his predecessors, current Prime Minister Tony Abbott included. As a result, over the course of two decades Australia has now operated a variety of both onshore and offshore detention facilities. The two most notorious offshore facilities are located in the Republic of Nauru and Manus, Papua New Guinea. The offshore facilities came into prominence under the previous labour government, when a vast increase in the number of asylum seekers arriving in Australia saw the government reintroduce

the external centres in an attempt to ease pressure on onshore processing facilities and to also attempt to avoid any further incidents of drowning in the attempts being made to reach Australian Shores (The Australian Human Rights Commission 2015). The current Liberal government has continued to exercise use of both facilities. Whilst the onshore facilities are considered directly subject to Australian rule, there have been implications made by the Australian government in the past that the offshore facilities are subject to the sovereign rule of both the republic of Nauru and Papua New Guinea. However, the facilities are Australian operated and funded as a part of an Australian government policy; therefore the welfare of the detainees is the responsibility of the Australian government (Gordon, M. 2015)

Thousands of people are welcomed to Australia to settle each year from a variety of nations, and approximately a further 40,000 depart the country each year to live, study, travel or work abroad. It seems quite astounding then that there is a persistent fear of the arrival of just a few thousand foreigners seeking asylum (Raper & Brennan 2002, p.31). Australia remains one of the world's most highly criticised countries for its harsh detention system, yet it receives a mere fraction of asylum applicants compared to a multitude of nations that do not practice systems of mandatory detention for asylum seekers. Across the world, governments work hard to ensure that asylum seekers arriving in respective countries seeking refuge are protected under basic human right norms (Raper & Brennan 2002, p.32). Yet in Australia, men, women and children seeking safety, fleeing often from war torn countries, are voided these rights by being placed in prison like facilities. The Australian run detention centres look and operate in a severe jail like manner, and the effects upon the detainees can be devastating. Estimates place the likelihood for incidents of self-harm or suicide for men and women in Australian detention centres to be around 26 and 41 per cent higher respectively than Australian men and women who have never been detained in detention centres. Figure 1, provided by a survey conducted within an Australian detention centre shows the commonplace nature of depression for the detainees within this environment. When asked 'How often do you feel depressed?' A total of 33% answered 'All of the time', only 2% surveyed felt that they did not suffer from depression at all (The Australian Human Rights Commission 2015).

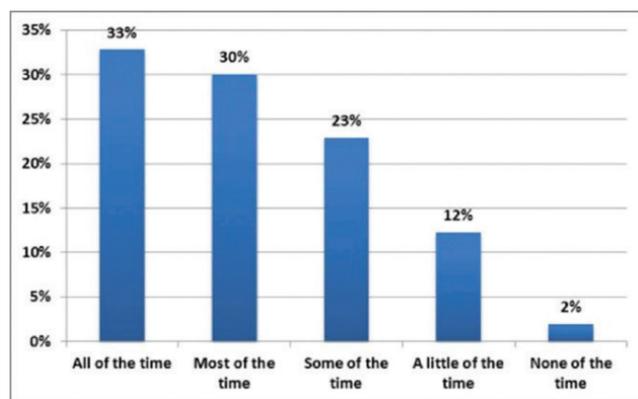


Figure 1. Response by Parents to the Question: How Often Do You Feel Depressed?

It is near impossible to look at the mental health issues of the detainees in the centres and presume that psychiatric care could be administered there, as so many of the issues themselves are being manifested by the detention centre environment (Australian Refugee Council 2014). In 2014, sexual abuse allegations emerged against the guards of the offshore Nauru detention facility, not to mention multiple cases of self-harm and suicide attempts by children (The Australian Human Rights Commission 2015). These conditions are clearly an abhorrent violation of basic human rights.

### 3. CURRENT CULTURAL AND POLITICAL CLIMATE TOWARDS IMMIGRATION

#### 3.1 Political Attitude

In terms of legal immigration into Australia, the laws are generally on par to those of many other countries, such as England or the United States, and on average Australia gains around 75,000 to 80,000 migrants every year legally. Conversely, the political processes for immigrants who arrive illegally, specifically those seeking asylum, do not find it such a clear path into the 'lucky country'. A large part of current Australian Prime Minister, Tony Abbott's campaign mantra for the 2013 election was his pledge to heighten Australia's border security by 'stopping the boats' (the Liberal Party of Australia 2013). The campaign encompassed the idea that Abbott and his party would protect Australian borders from 'unwanted illegals' arriving to the country via boat by implementing harsher rulings on people smuggling to Australia. The nature of such a statement in regards to immigration policy is a shockingly familiar flashback to the monstrosity that was the white Australian policy that ended thirty years prior. As of the January 31, 2015 there were 2298 people in Australian immigration detention centres, and a further 3007 in

community detention (The Australian Department of Immigration and Border Protection 2015). Whilst this is a large decrease from the numbers present under the previous labour government, particularly in the number of children detained, the fact of the matter is that mandatory detention centres continue to exist and they continue to remain a tangible part of the Australian Liberal party government's immigration policies. Prior to his election, as mentioned above, Tony Abbott's immigration promises included the phrase 'we will turn back the boats'. However he further stated 'we will not give the benefit of the doubt to those who arrive illegally without identification papers' (the Liberal Party of Australia 2013). Australia's political policies on immigration have grown ever closer to the right side of the political spectrum, in doing so the policies that are designed as border protection against security threats to the nation, allow for thousands of men, women and children seeking asylum to be lost in a sea of political rhetoric and statistics without the proper protection of basic human rights that are afforded to the rest of the nation (The Australian Human Rights Commission 2015).

#### 3.2 Societal Attitude

Is Australia considered a friendly nation? More often than not, the Australian population themselves are observed as a very friendly people (Freeman-Greene 2002). The term 'mateship' is a popular Australian colloquialism, originating in the 19th century white male wilderness or 'outback', it refers to treating people, even strangers, with respect, tolerance and goodwill. All implied goodwill aside, the general social attitude towards immigration in Australia, particularly towards asylum seekers, is often leaning towards intolerance. There are certainly Australians, both on the individual level and also organisational, who are practicing real acts of tolerance and friendship towards asylum seekers in Australian mandatory detention every day, such as sending phone cards, toys for children, writing letters and donating English language textbooks (Freeman-Greene 2002). However, whilst there are those who strive for compassion, there are many who are not as open minded. There is often a huge amount of misunderstanding and presumption made regarding foreigners who have immigrated to Australia amongst those who are not in favour of a multicultural nation. For example, pre conceived generalisations such as Buddhism being perceived as exotic, whereas Islam is received with suspicion, or the assumption that illegal immigrants refers only to maritime arrival, rather than the comparatively massive majority being

a result of overstayed visas (Jayasuriya, Gothard & Walker 2003). The elements of fear of change, racism and xenophobia that exist in the fringes of Australian society have been aptly tapped into as an advantageous political tool almost as effectively in the 21st century as it was with the White Australia and assimilation policies that existed a century prior (Jayasuriya, Gothard & Walker 2002).

### 3.3 Marginalisation of Foreign Language and Cultural Education

The benefits of foreign language proficiency and multilingualism in general are heavily downplayed in, not only Australian society but also within Australia education (Bense 2014, p.496). Whilst this might not seem like as massive an issue in terms of negativity towards multiculturalism and immigration in Australia when compared to the despotic immigration political policies, this remains a subtle factor in the overall negativity towards immigration; there is simply not enough in the way of support for foreign language and cultural education. Statistics show that in comparison to students in many OECD countries, Australian students only spend half as much time on the learning of foreign languages over the average school year (Bense 2014, p.489). Kleinhenz et al. (2007) state that whilst Australia is considered multicultural society, and whilst it may celebrate and embrace the idea of adopting a multicultural lifestyle in our major cities, there remains a 'pervasive undervaluing of languages in education and the wider Australian community' (p. 68). In a study undertaken by observing the teaching of a foreign language in an Australian primary school by two migrant teachers, the lack of extrinsic incentive to learn languages was nearly non-existent; rather the teachers found that the subject was often conceived as irrelevant to their students (Bense 2014, p.493). The question must be asked, how can the Australian government hope to keep up with the international stage and work towards increased understanding and tolerance of foreign cultures and immigration if the lack of importance placed on the education of young Australians in these areas is not addressed? To this day, educators who specialise in foreign languages have a multitude of challenges to overcome when undertaking classroom teaching, namely insufficient funding and lack of support (Bense 2014, p.490) In 2012, the Australian government promised a broad national education initiative whereby all students would be given the opportunity to study Asian culture, history and languages from primary education through to the completion of their year 12 studies (Bense 2014, p.490). Granted this push towards the recognition of foreign language benefits was welcome, it no

doubt left a large gap for the issues already affecting language education to continue to fall through the cracks, not to mention the fact that no initiative was offered to promote any other of the world languages.

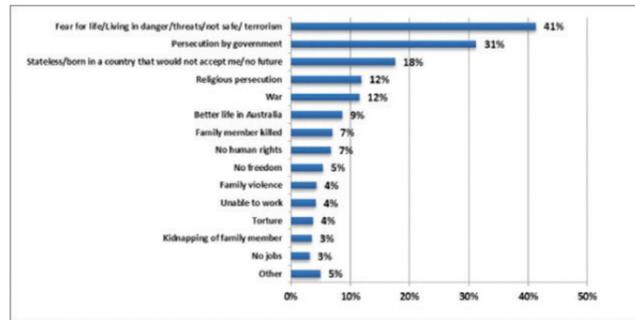
Overall, it is clear that the low value placed upon, and general marginalisation of languages other than English within Australian education and culture is severely impacting the ability to teach languages in the classroom. This general attitude certainly has affected the generally low numbers of Australian students who undertake a foreign language to the end of their high school studies and beyond (Bense 2014, p.492). This filtering down from adult to student of the undervaluing of foreign language results in students seeing the area of study as largely unimportant and not worth pursuing, an idea that would seem very at odds with a highly diverse population (Bense 2014, p.491). Furthermore, this attitude is extremely backward in a world that grows increasingly globalised, where multi-culturalism and multilingualism should be given the utmost of value.

### 4. WORKING FOR PROGRESS: IMPLICATIONS FOR THE FUTURE

#### 4.1 Alternatives to Mandatory Detention

There are a multitude of alternatives to practicing harsh, mandatory detention. Whilst the most obvious would seem to be to give simple liberty, the world is unfortunately never that simple. There will always remain the need of the government to track the population and the number of asylum seekers in order to ensure laws of border protection are maintained and national sovereignty is respected, however there is a plethora of ways that this can be achieved without having to compromise basic principles of human rights. For example, placements at restricted residencies, community housing or open community centres, would seem both incredibly more respectful of human dignity and a better method of introducing new arrivals to the Australian community, rather than forced incarceration (Raper & Brennan 2002, p.34). For the short term however, it would seem that mandatory detention is not likely to be abandoned, most certainly not under the current government, and as such it is too important to investigate methods of improving the already existing system, which is both economically and humanitarily costly to the nation. At the very least, it would be prudent to make the system far less jail like and for detention sentences be as limited as much as possible to allow time for health and security checks before integration into the community.

Figure 2. Responses by Children and Parents in Detention to the Question: Why Did You Come to Australia?



The majority of people being detained in these centres after all have faced enough hardship for a lifetime, to subject them to more suffering at the hands of the government that they have reached out to for safety is barbaric. Figure 2 depicts the data collected from the Australian Human Rights Commission (2015) in regards to why asylum seekers detained in Australian detention made the decision to come to Australia. An overwhelming 41% said the decision was made due to: fear for their lives, not feeling safe, terrorism or threats in their home country. The next most popular answer, receiving 31% of responses given, was that their government persecuted them. With this in mind it seems a remarkable lack of compassion to detain these asylum seekers in conditions that perhaps do not better those from which they had previously fled.

#### 4.2 Increased Education on Multiculturalism

Although it is certainly not as pressing an issue as changing the violation of civil liberties that are the conditions of the mandatory detention centre system, under the current Australian government, increased promotion of foreign cultures and languages would certainly seem a more achievable goal at this point in time. Perhaps with increased knowledge of foreign cultures, indigenous Australian culture, foreign affairs and languages, a heightened appreciation of culture may be cultivated for the youth of the nation. Furthermore, the development of groups such as 'Welcome to Australia' helps to encourage positive action in personifying the valued Australian ideals of diversity, generosity and compassion for all. By promoting and fostering a positive conversation towards celebrating multiculturalism in workplaces, schools and even larger institutions in Australian society, perhaps the nation as a whole can keep up with the global world in embracing diversity, rather than fearing it.

## 5. CONCLUSION

Whilst Australia is still lagging behind some parts of the world in terms of the often inhumane treatment of asylum seekers, it is encouraging to see that changes are on the horizon, however slowly they may seem to be approaching. There are upwards trends in several areas that show promise on heightened awareness of the importance of multiculturalism, immigration and social awareness of asylum seekers in detention, from the number of students learning foreign languages to year 12 and onwards into their tertiary education, to the reconciliation and compensation policies being made in regards to Indigenous Australians. The most important factor in fostering this change is to offer legitimate and achievable alternatives that can help reacquaint the nation of Australia with policies of progress, rather than regression.

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# When Life Is Too Perfect, You Don't Learn Anything: An Exploratory Study on Children's Experience of Parental Gambling

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## Social Affairs and Medicine

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### ABSTRACT

Problem gambling affects many areas of the gambling individual's life and family is one of it. The child of the problem gambler is a subject that has been given little attention in problem gambling research. Among the scant research done, emphasis was placed on highlighting the fact that children are victims of their parent's bad decisions but little is known about the agency of children in such situations. Therefore, this study aims to explore children's experience of parental gambling. Using the principles of social relational theory (SRT), in-depth interviews were conducted with three children to gain insight into their experience. Findings from this study inform that children are agentic beings who are able to exert their power in the relationship with their parents and this is made possible by the relationship context that the family provides. One family demonstrates that open communication and the strong relationship in the family empower the child to exercise their agency more constructively than other children. Based on the insights from the interviews, it is recommended that social workers facilitate difficult conversations about gambling between parents and children so that the problem is transparent in the family. This will enable the family to work together to solve the problem more effectively as compared to keeping the gambling problem as a secret.

### 1. INTRODUCTION

With the opening of the two integrated resorts in Singapore, Resorts World Sentosa and Marina Bay Sands in 2010, there have been numerous reports on the positive economic contribution of these two casinos (Lim 2011). However, this optimistic picture is only painted on one side of the coin. Several international studies have recognized that gambling addiction issues ensue from the opening of a casino (Jacques, Ladouceur & Ferland 2000; Welte, Wieczorek, Barnes, Tidwell & Hoffman 2004). In addition, problem gambling does not affect only the gambler, it also affects the lives of family, friends and co-workers significantly in the aspects of finance, emotions as well as social and relational (Darbyshire, Oster & Carrig 2001; Mathews & Volberg 2013). Therefore, the other side of the same coin is the price

families of problem gamblers pay and this is often hidden within the family. The purpose of this paper is to offer a firsthand and in-depth understanding of children's experience of parents' gambling, the meanings they accorded to the experience as well as the strategies adopted by them to manage this situation.

### 2. LITERATURE REVIEW

*'Problem gambling is gambling behavior, which causes disruptions in any major area of life: psychological, physical, social or vocational'* (NCSS 2006, p.4). A systematic review of problem gambling and the impact on families by Kourgiantakis, Saint-Jacques and Tremblay (2013) shows that research on the impact of problem gambling on children is scant as there were only a few researches that studies the impact of parental gambling on children (Darbyshire, Oster & Carrig 2001b; Patford 2007; Vitaro et al. 2008; Mathew & Volberg 2013). All four of these studies reported the impact of parental problem gambling on children and only the study conducted by Mathew and Volberg (2013) examined how adult children cope with these problems.

#### 2.1 Effects of Problem Gambling on Family

In a qualitative study of 50 Singaporeans with a family member who is a problem gambler, Mathew and Volberg (2013) found out that the impact of gambling was extensive ranging from depriving children opportunities for education and professional advancement to emotional distress, which included anger and distrust towards the gamblers. Eight of the 50 participants who were adult children of gambling parents reported that it was highly stressful for them. While upholding the cultural norms to be filial to one's aging parents they had to set a careful boundary in order to not feed on their parent's gambling habits.

Darbyshire, Oster and Carrig (2001a) studied the experiences of Australian children when a parent or caregiver has a gambling problem. The theme emerged from this study was "pervasive loss" for all of the children. These children experience physical loss where they saw that gambling causes their parents to leave them alone and existential loss of a parent as

they felt that their parents no longer place them as the top priority. Gambling had taken over their position to be the top priority. In addition, there was also loss of trust and reliability when parents kept breaking their promises. Last but not least, some of the children had tangible losses such as losing their savings to their parents.

From these literatures, it was evident that much emphasis is placed on highlighting the fact that children are victims of their parent's bad decisions. As Darbyshire, Oster and Carrig (2001b) observed '*[T] here is an overall sense in the literature of children being passive recipients of and respondents to their parent's gambling problem*' (p.189). There is little attention paid in the literature to how children actively deal with this situation on an everyday basis. Few, if any, study directly seeks and attends to these children and young people's accounts and understandings of their experiences. Therefore this study hopes to examine the effects of parental gambling from the perspective of children, the meanings assigned to the experience by the children and how they cope with the situation, which remains invisible in extant literature.

## 2.2 Theoretical Framework - Children as Active Agents

Conventional research, particularly in developmental psychology conceptualize parent-child interactions are seen as a unidirectional model as parents would affect children in their upbringing and the conditions they provide children to grow up in (Kuczynski 2003). Owing to this perspective, children are often seen as victims of their parent's circumstances. However, in the recent years, researchers are looking into the bi-directional model of parent-child influence. Kuczynski (2003) proposed to use the social relational theory to study the parent-child relationship.

Social relational theory (SRT) is an open-ended dialectic framework studying the processes in parent-child relationships (Kuczynski & Mol in press). In this theory, parent and child are regarded as equal human agents who have the power to influence and they contribute to the parent-child relationship through the interactions of their perspectives and actions. At the same time, SRT acknowledges that the children and parents have unequal power. Parents are physically stronger, more knowledgeable, have more resources because of their earning power. Yet, both parents and children have their own personal, relational and cultural resources to draw power from (Loulis & Kuczynski 1997).

According to Kuczynski & Mol (in press), the relationship between parents and children is a context for children to exercise their agency. The desire to maintain positive relationship prevents parents and children from doing things that are harmful to the relationship. Some strategies such as arguments and negotiations may be resistant in nature but these may also be healthy forms of resistance. This shows that both parties continue to engage in the maintenance of their relationship hence indicating that the relationship is important to them. When parents create a possibility for negotiation during such interactions, children will be able to play a bigger role in exercising their agency.

SRT also assumes a bidirectional influence between parents and children where how the parent responds to the child's present behavior will influence the child's subsequent behaviors. Similarly, how the child respond to the parent's behavior will influence the parent's subsequent behaviors. Through time, parent and child becomes engaged in a continuous transformation where each partner will respond to new characteristic of the other. The lens of 'children's agency' as well as 'bidirectional influence' proposed by SRT would be used to guide this study.

## 3. METHODS

### 3.1 Qualitative Mode of Inquiry

The qualitative mode of inquiry refers to the non-existence of objective reality and everything is subjected to interpretations (Rubin & Babbie 2008). In other words, reality is what the research participants perceive. Every individual's experiences, feelings and meanings attached to their encounters are unique; thus it is vital for researchers to attain an empathic understanding of the respondents' inner world in order to interpret their experience.

In this study's context, a qualitative research is more feasible because children of parents who are gamblers are a small population and there is no prior research to viewing children as active agents when their parent is a problem gambler. Past researches focused on the impact of gambling on children, which often portrays them as victims, and therein exists a gap on learning about how does children cope and actively handles such situation as agentic beings. Thus, more information is required in this area, which is achievable by conducting a qualitative study. It enables an exploratory approach and provides in-depth understanding about these children.

### 3.2 The Sample

Participants were recruited through Adullam, a non-profit self-help group that assist people with moneylending and debt issues, which largely stem from gambling. I started volunteering at Adullam in mid-January 2014. When I was there, I learned that volunteers run sessions weekly on Saturdays. Most of the volunteers were previously service users of Adullam's services. During my four separate visits, I got to interact with the coordinator and key volunteers, and learn about their experiences as recovering/ recovered gamblers. After discussing with the coordinator about my research project, she introduced me to parents of potential participants. Parental consent was first sought before I contacted their children separately to obtain their consent.

There are three inclusion criteria that are established for this study. Firstly, participants need to be children of parents who are recovering or have recovered from gambling. Secondly, participants must be able to comprehend and hold conversation in basic English or/and Mandarin. Thirdly, participants must be aged seven to 19 years old. Four participants were eventually recruited and interviewed. They are aged between 11 to 19 years old. Eventually, one participant had to be excluded because her parents were borrowing from moneylenders because of other issues and not problem gambling. She had been interviewed due to miscommunication on the inclusion criteria. The small sample size was mainly due to the challenge in recruiting participants, as parents were hesitant in allowing their children to talk about their experience and some children declined to be interviewed.

### 3.3 Procedure

The study comprises fieldwork at Adullam as well as interviews with the child participants at their preferred location. Each interview lasted between 45 minutes to an hour. Open-ended and semi-structured interviews were conducted with the facilitation of an interview guide. This allowed for greater flexibility, as follow up questions are based on the responses of the participants. The interview guide was formulated using the theoretical framework, literature reviews and opinions of the children. Before the interview, help was enlisted from the participants to find out what are some things that would be important for a researcher to learn from a child whose parents are problem gamblers. Their opinions are then incorporated into the interview guide. After the interview, feedback about the interview process was also gathered which allows the questions to be improvised. Finally, an incentive of \$20 NTUC voucher was presented to the participants as a token of appreciation for their participation.

Each interview was conducted individually with the participant at the location of their choice. Written consent was obtained from the participants before the start of the interview for their consent to the interview and to the audio recording.

The ethnographic fieldwork was conducted over a span of four weeks on the Saturdays at Adullam from mid-January to mid-March 2014. They lasted for three hours for each session between 5.30 p.m to 8.30 p.m. I spent the time helping out with administrative work, observing and holding informal interviews with key volunteers as well as help seekers. Many of them were parents of young children and they provided me with

Table 1. Profiles of participants

Name (pseudonym)	Current Age	Background Information
Adeline	19	Lives with her parents and younger sister. First learns about father's moneylending behavior after coming home to a front door that was splashed by paint in 2012. Parents then disclosed father's debt to child but child remains unsure about the cause of the debt.
Brenda	11	Lives with her parents and younger sister. Parents had never communicated to child about gambling habits and debts. Child does not want to ask in fear of getting reprimanded. Observes that the financial situation at home is not good but does not know the reason.
Cally	19	Lives with her parents and younger sister. Child always knew that father spends a lot of money on buying lottery since young. Father first disclosed about his gambling debt in early 2013 when he could not handle the payment. Family stepped in to help with the debts and father broke the trust of the family when he incurred another set of debts in September 2013.

insights about the family dynamics of their family, which helps me to understand the family situation of the participants.

### 3.4 Data Analysis

The interviews were transcribed and the interview transcripts and field notes were analysed. SRT guided the emergence of themes where were analysed and compared across all the three participants.

### 3.5 Limitations of the Study

The data collected from this study may not be generalizable to other children due to the small sample size of three children. Another limitation is that one of the interviews was conducted in Mandarin; meanings may be lost when translating the interviews into English verbatim. To safeguard this pitfall, I looked through the transcript and listened to the audio recording several times in order to make sure that the English translation captures the meaning of the interview.

## 4. FINDINGS

### 4.1 Family Situation

Among the three participants, not all of them were aware of their parent's gambling habits. Adeline (19 years old) got a hint about her father's gambling and moneylending habits when she first saw paint splashed on her door. Her parents later confirmed her guess that her father had owed moneylenders money. Brenda's (11 years old) parents had never disclosed her parent's gambling habit to her. She was only aware that her family is facing some financial difficulties through the careful use of money in their daily living well as through observing her parents working harder as compared to the past. As for Cally (19 years old), she had known about her father's gambling habits since she was young but she only got to know of the gambling debts when her father confessed when he was unable to pay the moneylenders.

For Adeline and Brenda, the debts were kept as a secret from them. Specifically in Adeline's case, she would not have known about the debts if not for being confronted with the splashed paint on her front door. Both of them also shared that they have never communicated with their parents about what is happening at home. Brenda is afraid that her parents would scold her if she asked and Adeline feels that she should not interfere in the matters at home. Conversely in Cally's home, her parents talk about

the financial problems openly and everyone knows what is happening, especially after the last blown-up where her father had borrowed another lump sum of money from the moneylenders for the third time.

During my fieldwork at Adullam, I spoke to two parents who are recovering problem gamblers. Through my conversations with them, it is evident that parents prefer to keep their gambling habits and debts as a secret because they felt that they would lose the respect of their children if they were to know about their debts. The face issue is pertinent to these parents. This shed some light on where the parents are coming from in the families where the gambling problem is kept from the children.

### 4.2 Issues/ Challenges Faced at Home

The themes surfaced for issues and challenges that children faced at home were financial strains, emotional strains as well as strained relationship with the gambling parent. In this section, each of these themes would be elaborated and substantiated by quotes from the children.

#### 4.2.1 financially strained

One of the common challenges faced by all three participants is financial strain. They reported that they have to make lifestyle adjustments to deal with the financial constraints due to the loss of money from gambling as well as the debt incurred by the parent gambler.

Lifestyle adjustments for all three children include limited social activities with their friends. For the two older children (Adeline and Cally) who are 19 years old this year, they would avoid going out with their friends in order to save money, or go on a budget whenever they do. As for the younger child (Brenda) who is 11 years old, she shared that she had never gone out with her friends on her own. For her, the biggest lifestyle adjustment was that she is unable to eat her favourite fast food (such as Kentucky Fried Chicken) as often as she used to.

The financial hardships of the family also meant these children experienced some deprivation. For example, Brenda only has one set of uniform to wear in school from Primary one to Primary five. As Brenda knows of the family problem as "money problem" at home, it was an area that was explored with her most to listen to her experience. Cally on the other hand recounted that she has to stop receiving pocket money from her parents during that period of time when the family was under severe financial strain.

#### 4.2.2 emotionally strained

For Adeline and Cally, harassment from moneylenders was the biggest issue for them. They went through substantial distress caused by moneylenders as a result of problem gambling. Adeline, for example, described the experience as scary and shocking. Not only that, she also shared that these induces wild thoughts in her.

*Researcher: How do you feel when you saw all these?  
Adeline: Shocked la, scared la. Like what if they kidnap me?*

Both of them reported that when the harassment first started, the intensity was high and the experience was extremely traumatic. They were scared to go home and felt that home was an unsafe place. This was especially evident in Cally's words:

*'All I think about is: can I go home or not? I am very scared if I go home, got anyone paste anything outside my house. I was very scared. Then in the middle of the night, very paranoid! Because for the illegal one, they pour paint and stuff right. We will start waking up in the middle of the night, checking our doors.'*

The emotional stress also comes from receiving anonymous letters in their mailboxes, pasting of defamation notices on their doors as well as splashed paint on their doors. This had also resulted both of their families to be highly paranoid, as they were afraid that the moneylenders would strike anytime. For Adeline, she was even locked out of her house once.

Emotional strains do not come from the harassment alone. The harassment caused Cally to be more paranoid and irritable and these emotions are transferred to other parts of her life, which intensifies the emotional strains. She shared that her relationship with her boyfriend hit the rock bottom during that period of time because she was especially irritable.

On the other hand, Brenda had never experience the harassment from moneylenders and she does not know about the debts that her parents had incurred. However, she was emotionally strained as well throughout this experience. She feels bad whenever she has to ask for extra money from her father to pay for additional school expenses as she understands that her father is already working very hard and finances are tight at home. When her parents quarrel at home due to money issues, she constantly fears that they would scold her. It is also very stressful for this child

who has to deal with other emotional stressors even when she does not need to deal with the harassment from moneylenders.

#### 4.2.3 strained relationship with gambling parent

Participants described that the relationship between the gambling parent and family members were highly strained. For Cally, her relationship with her father was so negative that she felt hatred towards her father.

*'When I found out that it got so full-blown... I actually advised my mum to get a divorce. I mean it is more than many years already. I mean ever since I have grown up, episodes like that are happening. Just that, it was in small amounts and it is not towards the moneylending side but I felt that when you step into gambling right, you can never stop.'*

When she learnt that her father had betrayed the family's trust for the third time, she could not believe in her father anymore and even advised her mother to leave her father alone so that he would not implicate the family. For Adeline, her sister was extremely angry with her father and refused to talk to him during that period of time.

### 4.3 Children's Agency - Strategies to Manage Stress

Through the interviews, it was found out that children are not passive receivers of the family's situation. They employ strategies to manage the financial, emotional and relational stress from parent's problem gambling. These strategies are focusing on studies, playing a role in the family and assigning meanings to the negative experience.

#### 4.3.1 focusing on studies

The most common strategy employed by all three children that was interviewed was to focus on their studies. For them, shifting their attention to studies was how they choose to cope with what was happening at home. It not only acts as a distraction for them from the things that are happening at home, it acts as an anchor because studies becomes one of the few certainties they have in their lives. For example, Adeline perceived concentrating in her studies as helping the family:

*'Like how do you want me to react? Like not like I can [help with the finances]... Unless like I'm working then I can like support financially right? Now I'm not even working. I'm still studying. Like if I worry, there*

is no use. So I just concentrate on my studies... Then like fewer people worrying.'

This strategy was most evident in Brenda. She shared that she would not take the financial situation at home at heart because she wants to concentrate in her studies. She also mentioned that when she hear her parents quarrel, she would either play with her young sister so that the younger sister will not disturb her parents or she would go back to her room to study. It was evident that studying was important to her as when asked about how she would advise a friend who is in a similar situation, she said that she would comfort the friend by playing with her and advises her to concentrate on her studies. All of these reflect the importance of studying to her and how she uses studies to cope with the emotional stressors.

#### 4.3.2 playing a part in the family

All three children play a role in the family. For Adeline, she would help to read the letters that are sent by the moneylenders to her illiterate mother. Although there are two children in the family, 19 (Adeline) and 17 (sister), Adeline said her mother would ask her to read the letters from the moneylenders when she does not understand them.

Even though Brenda is only 11 years old, she holds heavy responsibility in the family. She helps to take care of her sister (five year old) like helping to feed, bathe and play with her. In addition, she also saves up more than half of her own pocket money to pay for the additional fees that are needed for school. She explains that she does this because she does not want to burden her father who gives her pocket money for school. This shows that despite her young age, she tries to help with the family situation by being thrifty with her own pocket money and decrease the expenses of the family.

As for Cally, she helps to advise her mother on some aspects of the family finance. When money was tighter at home last year, her mother was considering on taking a loan and she helped to look at the different loans and advise her mother accordingly. Also, she wanted to contribute by paying off her father's debt with her savings but her parents refused to use her money. Her sister and her stopped taking pocket money for a while during that period of time when the finances at home was severely strained by her father's debt.

From all of these examples, it was evident that the children contributed to the family in their own ways.

#### 4.3.3 according meanings to their experience

Both of the older children (Adeline and Cally, both 19) shared that when they first learnt about what was happening, they could not understand at all and they would either ask themselves or ask their parents why this is happening to them.

Both Adeline and Cally attempted to explain their own experience by giving meanings to it. For Adeline, she gives meaning to the experience by telling herself that her father went into gambling with the intention of giving them a better life, but the good intention spiraled into gambling cycles and moneylending cycles. Although she has never clarified with her father what happened, she was convinced that this is why her father gambles and borrowed from the moneylenders.

As for Cally, although she recognized that the gambling problem that resulted in huge debts and harassment from money lenders brought her intense distress, nevertheless, she claims that she has now observed a kind of divine intervention into the problem and allows her to see the stressful experience positively.

*'We can only say that everything is predestined. Me and my mum, we discuss about this but we just felt that, it's just predestined to happen. It's something that the family has gone through and then for myself because I have been in church before, so there's always this phrase "God will never let something happen to you if... you are not strong enough.'*

When her father admitted to his wrong, the whole family was involved in solving their problem collectively and this allows Cally to exercise her agency. She expressed disappointment and hatred with her father's choice. Seeing how his daughters are extremely disappointed and how the family was affected by the harassment from moneylenders, her father started to mend his ways by working to repay off the debts and volunteers at Adullam to remind himself to not go back to his old ways. Cally mentioned that seeing how her father works hard at paying off the debts convinced her that he is finally putting the family as his priority and she starts interpreting it positively. She shared that she no longer bears hatred towards her father and she is happy that he is finally doing things for himself and showing himself as a capable father.

She also sees that without this incident, her family will not be as united as they are today so she is still thankful that it happened.

*'Definitely good changes. It kind of like really show that we care [for each other]. Very much, it's really about... the key thing [father's gambling and debt issues] was gelling the family [together].'*

Cally valued gaining good family relationships out of it and she is extremely thankful for the experience:

*'Let's say if I have a biography, I will definitely want perfect memories. But then, when it's too perfect, it comes to a point where you don't learn anything. Yeah.'*

It is apparent that she takes pride in the whole incident. Although the experience was extremely traumatic, she gained valuable insights out of the incident and will not want the experience to be removed from her life. The meaning narrative however was different for Adeline who shared that the experience was so scary and unpleasant that she will not want it to be in her life.

## 5. DISCUSSION

Given the assumption that all children are born agents, why some children exercise more agency than others? From the findings, it is evident that among the three children, Cally was able to exercise most agencies while Brenda exercises the least agency.

The relationship between Cally and her father reflects bidirectional influence posited by SRT. Both father and child are observed to be contributing to the parent-child relationship. Although the father's gambling brought about a lot of suffering for Cally's family, the bidirectional influence between father and Cally ignited a virtual cycle in the family. Father first influenced child to express hatred and disappointment due to the recurring debts father had incurred and this in turn influenced father to change for the better. Cally then sees the change in father and interprets this change positively. Not only so, she values her father more than before. Father and child engage in a series of continuous transformation where each of them responds to new characteristic of the other. There have also been bidirectional influence between parent and child of other family but the transparency of problem that was present in Cally's family enables such positive exchanges to be present.

Cally also shared that she draws a lot of support from her mother and she feels like her mother is the

pillar of the entire family that keeps the family together. Mother as a strong support for the family provides the relational context for the members of the family to exercise agency. The desire to maintain a positive relationship with mother engages father and child in a negotiation process where both parties participate in this cycle of maintaining their relationship through influencing each other. In addition, father creates opportunity for negotiation when he admits to his wrong and child was able to exercise her agency better.

During the interview, Cally shared with me that she hopes that she can share her story on bigger platforms to encourage other families and children who are in similar situation and to tell people to never step into gambling. In her own life, she also stepped up to be an informal 'consultant' to friends who meets similar problems. This shows that Cally not only has the power to negotiate with the family situation at home, she has excess resources to share with the people around her.

As for Adeline and Brenda, although the amount of relational power that they could draw from their family was limited, they are not totally powerless. As suggested by SRT, they also have the power to influence the family. They perform actions to affect their family, in a quiet manner like how Brenda helps to take care of her younger sister, chooses to not be demanding to her parents when it comes to eating her favourite food and wearing only one set of uniform. As for Adeline, she helps her parents to look at letters and helps the family save money by limiting her social activities with friends. However, they acted more like isolated agents in the family due to the lack of communication among family members. Therefore, they are less likely to draw resources to power their agency, as the relationship contexts in these families are relatively thin in resources. Also, both of them try to maintain homeostasis at home at their own expenses. By not asking their parents explicitly about the debt issues, they feel that they will help the family to worry less but they are not able to exercise as much power of influence as Cally does. Therefore, findings reveal that relationship is important as a resource for children to draw power from and open communication is definitely essential for positive transactions to take place between parent and child.

## 6. CONCLUSION

This study has also shed light on the less reported experiences of the children's experience of parental gambling. These experiences include financial

strains, emotional strains as well as family's strained relationship with the gambling parent. The findings from this study inform that children are agentive beings who are able to exert their power in their daily lives through employing various strategies to manage their stress. These strategies are: focusing on studies, playing a part in the family and according meanings to the negative experience.

The findings from this study have important implications in work with families who have one member who is a problem gambler. During the intervention process, a lot of parents have fear about confessing their mistakes and wrong decisions made as it will bring about shame for them in the presence of their children and this often makes problem solving as a family difficult due to the secrets that has to be kept. Social workers can facilitate the discussion so that the family can work together to solve this problem. At least in Cally's case, it is evident that the transparent communication in the family brought about positive impact in her life and she even has excess resources to support other people who face similar problems in their lives. Her family has demonstrated that the open communication and the relationship that the family creates for them, give power to family members to exercise their agency constructively.

## 7. INTERVIEW GUIDE

1. If I were to talk to another child whose father/mother is a very serious gambler, what do you think will be some of the things that will be very important to find out from her? When did you start observing your father/ mother has a gambling issue?

2. How did you find out about their gambling habits? How did you feel?

3. If you can describe in three words about how you feel during the whole gambling episode, what would it be? Why did you choose these words?

4. OR

5. If you have a friend whom you really trust, how will you tell this friend about what you went through during that period of time?

6. What areas of your life do you think was affected when your parents gambled?

7. Can you describe to me how you got through the time in your life?

8. (Probe) What/ who made the period easier/more difficult for you?

9. What has happened since the experience? What meanings have you taken from this experience? Looking back, would you remove this negative experience from your life?

10. How do you feel about yourself and the future now?

11. How do you think your father/ mother has changed? What do you think of the change? Do you think it is 'real'? What made you think so?

12. What are your thoughts about the family atmosphere? Do you think there was a change?

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# Addressing ‘the Neglect of Neglect’: Understanding Child Neglect and Potential Actions for Prevention and Early Intervention

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## 1. INTRODUCTION

In many developed countries, child neglect is by far the most prevalent form of child maltreatment – in the US alone 80% of the 679,000 victims of substantiated<sup>1</sup> maltreatment are victims of child neglect. Child neglect has a markedly higher incidence rate than child physical or sexual abuse (please see appendix 1 for definitions of all maltreatment subtypes) and has been shown to have equally damaging lifelong consequences for children who experience neglect (Gilbert, Widom, Browne, Fergusson, Webb & Janson 2009). Despite this, neglect remains the most understudied and least understood forms of childhood maltreatment. This disconnect has led to many authors discussing ‘the neglect of neglect’. This paper will explore the issues that have resulted in child neglect being ignored as a public health issue and will examine the ways in which child protection systems may overlook families where neglect is a problem. Lastly, this paper will explore national policy and practice directions to tackle child neglect.

Neglect has been defined by the Consultation on Child Abuse Prevention (as cited in Stoltenborgh, Bakersman-Kranenburg & van IJzendoorn 2013, p.345-6) as:

*‘the failure to provide for the development of the child in all spheres: health, education, emotional, development, nutrition, shelter, and safe living conditions in the context of resources reasonably available to the family or caretakers and causes or has a high probability of causing harm to the child’s health or physical, mental, spiritual, moral or social development. This includes the failure to properly supervise and protect the child from harm as much is feasible.’*

Neglect can include physical neglect (the failure to provide basic physical necessities, emotional neglect (lack of caregiver warmth), educational neglect (failure to provide appropriate educational opportunities for the child), supervisory neglect

<sup>1</sup>AIHW, *Substantiation refers to when notifications of abuse have been investigated and it was concluded that there was reasonable cause to believe that the child had been, was being, or was likely to be abuse, neglected or otherwise harmed, 2014.*

(child left within appropriate supervision for their development and age) and medical neglect (failure to provide medical attention). Issues of culpability and intent have been debated by scholars and there is no clear consensus on whether the intent to maltreat is a necessary part of the definition of neglect (Janczewski 2015).

The definition above touches on some of the crucial areas of debate surrounding neglect, most importantly the relationship between poverty and neglect. Studies have found that there is a strong link between poverty and neglect (McSherry 2004; Sedlak & Broadhurt 1996) however not all children who are neglected are from impoverished families and not all children from impoverished families are neglected (Crittenden 1999). In addition to poverty, there may be other conditions that result in children experiencing neglect that are unrelated to the caregivers’ intent to maltreat (e.g., refugee or asylum seeking families, physical disability [either parent or child], mental health problems or other chronic illness). Other factors that influence whether or not an act is considered neglectful are the age and developmental stage of the child; young children, toddlers, infants and children with special needs may be at greater risk of experiencing neglect due to their greater reliance upon their caregivers whereas an adolescent of 15 years- while still a child- may be old enough to take more responsibilities. Neglect is also socially constructed and what is considered neglect in a Western society may not be considered neglect in other cultures (e.g., leaving young siblings in care of older siblings) Culture is a powerful influence on what is considered neglectful parenting and Laird (2015) notes the flaws in applying Western conceptualisation of childhood to non-Western countries.

## 2. NEGLECT OF NEGLECT

The neglect of neglect is not a new phenomenon. In the 1980s researchers began to contend that neglect was being overlooked compared to other maltreatment subtypes such as physical and sexual abuse (Moore 1989 as cited in Tomison 1995; Wolock

& Horowitz 1984). Since then there have been further publications lamenting the overlooking of neglect (Dubowitz 2007; Hobbs & Wynne 2002; McSherry 2007, Stoltenborgh et al. 2013). Gilbert and colleagues (2009) state that neglect receives ‘*little attention from self-report and parent-report studies despite being the most frequent category of child maltreatment recorded by child protection agencies*’. A recent meta-analysis on the prevalence of neglect highlighted the relative dearth of studies compared to sexual abuse studies; there were 13 studies included in the neglect meta-analysis compared to a similar study on child sexual abuse by the same group returning over 200 studies (Stoltenborgh et al. 2013). McSherry (2007) describes the paradox of neglect having markedly higher prevalence rates and causing as severe long term consequences as other subtypes of maltreatment, and yet is the least understood form of maltreatment.

### 2.1 Prevalence of Neglect

As noted above, neglect is the most commonly substantiated maltreatment subtype and the rates of neglect have increased dramatically in developed countries over the past two decades (insert figures, Watson, 2005). The Australian Institute of Health and Welfare (AIHW) report that in 2012-2013, neglect was the most commonly substantiated maltreatment type in most jurisdictions, as well as co-occurring frequently with psychological maltreatment and physical abuse. Amongst Indigenous Australians the proportion of substantiated neglect cases is markedly higher, accounting for 40% of substantiations compared to non-Indigenous Australians. The overall rate per 1,000 children reported by the AIHW is low (2.2 per 1,000, or 0.22%, in 2012-2013) Child protection statistics from the United States, Canada and the United Kingdom all suggest that neglect is prevalent (Watson 2005). These figures are likely to underestimate the true prevalence of neglect as they rely upon neglect being reported to child protection, investigated and found to be likely to cause harm to the child. Self-report (respondents are asked to indicate if they were neglected during their childhood using a variety of measures included single questions, short questionnaires or interviews) studies suggest that the true prevalence may be higher Australian self-report studies have found a higher rate, ranging from 2% to 12% (Rosenman & Rodger 2004; Price-Robertson, Smart & Bromfield 2010; Strauss & Savage 2005). A recent meta-analysis of studies conducted in countries rated by the World Economic Outlook Database as high resource countries estimated the prevalence of physical neglect as 16.3% and emotional neglect slightly higher at 18.4% (Stoltenborgh et al. 2013). The

authors noted that studies of the prevalence of neglect from ‘low resource’ were absent from the literature. These studies suggest that the true prevalence of neglect in the community is much higher than the cases that come to the attention of child protection authorities.

### 2.2 Consequences of Neglect

Neglect has major consequences for both the neglected individual and for broader society. With regards to the individual outcomes, it has been proposed that neglect is at least as damaging as other abuse types (Gilbert et al. 2009). Specifically, the long term effects of childhood neglect can include:

- Increased risk of substance abuse,
- Diminished economic well-being,
- Risky sexual behaviour,
- Increased risk for post-traumatic stress disorder,
- Increased likelihood of using social services,
- Increased likelihood of behaving violently,
- Impacts upon health; including greater risk of obesity, poor general health and increased health care utilisation and costs,
- Young children (under 2 years) who experience neglect can be affected in all areas of cognitive, social and emotion emotional functioning, and have impaired attachment.

At the societal level, child abuse and neglect are major economic burdens. Fang and colleagues (2012) estimated that the total lifetime cost (in US dollars) of experiencing child maltreatment was over \$210,000 per victim. Based on this, the lifetime economic burden of maltreatment occurring in 2008 was approximately \$124 billion. This total figure is determined by the number of children who were the subjects of a substantiated case of maltreatment and as mentioned previously, the substantiation rate underestimates the true prevalence rate; the true cost is likely to be higher again. The estimated lifetime costs of child abuse and neglect in Australia are similar - \$223,181 per child (based on calculation of \$6 billion of lifetime costs based on 26,884 children experiencing maltreatment for the first time in 2007) (Taylor, Moore, Pezzullo, Tucci, Goddard & De Bortoli 2008). It is important to point out that because neglect often co-occurs with other forms of abuse it is not possible to separate the cost. As neglect represents a large portion of the notifications and substantiations, it is likely to also account for a large portion of the total cost of child abuse and neglect.

### 2.3 Contributing Factors to Neglect

There are many potential contributors to neglect. Belsky (1993) applied a developmental-ecological model to the aetiology of child abuse and neglect. The model recognises that child maltreatment is determined by a multitude of factors operating at various levels of analysis from the individual to the broader social context. The central tenet of the model is that human development takes place through progressively more complex interactions between a human being and their environment. The model suggests that there are risk factors across a variety of contexts which interact with each other. These are most frequently visualised as a series of concentric circles starting with the child at the centre and the other contexts expanding from the child. Table 1 below explains the levels of interaction described by Belsky (1993) and the risk factors for neglect that relate to each context. (Table 1).

Neglect isn't associated with ethnicity, gender or the temperament of the child after other variables have been controlled for (Watson 2005). It is important to note that previous research has largely examined the maternal risk factors due to the gendered view of child-

raising and the mother being viewed as neglectful if the child is not adequately care for or supervised.

The risk factors often interact and there is no one pathway to child neglect. For example, both poverty and substance abuse are risk factors but each may be an antecedent of the other in different circumstances-one family may have alcohol problems related to losing work, whereas another may spend all available resources on illicit substances. Disentangling the causes of neglect so as to intervene is a challenging task and there is no one-size-fits all response to neglect or child maltreatment in general.

### 2.4 Why Neglect Has Been Overlooked

There are a range of influences which together have resulted in neglect being overlooked.

Firstly, difficulties in defining what neglect exactly is, including defining a threshold for harm, have played a role in neglect being overlooked (McSherry 2007). While it is comparatively easy to determine if a child has experienced physical abuse, the threshold for determining the point at which neglectful behaviour

causes harm to the child is much more difficult. Related to the definitions of neglect, are issues of culpability. When children are neglected, the parents may not have intended to do so and children may end up being neglected due to lack of available resources. Secondly, the conflation of child abuse and neglect into a single concept may result in neglect being overlooked in research. Much is written about child abuse and neglect which only deals with child abuse. Thirdly, research has identified that there are commonly held and erroneous beliefs that neglect is less harmful than other forms of maltreatment (McSherry 2007). In one study of 20,000 adults, neglect was the form of maltreatment least likely to garner a response other than to make a child protection notification (Donovan, Wood, Jalleh & Ivory 2010).

Tanner and Turney (2003 as cited in Scott, 2014) explore why case workers find it challenging to work with families of neglected children and the following themes were reported; difficult to decide at what threshold a situation requires intervention; neglect occurs over a long period; lack of an evidence base for practice with families.

### 2.5 Neglect is Challenging for Traditional Statutory Child Protection Systems to Respond to.

Child protection systems were set up to respond to allegations of physical harm and sexual abuse. Since then changing definitions of what constitutes child abuse and neglect have put increasing amounts of pressure on child protection systems. As an unintended consequence of mandatory reporting (mandatory reporting refers to the legislative requirement imposed on selected groups of people such as teachers, police, psychologists and medical practitioners, to report suspected cases of child abuse and neglect to government authorities) and the expansion of the definition of child maltreatment, Australian child protection services are facing an increasing number of notifications. Large numbers of notifications becoming a bottleneck into child welfare service system. Between 1989-90 and 2009-10 the number of notification to child protection services in Australian increased, from 42,695 to 286,437 (AIHW 2001; 2011 as cited in Bromfield; Arney & Higgins 2014). One in around every five or six notifications is substantiated, leaving around four in every five cases with no legislative grounds for interventions yet some level of vulnerability, need or risk has been identified (Gilbert, Kemp, Thoburn, Sidebotham, Radford, Glaser & MacMillan 2009). Neglect has the potential to be overlooked in child protection systems

as they are traditionally incident based, whereas each incident of neglect (e.g., a child doesn't have a jumper at school on a cold day, or has poor hygiene) may be less urgent to investigate as maltreatment despite the long-term risk of cumulative harm. The breadth of the behaviours notified to child protection services is also problematic. Notifications can range from reporting children who have an unhealthy lunch (e.g., chocolate bars for lunch) to children starving. Sifting through these notifications is challenging and greater education on what constitutes neglect may Bromfield, Gillingham and Higgins (2007) state that '(statutory) child protection has limited capacity to intervene to protect children experiencing low to moderate severity, and chronic child maltreatment' (p.42). If these notifications do not reach the risk threshold, intervention may not be offered, meaning families fall through the gaps and receive no response. Higgins and Katz (2008) propose that the majority of families who are notified to the child protection system may not meet the criteria for child protection intervention but nonetheless have significant support needs. Lastly, families in which neglect may occur are seen as 'too bad' for some services, but yet not bad enough for others and can fall through these gaps.

### 3. WHAT CAN BE DONE TO ADDRESS NEGLECT?

#### 3.1 In Practice and Policy.

In order to address the growing concern of all forms of child maltreatment, a public health approach is being advocated for. In a public health approach priority is placed upon having universal supports available for all families, more intensive secondary preventions are provided to families who need additional assistance, with a focus on early intervention and tertiary child protection systems (i.e., those that seek to remove children from experiencing further harm) are a last resort to child abuse and neglect. There is some evidence that a public health approach can reduce the occurrence of child maltreatment. Lower levels of maltreatment indices have been noted Sweden compared to the USA are consistent with lower rates of child poverty and parent risk factors and policies providing higher levels of universal support for parenting in Sweden (Gilbert et al. 2012). There is an increasing push in Australia for services to recognise that the parental problems impact upon children and ensuring that the children are considered in services offered to their parents (McDougall & Gibson 2014; Bromfield, Lamont, Parker & Horsfall 2010). In addition to social policies, researchers have explored some programs aimed at the universal level

Table 1. Developmental Ecology Definitions and Risk Factors for Neglect

Level of interaction	Definition	Risk factors
Developmental-psychological context	The role of parent and child factors in the aetiology of neglect, including the intergenerational transmission of child maltreatment	<b>Parental characteristics:</b> - Maternal age (young mothers are more at risk); - Presence of maternal mental health (e.g., depression); - Having experience maltreatment as a child themselves, having been in foster care; - Intellectual impairment. <b>Child characteristics:</b> - Age (younger is a risk factor); - Physical or mental disability.
Immediate interactional context	The parenting behaviours and patterns of parent-child interactions	Parenting behaviours (e.g., poor parenting self-efficacy); Substance abuse; Domestic violence.
The broader context	The community and social support, socio-economic status, neighbourhood context, social norms and cultural influences	Social isolation, lack of social support; Lack of available services; Poverty; Number of people in the home (large sibling groups); Intergenerational issues; Societal changes (increasing inequality between the rich and poor); Increasing individualisation of parenting (parenting viewed as nuclear family, not extended).

Source: Crittenden 1999; Watson 2005.

which have showed some success. Melton (2014) implemented the Stronger Communities for Children program. One of the aims of the Stronger Communities for Children was to ensure that children and parents in need of support were noticed and cared for by the community. Parents in the program reported changes including less stress, greater support and sense of community and more positive parenting behaviour. A decline was also noted in substantiated cases of child maltreatment. Addressing risk factors such as a lack of parental knowledge is another potential means to prevent child neglect. Prinz, Sanders, Shapiro, Whitaker and Lutzker (2009) explored the potential of a parent education and support program in a trial across 18 United States counties, nine counties received the parenting program and nine counties did not. Prinz and colleagues found preventative impact on substantiated child maltreatment, OOHC placements and child maltreatment injuries.

### 3.2 Targeted Prevention Initiatives

One of the characteristics of a public health approach is the early intervention and targeted prevention; programs aimed towards at risk families. Scribano (2014) notes that the return on investment in targeted prevention can range from between \$3 and \$17. The following section will discuss some of the emerging targeted prevention programs. MacMillan and colleagues (2009) review preventative interventions for families at risk of neglect occurring and report that home visitation and multi-component interventions show some evidence for reducing the occurrence of neglect. Home visiting programs have the advantage of being able to engage with mothers during pregnancy and provide support prior to the birth and the child and in an on-going manner. MacMillan and colleagues report that families participating in nurse home visiting programs had shown reductions in objective measures of child maltreatment or associated outcomes when administered to high-risk families prenatally and in the first 2 years of a child's life. It was noted, however, that not all home visiting programs were equally effective and some of the important factors contributing to effectiveness were; developed as research programmes initially, tertiary level qualifications of providers (Sweet & Applebaum 2004) and substantial investments in ensuring fidelity of programme delivery.

Project SafeCare is a home-visiting, parent education program from the United States for parents who were reported for, and at risk of child maltreatment (Gershater-Molko, Lutzker & Wesch 2003). The aim of the intervention was to improve

child health care, parent-child interaction and accident prevention. Practitioners delivered the training to the families in their homes. While the interventions improved parent's knowledge in the three areas, high levels of attrition were noted. The authors note that the presence of multiple stressors in the family's lives may be a limiting factor in their willingness to participate in a parent education program.

The home visiting programs described above all rely on professionals or paraprofessional coming into families lives and providing education. There is an increasing recognition of the role that community members can play in supporting families as noted by Wilson and Melton (2002 as cited in Melton, 2014) who explored commonalities between exemplary family support movements and among the 12 commonalities noted, strengthening family and community connection, treating parents as vital contributors to child growth and providing settings where parents and children can gather and learn from each other are all noted. The Family by Family program in Australia is an emerging, peer mentoring service for parents. Families are engaged in 'link-ups' with other families who have also been through challenging times and with support from program staff work towards . Family by Family is a targeted intervention; operating in disadvantaged areas and taking referrals from statutory child protection agencies. There is insufficient evidence examining the effectiveness of the family by family program at this stage but it is a promising

### 3.3 Differential Responses

Differential responses are a means of responding to families where neglect concerns may otherwise be overlooked. Essentially differential response services operate alongside the traditional investigative arm of child protection services and families may be referred to the differential response track after a case has been notified but without a formal investigation starting. In Australia non-government organisations provide most of the support services offered to families and statutory child protection has traditionally taken a more forensic approach. Differential response services aims to identify what individual and environment barriers facing the family may be contributing to the maltreatment risk and working with the family to negate these risks. Kyte, Trocme and Chamberland (2013) reviewed the evidence for differential response and noted that differential responses do not compromise child safety, and have found improvements in family engagement, worker satisfaction, response times and involvement with community organisations. Other

benefits included lower subsequent maltreatment reports, longer time to re-report, re-reports often less severe. In a recent evaluation of a differential response services in the United States Janczewski (2015) found differential response moderated the impact of poverty on investigation rates and offered the following interpretation- families coming to the attention of CPS because of an unmet need related to poverty may be diverted to an alternative track prior to investigation. It was also found that child protection agencies were investigating fewer cases but having a higher substantiation rate amongst the cases that were investigated. Despite the potential benefits of the differential response, there are some drawbacks. A differential response system still relies on families coming into contact with the child protection system – that is children may have experienced harm already – and due to the increasing numbers of notifications made to child protection systems, Bromfield, Arney and Higgins (2014) note that differential responses are ultimately unable to respond to the vast population of families who require support rather than coercive, court-ordered interventions.

## 4. CONCLUSION

Neglect is one of the most prevalent and most commonly substantiated maltreatment subtypes. Yet despite being as damaging for neglected children as physical or sexual abuse, neglect remains relatively overlooked. Issues that have made neglect difficult to respond to in research and practice include definitional issues, erroneous beliefs about the impact of neglect, difficulties in responding to neglect through current statutory child protection systems and

the intertwining of neglect and poverty. Differential responses and targeted interventions such as home visiting show some promise in preventing neglect and alleviating further instances where a child has already been neglected however these services alone are insufficient in creating lasting change for children and families. Broader moves towards a public health approach to child abuse and neglect are necessary given the associations with issues such as poverty and isolation. Moves towards a public health model with increased availability of health care, child care and education for all and a system for ensuring families where there is a risk of child maltreatment receiving access to evidence-based services are needed.

## APPENDIX 1

To provide a brief overview of the forms of child maltreatment, definitions of physical abuse, sexual abuse, psychological maltreatment and witnessing family violence are provided in appendix 1 below. As neglect is the central issues of this paper, it is discussed in greater detail in the table (Definitions of child maltreatment).

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Definitions of Child Maltreatment

Maltreatment subtype	Definition
Physical abuse	The non-accidental use of force against a child that results in harm. The use of physical force that is likely to cause harm would also generally be considered physical abuse.
Sexual abuse	Very broadly, sexual abuse is any act which exposes a child to, or involves a child in, sexual processes beyond his or her understanding or contrary to accepted community standards. It is recognised that the definition of sexual abuse varies depending on the relationship between the victim and the perpetrator.
Psychological maltreatment	Psychological maltreatment covers both emotional abuse (acts of commission) and emotional neglect (acts of omission) and is defined as inappropriate verbal or symbolic acts toward a child and/or a pattern of failure over time to provide the child with adequate non-physical nurturance and emotional availability.
Witnessing family violence	The witnessing of family violence is defined as a child being present while a parent or sibling is subjected physical, sexual or psychological abuse or is exposed to the damage caused to a person or property. It is debated as to whether or not is a separate subtype of maltreatment or considered a form of psychological maltreatment

Adapted from Price-Robertson, 2012.

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## *Session I B: Social and Psychological Well-Being*

*We wish to acknowledge the rich and diverse history and traditions of the Indigenous peoples<sup>1</sup> of Australia and recognise those whose ongoing effort to protect and promote Aboriginal cultures will leave a lasting legacy for future Elders and leaders. We are researchers from the University of South Australia and both share a strong interest in mental health and suicide prevention, particularly among diverse, vulnerable or marginalised communities. The thoughts reflected here represent our early thinking and learning discoveries on the topic of Indigenous youth suicide. We would like to express our sincere thanks to our Indigenous colleagues and friends who have shared their wisdom with us so far. We look forward to continuing these conversations and combining our efforts towards future work together.*

### **1. INTRODUCTION**

Suicide is a major public health concern. Global estimates suggest that approximately 800,000 people end their life by suicide each year, and that the number of people who engage in non-fatal suicidal behaviours is much greater (WHO 2014). Suicide can have devastating and long-lasting impacts for the individual, their family and friends, and the wider community. Certain groups are at greater risk of suicide than others. In countries such as Australia, New Zealand, Canada and the United States, rates of suicide among Indigenous young people are typically higher than those for non-Indigenous young people. This paper will explore the issue of Indigenous youth suicide in Australia. The paper will begin with an introduction to Indigenous communities in Australia and an overview of some of the inequalities experienced by Indigenous Australians. A description of what is known about Indigenous youth suicide will be provided, followed by an overview of what

<sup>1</sup> We acknowledge the diversity of the Aboriginal and Torres Strait Islander people of Australia. We also acknowledge that it is preferable to refer to specific group names where possible; however, given the broad nature of this paper, the terms 'Indigenous' and 'Aboriginal' will be used interchangeably to collectively refer to people of Aboriginal and Torres Strait Islander backgrounds. Australia's National Aboriginal Community Controlled Health Organisation (NACCHO 2014) adopted the term Aboriginal as inclusive of all Aboriginal and Torres Strait Islander peoples, and endorsed the term 'Indigenous' in international contexts.

is being done to prevent it. It will be argued that a collaborative, multi-sectorial and holistic approach is required to reduce the occurrence of suicide among young Aboriginal Australians.

### **1.1. Indigenous Communities in Australia**

Australian Indigenous cultures are the oldest living cultural history in the world, with archaeological investigations in the northwest of Australia suggesting that Indigenous people may have occupied Australia for at least 60,000 years (Australian Museum 2009). Over many thousands of years, Australian Aboriginal customs and practices evolved into a sophisticated relationship of sustainability with the Australian environment (Dockery 2009). The resourcefulness, strength and adaptability of Aboriginal people can be observed in their ability to have survived the often harsh climate as well as enormous changes over time in the landscape of the land now known as Australia. Despite only 2.4% of Australia's population being of Aboriginal background, Australian Indigenous cultures are rich and diverse. There is no single Aboriginal culture, but numerous groupings, kinships, tribes, ways of living, as well as languages (Department of Health and Ageing 2013). At the time of colonisation in the 1700s, there were an estimated 700 Aboriginal languages and dialects spoken, however, today there are less than 250 languages in existence (Australian Museum 2009).

### **1.2 Indigenous Perspectives on Health and Wellbeing**

Australian Aboriginal approaches to health and wellbeing are different to non-Indigenous understandings of these concepts. For Aboriginal people, the term mental health comes more from an illness or clinical perspective, denoting a more individual focus (SHRG 2004). The term 'social and emotional wellbeing' is preferred, which is considered to differ in important ways to non-Indigenous concepts of 'mental health' (SHRG 2004). Social and emotional wellbeing recognises the importance of connection to land, culture, spirituality, ancestry, family and community, and how these affect the

individual (SHRG 2004). These factors can serve as sources of strength and recovery when Indigenous people are faced with stress and adversity (Kelly, Dudgeon, Gee & Glaskin 2009). It is therefore critical that a wide range of dimensions affecting health and wellbeing are considered when examining a topic as complex as Indigenous suicide. Likewise, historical events, societal policies and other circumstances which have impacted on the health and wellbeing of Australian Indigenous peoples need to be carefully considered. In this paper, we are unable to provide a detailed account of all such influences but have sought to outline major historical and societal factors which are thought to impact on the health and wellbeing of Australian Indigenous peoples.

## 2. INEQUALITIES EXPERIENCED BY INDIGENOUS AUSTRALIANS

Despite their resilience and strength, a number of social inequalities are experienced by Indigenous Australians compared to non-Indigenous Australians. These are evident across multiple domains, including, but not limited to, mortality, health, education and employment. The most recent mortality data (AIHW 2014c) indicate that life expectancy is approximately 10.6 years less for Indigenous Australians compared to non-Indigenous Australians: 69.1 years for Indigenous males compared to 78.7 years for non-Indigenous males, and 73.7 years for Indigenous females compared to 83.1 years for non-Indigenous females. In addition, Indigenous Australians have a much lower age distribution pattern, with 65% of Indigenous deaths occurring before the age of 65 years (compared to 19% for non-Indigenous deaths). Further, the median Indigenous age is 21 years, compared to 37 years for the non-Indigenous population. As a result, 57% of the Indigenous Australian population is comprised of young people (aged up to 24 years) (ABS 2012a). Health inequalities are largely responsible for these differences, with greater incidences of chronic diseases, particularly circulatory diseases and cancer, considered to be the main contributors to the mortality gap (AIHW 2014c). These inequalities are compounded by reduced access to health services for Indigenous people, particularly in the more remote areas of Australia (AIHW 2014a).

Outside of the health domain, other notable inequalities are evident. In 2008, 65% of working age Indigenous Australians was in the labour force, compared to 79% of non-Indigenous Australians (AIHW 2011). Almost half of Indigenous children were considered to be living in jobless families – a rate that is three times higher than that of all children

in Australia. In addition, data from 2011 indicate that 1 in 20 Indigenous Australians were considered homeless – a rate 14 times higher than for non-Indigenous Australians (AIHW 2014b). Inequalities are also seen in the overrepresentation of Indigenous people in the prison system. In June 2014, 9264 prisoners identified as Indigenous and accounted for over one quarter (27%) of the total Australian prisoner population (ABS 2014). This is a staggering rate, considering that the adult Indigenous population comprises just over 2% of the Australian population. While the inequalities highlighted here represent just some of those experienced by Indigenous people in Australia, understanding these provides a context for the discussion of suicide to follow.

## 3. INDIGENOUS YOUTH SUICIDE

Suicide in Indigenous Australian communities was reported to be a rare occurrence prior to the 1970s (Tatz 2001). However, the rate of suicide and self-harm among Aboriginal people has reached crisis levels, in particular amongst younger age groups (Culture is Life 2014). In 2010, suicides accounted for 4.2% of all registered deaths of people identified as Aboriginal, compared with 1.6% for all Australians. Young Indigenous females (15-19 years) are 5.9 times more likely to die by suicide than non-Indigenous young females in Australia (ABS 2013a). Similarly, Indigenous males aged 15-19 years are 4.4 times more likely to die by suicide than non-Indigenous young Australian males. Rates of suicide are particularly concerning in certain regions, such as the Northern Territory, with a 2012 government report noting: *'The suicide rate for Indigenous Territorians is particularly disturbing, with 75 per cent of suicides of children from 2007 to 2011 in the Territory being Aboriginal'* (Select Committee on Youth Suicides in the NT 2012).

### 3.1 Possible Reasons for Suicide among Young Indigenous People

Suicide is a highly distressing event that can have profound effects on the family, friends and communities of those who take their own lives (Silburn et al. 2010). The reasons and motivations for taking one's own life are often complex and may be difficult to establish after the event. Research into the reasons why Aboriginal people are at elevated risk of suicide (De Leo 2012) as well as Aboriginal understandings of suicide and self-harm behaviour (Elliott-Farrelly 2004) is scarce. Further obscuring this issue, it is far less common for Indigenous people to leave a suicide note as compared with non-

Indigenous people who complete suicide (De Leo 2012). Despite the lack of research into the reasons for suicide amongst Indigenous Australians, a range of possible contributing factors have been suggested. The following discussion is not exhaustive but reflects the key issues described within the literature.

High levels of serious psychological distress are thought to link to elevated rates of suicide (Kelly, Dudgeon, Gee & Glaskin 2009). Findings from a survey in 2008 showed young Indigenous people aged 18–24 years were more than twice as likely as non-Indigenous people to have experienced high or very high levels of psychological distress in the previous month (33% compared with 13%). In addition, more than half (55%) of Indigenous young people aged 15–24 years surveyed had experienced one or more personal stressors in the previous year, similar to the rate reported by those aged 25 years and over. For young people, the most commonly reported stressors were the death of a family member or close friend (22%), inability to get a job (15%) and personal illness (9%) (ABS 2013b).

Loss and grief can feature intensely in the lives of young Indigenous people, as a result of both current circumstances and historical events. As Colin Tatz, a leading author in this field, remarked, *'to understand Aboriginal suicide, one has to understand Aboriginal history'* (2001). For Aboriginal people, colonisation meant a loss of land, language and culture (Mental Health First Aid Australia 2008). Young Aboriginal people grow up having to 'walk in two worlds', which often includes exposure to consequences of loss and trauma experienced by previous generations. The Stolen Generation, whereby Aboriginal infants and children were forcibly removed from their families, involved a loss of identity, family and community, which still greatly impacts on many Aboriginal Australians today. It was the Royal Commission into Aboriginal Deaths in Custody (1991) which took note of the growing problem of suicide among Indigenous Australians. The Commission acknowledged the disproportionate number of deaths (over three quarters) where there was a history of having been forcibly removed from families as children (Silburn et al. 2010). The Commission's report reflected the interconnectedness of other potential contributors to suicide mentioned in this paper, including cultural dislocation, racism, disadvantage and substance misuse (Silburn et al. 2010).

Many Aboriginal people experience the loss of loved ones through death at an early age, which may be a frequent occurrence throughout their lifetimes

(Mental Health First Aid Australia 2008). It is often reported that there is a perpetual cycle of grief within Aboriginal communities (Tatz 2001), where there is little time to recover from one death before another has occurred (Silburn et al. 2010; Tatz 2001). For more vulnerable individuals, such experiences of loss can trigger suicidal thoughts and actions (Silburn et al. 2010). Of concern, within some Indigenous communities, a death by suicide can spark a cluster of suicides, including of similar methods, gender or age (Elliott-Farrelly 2004), particularly amongst younger age groups (Hanssens 2007).

Loss of connection with culture and land are key issues affecting Aboriginal young people. Identification with culture and staying connected with country can form key parts of a person's identity (ABS 2012b), as Baydon William, an Aboriginal Elder from the Northern Territory illustrated (The Elders' Report 2014, p. 35): *'A lot of our mob are now always in town. When I can get our young people out bush, a lot of them, they cry. What they feel is a spiritual feeling. They get information from being out there on their homelands. It's their culture healing them, strengthening them, giving them reason to live. The air is sweeter out bush.'* Learning how to live on country and having access to traditional knowledge and culture strengthens and reinforces a positive sense of identity, providing young Aboriginal people with a cultural foundation and protecting them from feelings of hopelessness, isolation and being lost between two worlds (The Elders' Report 2014). Recent moves to close up to 150 remote Aboriginal communities in Western Australia have raised considerable concern about an increase in mental distress, due to the strong link between the land and Aboriginal identity (ABC 2015).

Other factors which are thought to contribute to suicide amongst young Indigenous Australians include substance misuse (Tatz 2001; The Elders' Report 2014), scarcity of role models and mentors (Tatz 2001), unemployment (Hanssens 2007), racism (The Elders' Report 2014) and lack of purpose in life (Tatz 2001). Whilst space restricts further discussion of these – and other – potential reasons or factors which contribute to suicide in young Indigenous people, it is again critical to consider the interconnectedness of these issues, particularly in light of holistic, Indigenous understandings of health and wellbeing, and therefore conceptions of ill-health within Aboriginal cultures.

### 3.2 Impact of Suicide for Indigenous Peoples

Suicide has a profound impact on individuals and families, and carries ongoing implications for the communities in which they live (Department of Health 2013). The high levels of bereavement suffered by Aboriginal families and communities (Tatz 2001) are of growing concern for many Aboriginal communities. After a suicide, grief and mourning can spread outwards through a community to other communities, particularly where families are interconnected and strong cultural obligations with regard to funerals and observance of 'sorry business' exist (Silburn et al. 2010). The mobility of Indigenous peoples, between remote communities, regional and urban centres, is another factor which has important implications for the way in which suicide impacts on families and the availability of supports and services for treatment and prevention (Silburn et al. 2010).

### 4. WHAT IS BEING DONE CURRENTLY? REVIEW OF EXISTING SUICIDE PREVENTION STRATEGIES

Globally, suicide is recognised as an important public health concern and a behaviour that can be prevented (WHO 2014). Given the high prevalence of suicide among Indigenous youth in Australia, and the significant impacts this can have on whole communities, it is evident that suicide prevention efforts are needed. In this section, some brief examples of prevention efforts and what is known about their impact will be described.

#### 4.1. Examples of Current Suicide Prevention Strategies for Aboriginal Youth

Web searches reveal a number of initiatives to reduce Indigenous youth suicide are being implemented. For example, beyondblue, Australia's national anxiety and depression prevention initiative, aims to promote awareness of issues related to Indigenous mental health through information, resources and campaigns specific to this group. In the same way, headspace, Australia's national youth mental health foundation, provides similar resources specific to young Aboriginal Australians. One example of a recent headspace initiative is the production of a music video, 'Got a lot going on', which aims to encourage young Indigenous people to talk about mental health and wellbeing (headspace 2015).

In addition to these Australia-wide campaigns, a number of local projects have been implemented. One example is Alive and Kicking Goals!, a suicide

prevention project that originated in 2009 in the Kimberley, a region of Western Australia with very high suicide rates among young Indigenous people. The project was initiated with a focus on enhancing protective factors (particularly community connectedness, personal capacity and program ownership), primarily through a peer-education approach. The project stemmed from a local football team, largely comprised of Indigenous players, expressing the desire to address youth suicide within their communities. It was recognised that sporting role models are important for young Indigenous males. These players formed a youth sub-committee, and were trained in suicide prevention (e.g. suicide risk factors and warning signs, healthy coping strategies, and approaches for addressing at-risk members of the community) and leadership skills. Preliminary findings during the first twelve months of the project found that it was very well-received, with a high attendance rate at regular weekly meetings (Tighe & McKay 2012). Further, 421 Indigenous participants attended at least one of the activities associated with the initiative, and 16 young men became peer educators. While formal evaluation does not appear to have been undertaken, preliminary findings highlighted two key areas of strength: the creation of a healing space for the community to address suicide, and the potential to begin to address the stigma associated with suicide and help-seeking (Tighe & McKay 2012). The project is still in operation today, and now extends to young Indigenous females. It will be interesting to see how this unfolds and whether any formal evaluations are undertaken in the future.

#### 4.2 Evaluation of Suicide Prevention Strategies for Young Aboriginal People

Despite the potential of the previously discussed initiatives, there is a paucity of high quality evaluations of the impact of suicide prevention approaches for young Indigenous Australians. This is evidenced by a recent systematic review of suicide prevention programs for Indigenous youth in Australia, Canada, New Zealand and the United States. Harlow, Bohanna and Clough (2014) identified a total of eleven peer-reviewed articles evaluating such programs, with only two of these coming from Australia. Combining the literature, it was found that programs were generally culturally tailored (i.e. developed in consultation with Indigenous people). However, the majority of the programs failed to include high quality evaluations, resulting in limited understandings of how effective the programs were. The authors concluded that much more rigorous research is required before the impact

of Indigenous youth suicide prevention strategies can be fully understood.

More recently, a review by Ridani et al. (2015) sought to identify and describe the content of Aboriginal suicide prevention initiatives in Australia since 1998. A total of 67 initiatives were identified in the peer-reviewed and grey literature. Of these, the majority of the programs were aimed at either the whole community (n = 45), or youth (n = 23) specifically. Given that there is no comparison to non-Indigenous suicide prevention programs, it is unclear how representative these programs are in comparison to need, however it was found that most of the programs were being conducted in states with the highest rates of Indigenous suicide (i.e. Western Australia, Queensland and Northern Territory). Across all target groups, differences were found between programs that were either wholly or partly Indigenous owned, and those that were not Indigenous owned or facilitated, with the former incorporating creative delivery means (e.g. art, dance, cultural camps) and the latter incorporating more training and education. Further, Indigenous developed and owned programs appeared to have greater longevity and to incorporate multiple channels of delivery. While these findings stress the importance of Indigenous driven programs, the authors also highlight a general lack of program evaluation, with few programs incorporating the exploration of reduction in suicide rates and other suicide-related variables. Combined with Harlow et al.'s (2014) conclusions, these findings stress the missed opportunities to gain knowledge, and the need for a coordinated response to program evaluation.

### 5. FUTURE PRIORITIES FOR ADDRESSING YOUTH SUICIDE IN INDIGENOUS COMMUNITIES

Given the high rates of suicide among young Indigenous Australians and the impact that this has on whole communities, coupled with the knowledge gap regarding how best to approach suicide prevention for this group, it is clear that much more needs to be understood about this issue. In this section, some key future priorities are identified.

#### 5.1 Prioritising Indigenous Youth Suicide Prevention in Policy

The reduction of Indigenous suicide, across the lifespan, is receiving increasing attention in international (WHO 2014), national (Department of Health and Ageing 2013) and state-level (Government of South Australia 2012) policy. In 2013, the first

National Aboriginal and Torres Strait Islander Suicide Prevention Strategy (Department of Health and Ageing 2013) was released in Australia. Reflective of calls for unique approaches to Indigenous suicide (e.g. Elliott-Farrelly 2004; Tatz 2001), on the grounds of differences between Indigenous and non-Indigenous suicide, and growing understandings of Indigenous conceptualisations of suicide and self-harm, the policy recognises the importance of taking: *'a holistic and early intervention focus that works to build strong communities through more community-focused and integrated approaches to suicide prevention and... to genuinely engaging with Aboriginal and Torres Strait Islander peoples to develop local, culturally appropriate strategies'*. These underpinnings are reflected in six key action areas:

1. Building strengths and capacity in Aboriginal and Torres Strait Islander communities;
2. Building strengths and resilience in individuals and families;
3. Targeted suicide prevention services;
4. Coordinating approaches to prevention;
5. Building the evidence base and disseminating information;
6. Standards and quality in suicide prevention.

Addressing these six action areas therefore requires a whole-of-government approach, including domains beyond health and wellbeing, such as the employment, education, housing and community safety sectors. While such policy offers promise for reducing Indigenous youth suicide, there is still much progress to be made in terms of implementation. Continuing to prioritise Indigenous youth suicide in policy will be essential to the support and funding of future prevention initiatives.

#### 5.2 Addressing Indigenous Australian Disadvantage

Given the range of inequalities experienced by Indigenous Australians and the influence this is believed to have on health and wellbeing, continued efforts to address disadvantage are required. One example is the Closing the Gap Campaign, established in 2006 between Indigenous and non-Indigenous health bodies, non-government organisations and human rights organisations. The campaign aims to reduce the health and life expectancy gaps between Indigenous and non-Indigenous Australians, with the goal that by 2030, Indigenous children have the same opportunities as other Australian children. However, a recent report (Australian Government 2015) documenting the progress of the program has

revealed mixed findings. Some targets are on track to being met, such as halving the gap in mortality rates for Indigenous children under the age of five years, and halving the gap for Indigenous Australians aged 20-24 years in Year 12 attainment. Other important targets are not being met: access to early childhood education for all Indigenous four year olds in remote communities, halving the gap in life expectancy, and halving the gap in reading, writing and numeracy achievements for Indigenous students. It will be vital that targets continue to be met if inequalities between Indigenous and non-Indigenous Australians are to be reduced, requiring collaboration and coordination between a range of sectors (e.g. education, health, housing, etc.).

### 5.3 Identifying Research Priorities

From a research perspective, there are numerous priorities which could be addressed. These include the need for better understandings of Aboriginal explanatory models of health, wellbeing and suicide, as well as hearing young Aboriginal voices regarding why suicide occurs and how it might be prevented. This has been addressed to some extent (e.g. The Elders' Report; Williamson et al. 2010), but far greater effort is required if prevention efforts are to be effective. Further, it has been highlighted that understanding how to prevent Indigenous youth suicide in Australia calls for a greater emphasis on program evaluation (Elliott-Farrelly 2004; Harlow et al. 2014; Ridani et al. 2015). This will require evaluations to be built into programs at the planning stage, as well as collaboration between research and implementation bodies, and collaboration between different initiatives. Moreover, for evaluation to be meaningful, it will require the use of Indigenous-identified outcomes. For example, Western approaches typically explore reductions in risk factors and suicide rates as measures of program success. As mentioned, Indigenous explanatory models of social and emotional wellbeing are preferable and should be incorporated into evaluations in order to ensure that programs are meeting the needs of Aboriginal people. Expanding this research will be vital to provide evidence-based programs, as well as to attract funding for future programs.

### 5.4 Continued Collaboration

Finally, collaboration between Indigenous and non-Indigenous Australians at all levels of suicide prevention should be at the core of future work. A commitment to partnering with Indigenous communities will ensure that future programs are developed from the ground up and will further assist

in building Indigenous capacity to develop and implement programs. Elliott-Farrelly (2004) highlights the many benefits that can emerge from Indigenous suicide prevention programs that have been both developed and implemented by the communities they are targeting: heightened personal and community awareness, increased self-respect and dignity, higher levels of commitment to achieve desired outcomes, decreased dependency, and empowerment.

## 6. CONCLUSION

Despite the complexity, distress, sensitivity and ambiguity surrounding the topic of Indigenous youth suicide, there are signs of hope and healing on the horizon. Initiatives to reduce suicide – designed and implemented in collaboration with Aboriginal people – are showing great promise. Efforts to better understand the meaning and impact of suicide among Aboriginal communities are vital to reduce suicide. Furthermore, the evaluation and sustainability of current and future prevention strategies should be prioritised. We are hopeful through sustained collaboration, drawing on and reconnecting with the strengths of Indigenous cultures and knowledge, that healing will occur and suicide among young Indigenous people can be further prevented.

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## Divorce or Marriage: Which One Is Greener?

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### ABSTARCT

Growth in the number of households and smaller household size has been held responsible for contributing to the higher level of energy consumption which is one of the main causes of global warming. We examine the relationship between family dynamic and environmental quality in 70 countries over the 1996-2012 period, controlling for important determinants of environmental quality. By applying panel fixed-effect estimation method, the results show that countries with higher marriage rates and lower divorce rates have higher level of environmental quality.

### 1. INTRODUCTION

This paper focuses on the relationship between family dynamic and environmental quality. We hypothesize that countries with higher marriage rates and lower divorce rates have higher level of environmental quality. This argument can be understood in terms of the basic theory of economies of scale. The existence of economies of scale within families means that energy consumption for two people in one house is not as much as energy consumption for one person in one house. It is because household members share space, home furnishings, transportation and energy, leading to significant economies of scale

(Keilman 2003). In other words, economies of scale allow couples to share the energy when married. This implies that individuals will choose to consume less energy when co-resident than when separated. To make our argument more concrete we note two examples. For instance, average per-person costs for electricity and water in a household headed by a divorced person were about 46 percent and 56 percent higher, respectively, than in a married household in the US in 2005 (Yu & Liu 2007). Similarly, one-person households consumed 55% more electricity and 61% more gas per capita than four-person households in UK in 2006 (Euromonitor International 2008). In terms of total consumer expenditures, Euromonitor International (2013) show that one-person household spent much higher than two, three, four, five and +6-person household in most countries in 2012 (see Table 1).

The relationship between these variables has received relatively little research attention in the contemporary energy literature. The only research papers studying the effect of family dynamic on energy consumption have been written by Yu and Liu (2007), Liu et al. (2003), Keilman (2003). Using data from 12 countries over the period of 1998-2002 and applying graphical analyses and descriptive statistics, Yu and Liu (2007) provide evidence that increasing

Table 1. Consumer Expenditure per Household Member by Household Size in Selected Countries in 2012

Countries	1-person household	2-person household	3-person household	4-person household	5-person household	+6-person household
Spain	27,720	20,690	16,761	15,225	13,229	10,993
Indonesia	3,867	3,180	2,709	2,269	1,834	1,644
Venezuela	20,452	14,523	11,473	9,225	6,800	4,921
Turkey	14,927	13,053	10,813	8,448	6,165	5,023
Canada	40,159	34,580	29,515	25,455	22,000	21,741
Taiwan	19,096	13,656	12,697	11,373	9,568	9,216
Mexico	17,333	11,151	8,967	7,464	5,307	4,636
Malaysia	10,897	8,690	6,748	6,130	5,057	4,714
Italy	33,534	24,632	19,753	16,174	13,021	12,738
Germany	30,133	25,977	19,571	16,377	14,478	13,778
Brazil	16,803	9,784	8,000	6,665	5,428	4,779

Note: Consumer expenditure per person (US\$).  
Source: Euromonitor International, 2013.

incidences of divorce can lead to an increasing number of households. They also noted that the average household size and efficiency of limited resources (water, land, and energy) are lower in divorced households than in married households. In other words, divorce escalates consumption of increasingly limited resources through household proliferation and reduction in household size. In a similar study, Liu et al. (2003) argue that reduction in household size (that is caused by several factors including higher divorce rates, higher per capita income, lower fertility rates, ageing populations, and a decline in the frequency of multi-generational families living together) has an adverse effect on resource use and biodiversity because first: more households means more housing units, thus generally increasing the amount of land and materials (e.g. wood, concrete and steel) needed for housing construction; second, smaller households have lower efficiency of resource use per capita because goods and services are shared by more people in larger households. Likewise, Keilman (2003) suggest that small households (caused by, for example, divorce, women economic independence, less religiosity and increased individual freedom on ethical issues) have negative impacts on resource consumption because they are less energy-efficient and often reflect an increase in the number of households.

The existing studies have identified the significant relationship between marital statuses and energy consumption. However, previous studies tend to be descriptive and mostly lack any formal empirical analysis. They also often focus on one or more country case studies for a short period of time. In fact, they supported their hypotheses by using descriptive statistics and graphs. To address the empirical gaps in the literature, the present study will apply panel data regressions using data from 71 countries over a period of 17 years (1996-2012) in order to test the relationship between family formation, family breakdown and environmental quality. The results suggest that lower level of divorce rates and higher level of marriage rates can lead to higher level of environmental quality. Our findings would not only enhance our understanding of the determinants of environmental quality but is also policy relevant, because, globally, number of households and household size are expected to increase and decrease, respectively, which can put more pressures on resources such as energy, land and food, as well as the environment. Increases in number of households and decreases in household size are due to a combination of factors, including a rise in divorce rates, lower marriage and fertility rates, urbanization, rising income and wealth in developing economies, and ageing populations (Euromonitor International

2013). As noted by Euromonitor International (2008) and Liu et al. (2003), growth in the number of small households is held responsible as one of the contributors to the global warming. Figures 1 and 2 illustrate the historic/forecast of number of household and household size in the world from 1995 to 2025.

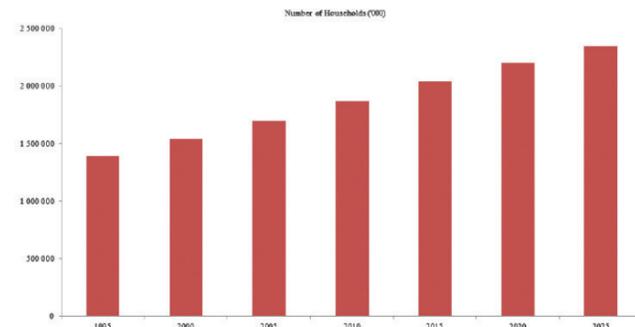


Figure 1. Historic and Forecast of Household Size ('000) of World, Euromonitor International (2014)

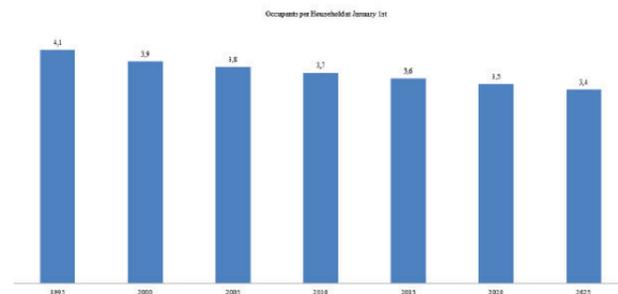


Figure 2. Historic and Forecast of Occupants per Household at January 1st of World; Euromonitor International (2014)

The remainder of the paper is structured as follows. Section 2 provides a theoretical explanation for the relationship between family dynamic and environmental quality. Section 3 presents our empirical research design. Results are presented and discussed in Section 4. Section 5 concludes the paper.

## 2. THEORETICAL BACKGROUND

The economics of scale is one of the fundamental principles in microeconomics. This theory talks about the cost advantages that can be obtained from scale of operation and specialization. That is, as the size of the business enterprise increases the profitability and efficiency increase constantly until an absolute limit is reached in which the most efficient size of operation for any given firm can be realized (Emery 1965).

Although there are numerous examples about the applications of economies of scale in different industrial fields (Farsi, Fetz & Massimo 2007; Liu & Jiang 2011; Moore 2011), this theory has also significantly influenced other fields of science such as politics (Peck 2002), research and development (Nightingale 2000), medicine (Jacobs, Rapoport & Edbrooke 2004), and finance (Altinkilic & Hansen 2000; Lambrecht 2004).

Household economies of scale are the consequence of more intense use of household goods and services that can be shared by a number of residents. For example, a little more time and energy should be spent to prepare a meal for four or five people in compare to one or two. There is also some evidence of large economies of scale for residential water consumption when the household size increases (Duncan 1991; Ironmonger & Van Hoa 1991).

During the past few decades the demand for natural resources, specifically energy, has risen significantly. The surging growth of world population is considered the main driver but the smaller household size also contributes substantially to the higher demand for strategic resources. For instance, over the period of 1970-1990, energy consumption accelerated by 2.1% per year in developed countries and while population growth only explains 0.7% of this growth, the remaining of 1.4% is related to the changes in per capita energy usage by the occupants (Keilman 2003). In addition, according to Liu et al. (2003), the annual growth rate in the number of households, during the period of 1985 to 2000, was around 3.1% among hotspot countries (see Conservation International) which is 1.3% higher than the population growth rate of those countries.

Ironmonger, Aitken and Erbas (1995) in their study on economies of scale in energy consumption among adult-only households in Australia mentioned that small households suffer a double penalty of greater per capita energy use and higher charge per unit of energy. It means dwellers of small households need to use more energy per adult to maintain the same level of production as their larger households' counterparts, a fact which is more evident among older households. The trend towards smaller households is not limited to developed nations. Between 1970 and 2000, the average household size in less developed countries decline from 5.1 to 4.4. The corresponding numbers for developed nations show a decrease from 3.2 to 2.5 inhabitants per household (Keilman 2003). This trend indicates that 'economies of scale are continually being lost, offsetting gains in energy efficiency

achieved through other means' (Ironmonger et al. 1995, pp. 301).

In this research, motivated by aforementioned studies and also the study of Yu and Liu (2007) on environmental impacts of divorce, we apply the theory of economies of scale to justify that the larger families who live together consume energy more efficiently that cause lower air and water pollution. That is the higher (lower) the marriage (divorce) rate in a country, the larger the household size and therefore the more efficient energy consumption by the households in that country, a fact that may lead to a better environmental quality.

## 3. EMPIRICAL RESEARCH DESIGN

### 3.1 Sample

We used annual data from 1996 to 2012 for the 70 countries. Our sample covers all those countries for which data on all variables is obtainable. Table A.1 in appendix A shows the sample countries.

### 3.2 Variables

#### 3.2.1 dependent variable: environmental quality

We use air pollution as a measure of our dependent variable, environmental quality. We have chosen to focus on carbon dioxide (CO<sub>2</sub>) that is the primary greenhouse gas emitted through human activities. The main human activity that emits CO<sub>2</sub> is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation, although certain industrial processes and land-use changes also emit CO<sub>2</sub> (EPA, 2015). It should be noted that we use CO<sub>2</sub> emission per capita for analyses. Following Antweiler, Copeland and Taylor (2001), Bernauer and Koubi (2009) and Bernauer and Koubi (2013) we use the logarithmic transformation of the air pollution variable.

#### 3.2.2 variables of interest: marriage rate and divorce rate

The data for marriage rate (the number of marriage per 1,000 individuals (MAR) and divorce rate (the number of divorces per 1,000 individuals (DIV) were obtained from the Euromonitor International database.

#### 3.2.3 control variables

Although the main purpose of this paper is to examine the relationship between family dynamic and environmental quality, we need to control other

Table 2. Description of Variables

Variables	Description	Source
CO2 emissions (metric tons per capita)	Carbon dioxide emissions are those originated from the burning of fossil fuels and the manufacture of cement. For instance CO2 produced during consumption of solid, liquid, and gas fuels and gas flaring.	World Bank
MAR	The number of marriage per 1,000 individuals	Euromonitor International
DIV	The number of divorces per 1,000 individuals	Euromonitor International
GDPcap		
(GDP per capita)	Gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Data are in current U.S. dollars.	World Bank
MANF	Manufacturing, value added (% of GDP) and refers to industries belonging to ISIC divisions 15-37. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs.	World Bank
TRADE	Merchandise trade as a share of GDP is the sum of merchandise exports and imports divided by the value of GDP, all in current U.S. dollars.	World Bank
FDI	Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. Data are in current U.S. dollars.	World Bank
GOVEX	General government final consumption expenditure (% of GDP) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defence and security except the government military expenditures that are part of government capital formation.	World Bank
CORR	Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests.	World Bank
DEMOC	Voice and Accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	World Bank

important determinants of air pollution that have been identified in the relevant studies. As highlighted by Gassebner et al. (2011), a wide variety of variables has been proposed as explaining environmental pollution and there is little consensus in the literature on which of these variables really matter. However, some explanatory variables show persistent relationship with pollution in existing studies. The set of control variables include income (GDPcap), manufacturing as a percent of GDP (MANF), the ratio of the sum of exports and imports to GDP (TRADE), foreign direct investments (FDI), government expenditure as a percent of GDP (GOVEX), control of corruption (CORR) and democracy (DEMOC) (e.g. Bernauer & Koubi 2009; Bernauer & Koubi 2013; Gassebner

et al. 2011). Table 2 shows the description of each variable.

GDPcap and MANF are calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. CORR and DEMOC scores are between around -2.5 and +2.5, with higher values indicating less corruption and better governance in a country, respectively.

### 3.3 Model Specification

Based on the above discussion, the empirical model is as following:

$$\log CO2_{it} = \beta_1 MAR_{it} + \beta_2 DIV_{it} + \beta_3 \log GDP_{capit} + \beta_4 MANF_{it} + \beta_5 TRADE_{it} + \beta_6 \log FDI_{it} + \beta_7 GOVEX_{it} + \beta_8 CORR_{it} + \beta_9 DEMOC_{it} + v_i + \pi_t + u_{it}(1)$$

where CO2 represent a proxy for environmental quality (CO2 per capita), *i* denotes the country, *t* denotes the time period (1996-2012), log is the logarithm,  $\beta_s$  are the coefficients to be estimated,  $v_i$  is an unobserved country-specific effect,  $\pi_t$  time fixed-effect and  $u_{it}$  is an error term.

### 3.4 Estimation Methods

Following Antweiler et al. (2001), the equation (1) is estimated using panel random-effects and fixed-effects methods which can control for unobserved factors (unobserved heterogeneity) in the specifications. The random-effects method assumes that the unobserved factors are uncorrelated with all the explanatory variables while the fixed-effects method assumes that the individual specific effects are correlated with the independent variables (Wooldridge 2009). In order to determine which model is preferred for the equation estimation, we apply a Hausman test. If the Hausman test Chi-square statistic is significant at the 5% level, this indicates that the random-effects estimator is inconsistent and that the fixed-effects estimator is to be preferred.

## 4. RESULTS

Table 3 presents the results of panel fixed-effect method to estimate Equation (1). We employ the fixed-

effects estimator and assume the country specific effects to be correlated with the error terms. It is because the Hausman test rejects the null hypothesis that fixed-effects estimates are not statistically different from random-effects estimates, which indicates that fixed-effects estimates are preferred to random-effects estimates.

The findings show that increases in marriage rate (MAR) have a negative and significant relationship with air pollution (CO2 emission per capita), after controlling for other determinants of pollution, in our sample countries ( $\beta = -0.010$ ,  $p < 0.05$ ). On the other hand, the coefficient of divorce rate (DIV) has a positive sign and is significantly associated with CO2 emission per capita at the 1 % level. These results support our hypotheses we put forward; countries with higher marriage rates and lower divorce rates have higher level of environmental quality (or lower pollution). These findings are consistent with those of Liu et al. (2003), Keilman (2003) and Yu and Liu (2007) on environmental impacts of small family structure. As a country experiences higher rates of divorce and lower of marriage it faces higher number of households and as the results it loses its efficiency of resource use per capita. According to Ironmonger et al. (1995) dwellers of small households consume more energy per adult in compare to the residents of larger families because the economies of scale are being lost in smaller households. This may result in relatively higher air and water pollution in a country. As such, the results of this study also provide support for the proposed economics of scale theory.

Table 3. Results of Panel Fixed-effect Estimations

Dependent Variable: log(CO2) per capita				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MAR	-0.010	0.004	-2.370	0.018
DIV	0.129	0.021	6.191	0.000
logGDPcap	0.104	0.029	3.555	0.000
MANF	0.005	0.002	2.455	0.014
TRADE	0.0001	0.000	0.796	0.426
GOVEX	0.241	0.037	6.507	0.000
logFDI	0.0001	0.004	-0.100	0.920
CORR	0.011	0.018	0.607	0.544
DEMOC	0.020	0.021	0.969	0.333
Effects Specification				
Cross-section fixed (dummy variables)				
Period fixed (dummy variables)				
Adjusted R-squared	0.974			
F-statistic	394.577	Prob(F-statistic)	0.000	

Regarding the control variables, our findings show that increasing capital intensity of production (proxied by manufacturing as a percent of GDP (MANF) and government expenditures (GOVEX) are positively and significantly associated with air pollution. Similarly, GDP per capita (as a proxy for economic activity) increase the pollution in the sample countries. Finally, our empirical results indicate that trade openness, foreign direct investment inflows, control of corruption and democracy do not have significant relationship with CO2 emissions.

## 5. CONCLUSION

We have examined the relationship between household dynamic (marriage and divorce) and pollution. We use data from 70 countries from 1996 to 2012. By applying panel fixed-effects method, we show that the marriage and marital stability have positive effect on environmental quality (lower pollution).

The results of our study provide some important implications. Governments and environmentalists may try to encourage marriage and family formation and discourage divorce in order to decrease energy consumption and pollution. For example, governments need to create favourable economic condition to encourage marriage and reduce divorce cases. Research has shown that low inflation rate, low unemployment rate and affordable housing contribute positively to family formation and sustainable couple relationship (for a review of relevant literature, see Farzanegan & Gholipour 2015; Gholipour & Farzanegan 2015). Governments may also provide marriage loans to young couple who intend to form a family. And many other policies that can be found in sociology discipline.

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## Session II: Improving Public Health

# Vaccine Policy and Bioethics in Relation to Vaccine Preventable Diseases

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## ABSTRACT

Infectious disease surveillance reporting from health agencies and mainstream media reports have indicated that an area of concern in public health is the outbreak of infectious diseases that are otherwise preventable by vaccine. A major outbreak of measles recently occurred in the United States of America. A smaller outbreak occurred in Australia. Both of these outbreaks have been attributed to unvaccinated persons. People may choose to not vaccinate for personal, philosophical or religious reasons. The basic biology, pathophysiology and epidemiology of measles is noted as a background to a discussion of the policy relating to these choices. It is concluded that stronger emphasis on vaccination is required and that non-medical exemptions to vaccination are not allowed in order to prevent outbreaks of measles and other vaccine preventable diseases.

## INTRODUCTION

In December 2014 an outbreak of measles occurred in California, United States of America that was linked to visiting the well-known Disney theme parks in Southern California. At a similar time there were reports of an outbreak, albeit a smaller one in Victoria, Australia that was linked to the attendance of a university graduation ceremony at Etihad Stadium in Melbourne.

Measles is a highly contagious infectious disease that is regarded by government bodies and international organisations as one of many vaccine preventable diseases. A vaccine to prevent measles has been available since the 1960s and numerous studies have shown it to be a highly effective vaccine with extremely rare side effects.

Despite this many people choose for personal, philosophical or religious reasons to not have their children vaccinated against measles and other vaccine preventable diseases. In 1998 Andrew Wakefield and colleagues published in the prestigious medical journal *The Lancet* research which linked the measles, mumps, and rubella vaccine with the development of autism. Even though this research has been widely acknowledged as being fraudulent with the article retracted by *The Lancet* and Wakefield being stripped

of his medical licence in the United Kingdom this belief is still a factor in a substantial number of people choosing to not vaccinate their children.

Vaccination policy and strategy to implement policies varies between countries and even states within countries however it would be safe to suggest all government bodies are pro-vaccination for vaccine preventable diseases. This paper does not aim to discuss the policy of every country but rather focus on a select number; namely Australia and the United States of America. In addition a discussion related to the bioethics of vaccination and the decisions to refuse vaccination is presented.

## 1. MEASLES

### 1.1 Basic Measles Biology and Pathophysiology

Measles is a highly contagious infectious disease caused by Measles virus (MV) which is a member of the *Morbillivirus* genus in the Paramyxoviridae family (Moss & Griffin 2012). Infection by MV is via the respiratory route and occurs when susceptible persons come into contact with the virus from infected persons who have sneezed or coughed (de Vries, Mesman, Geijtenbeek, Duprex & de Swart 2012). Common symptoms of measles are a high fever ranging from 39°C to 40.5°C, a prolonged cough and conjunctivitis. Most commonly associated with measles is the appearance of a rash increasing in severity over a period of 3 days (Perry & Halsey 2004). The incubation period for measles ranges from 8 to 14 days with a median incubation period identified as 12.5 days (Lessler et al. 2009). Measles is contagious both before and after the more obvious rash which hinders disease control measures (Moss & Griffin 2012).

Recovery from measles begins after the appearance of the rash with the majority of people making a full recovery however complications can occur in up to 40% of cases (Moss & Griffin 2012). The most common complication related to measles is Pneumonia with it occurring in more than 50% of measles related deaths (Duke & Mgone 2003). Rarer complications such as acute disseminated encephalomyelitis (ADEM) occurs in the central nervous system at a rate of one to two per 1,000 measles cases (Nardone, Golaszewski,

Trinka, Tezzon, & Zuccoli 2011). This leads to the demyelination of white matter of the brain and spinal cord which can result in permanent neurological damage (Tenembaum, Chitnis, Ness, & Hahn 2007). Subacute Sclerosing Panencephalitis (SSPE) is another complication which is neurodegenerative in that as the disease progresses physical and mental impairments become much more noticeable and severe. While rarer again than ADEM at an estimated one in 10,000 unlike ADEM this condition is fatal. Onset is generally between seven to ten years after measles infection with death occurring between one to three years after symptoms first appear. Infection with the measles virus at or before two years of age is accepted as a major risk factor for developing SSPE (Bellini et al. 2005).

### 1.2 Measles Epidemiology

Humans are the only reservoir of measles virus known to exist and it has been reported in human populations worldwide (Moss & Strebel 2011). All age groups without immunity from previous measles infection or vaccination are susceptible however it is most common in infants and younger children (Leuridan et al. 2010). With a basic reproduction number ( $R_0$ ) of 12-18 making it one of the most contagious diseases known it is accepted that immunity is required in 95% or more of a population to prevent or contain an outbreak of measles (Durrheim, Crowcroft & Strebel 2014). As  $R_0$  is based on a totally susceptible population the effective reproduction number,  $R$ , is used as a measure of determining transmission in a population of varying susceptibility;  $R > 1$  can result in a disease becoming epidemic,  $R < 1$  will result in the lack of transmission and if maintained will result in the elimination of indigenous transmission (De Serres, Gay & Farrington 2000).

### 1.3 Measles Vaccine

A vaccine for measles was first licensed for use in the United States in 1963 after many years of research, in particular in the laboratory of John Enders, a joint Nobel Prize winner for pioneering methods in viral tissue culture (Baker 2011). The publication of a series of papers in *The New England Journal of Medicine* in 1960 by Enders, colleagues and other collaborating investigators formed the foundation for the licensing of this vaccine and the basis for further measles vaccine research and development (Katz 2009). Vaccination for measles is commonly given as a trivalent vaccine in combination with mumps and rubella vaccines, known as MMR vaccine, as developed by Maurice Hilleman at Merck and first

licensed in 1971 (Baker 2011; Banatvala & Brown 2004).

The vast majority of countries in the world have included measles as part of immunisation programs with the World Health Organization including measles vaccination as part of its Expanded Program on Immunization in 1977. Due to this initiative and others by individual countries and non-government organisations it is estimated that between 2000 and 2008 measles related deaths globally dropped by 78% (World Health Organization 2013).

Despite these advances there have been setbacks that have thwarted immunisation campaigns with ongoing consequences for public health. The most well-known setback was the publication of research in *The Lancet* in 1998 by Andrew Wakefield and colleagues that linked the MMR vaccine to the development of autism (Wakefield et al. 1998). This article was retracted by all authors except one who could not be contacted and most noticeably Wakefield himself. Accusations of misinterpretation at best and blatant fraudulence as well as self-interest are succinctly discussed in an article published in the *British Medical Journal* which notes the invaluable contribution of investigative journalism by Brian Deer. In addition to the article being retracted Wakefield was stripped of his license to practice by the General Medical Council, the governing body for practicing medical doctors in the United Kingdom (Godlee, Smith & Marcovitch 2011). In addition to this many studies have concluded that there is no link between MMR vaccination and the development of autism (D'Souza, Fombonne & Ward 2006; Madsen et al. 2002; Taylor et al. 2000; Taylor et al. 2002).

There are a number of other reasons people choose not to vaccinate including beliefs that contracting the disease and acquiring immunity naturally is better, vaccines cause allergies and other autoimmune disorders and vaccines impair the body's natural resistance (Alfredsson, Svensson, Trollfors & Borres 2004; Offit & Hackett 2003). Additionally general mistrust of the pharmaceutical industry is also a common theme amongst non-vaccinators (Gullion, Henry & Gullion 2008).

## 2. RECENT OUTBREAKS OF MEASLES

### 2.1 California, United States of America

An outbreak of measles linked to visiting Disney theme parks in Southern California was first made public by California Department of Public Health (CDPH) on January 7<sup>th</sup>, 2015. The Centers for

Disease Control and Prevention has reported that as at February 11<sup>th</sup>, 2015 125 cases linked to visiting Disneyland have been confirmed in US residents as well as one in Mexico and 10 in Canada. Of this 125, 110 were Californian residents. Of this 110, 49 (45%) were unvaccinated and another 47 (43%) had unknown or undocumented vaccination status. The age of patients runs very widely from 6 weeks to 70 years old. 17 (15%) of cases have required hospitalisation. Twelve of the cases were in infants under the age of vaccination and amongst those remaining eligible for vaccination 28 (76%) were intentionally unvaccinated due to personal beliefs; 18 were children, 10 adults (Zipprich et al. 2015).

## 2.2 Victoria, Australia

While no outbreaks of the scale seen in California have occurred in Victoria in recent times there have been a number of smaller outbreaks. In December 2014 at least three cases were linked to the attendance of a university graduation ceremony with all cases being unvaccinated (Lester 2015). Likewise in August 2014 five cases were reported in primary school children from the same school, none of whom had been vaccinated (Lester 2014a). It was published in July 2014 that 56 had been confirmed since 1st January, the highest level since 1999 with 16 of that 56 occurring since the 1st of May (Lester 2014b).

## 3. POLICY

### 3.1 United States of America

The United States of America deals with vaccination on a state by state basis with all states requiring vaccination for measles as well as a number of other vaccine preventable diseases. All states allow for medical exemptions to vaccination and the vast majority allow for religious and philosophical exemptions except Mississippi and West Virginia (Walkinshaw 2011).

In California specifically the main piece of legislation relating to childhood vaccination for vaccine preventable diseases is Health and Safety Code Section 120325-120380. Section 120325 includes measles, amongst others, as one of the diseases for which it has intent to provide total immunisation for appropriate age groups. It however also has the intent of providing exemptions from immunisation for medical reasons or because of personal beliefs (Legislative Counsel of California 2015).

Section 120335 provides that unconditional admission shall not be granted to *'any person as a pupil of any private or public elementary or secondary school, child care center, day nursery, nursery school, family daycare home, or development center, unless, prior to his or her first admission to that institution, he or she has been fully immunized'*.

Exemptions to this are provided under section 120365 which requires the providing of a letter or affidavit by the parent or guardian or responsible adult documenting which immunisations have been given and which have not based on personal belief. As of January 1<sup>st</sup> 2014 an additional requirement is that a health care practitioner has provided the parent or guardian the benefits and risks and immunisations as well as the risks of the relevant communicable disease.

While not specified it is acknowledged that the personal beliefs in California may include both religious and philosophical reasons (National Conference of State Legislatures 2015).

Due to these exemption policies and in the wake of the recent outbreak of measles linked to Disneyland in California legislation has been out forward that would essentially disallow personal belief exemptions (McGreevy 2015). Similar legislation has also been introduced in other states that have somewhat high exemption rates including other western states Oregon and Washington as well as eastern states Vermont and Maine (Richardson 2015).

### 3.2 Australia

Vaccination policy in Australia is dealt with in different regards at both national and state levels.

In Victoria legislation regarding childhood vaccines is contained within division 7 of the Public Health and Wellbeing Act 2008 sections 144-149 and division 4 of the Public Health and Wellbeing Regulation 2009 sections 80 to 85 (Victorian Government 2008, 2009). The act and regulations make it a requirement for any child enrolling into primary school to have an immunisation status certificate. While this certificate may encourage vaccination the primary purpose is to allow the identification of non-immunised children in case of an outbreak and enable their non-attendance in such a situation.

At a national level vaccination is encouraged by linking vaccination to family assistance benefits (Australian Government 1999). This legislation

however allows that *'The child meets the immunisation requirements if a recognised immunisation provider has certified in writing that he or she has discussed with the adult the benefits and risks of immunising the child and the adult has declared in writing that he or she has a conscientious objection to the child being immunised.'* Conscientious objections is given the meaning as *'An individual has a conscientious objection to a child being immunised if the individual's objection is based on a personal, philosophical, religious or medical belief involving a conviction that vaccination under the latest edition of the standard vaccination schedule should not take place'*.

The state of New South Wales has recently enacted legislation that mirrors federal legislation for preschool enrolment under the Public Health Act 2010 which encourages vaccination at an earlier age than primary school entry. Under this legislation exemptions are still allowed when a parent or caregiver has a conscientious objection to vaccination (NSW Government 2015).

In Victoria the recently elected Labor government has indicated that they will be pursuing the implementation of a 'no jab, no play' policy similar to that of the NSW government which was part of their election campaign with the hope of it being implemented in early 2016. However like the NSW legislation and federal legislation this also allows for conscientious objection (Thackray & Cheer 2015; Victorian Labor 2014).

## 4. BIOTHEICS

Bioethics may be defined differently depending upon personal perspective however a general definition has been given as *'the discipline dealing with the ethical implications of biological research and applications especially in medicine'* (Meriam-Webster 2015). Many advances in medical treatment, both preventative and corrective, have raised bioethical issues with vaccinations being no different. This section will also intertwine with legal discussion around this topic as legal principles are an important part of many bioethical discussions. While there are a number of bioethical discussions that could be held in regards to vaccination the focus will be on compulsory vaccination and non-medical exemptions.

### 4.1 Personal Belief Exemptions

Personal belief exemptions, also referred to as philosophical exemptions, are allowed in Australia and in a significant number of states in the US

(Australian Government 1999; National Conference of State Legislatures 2015). These exemptions are based around beliefs held regarding vaccine safety as discussed previously and may also stem from concepts of personal autonomy in decision making and parental freedom of choice (Brown et al. 2010).

Personal autonomy has been discussed as self-rule that is free from controlling interference by others and from limitations such as inadequate understanding that prevents meaningful choice (Beauchamp & Childress 1989). While not being specifically discussed in regard to vaccination it is clear to see the application; vaccination requirements being the controlling interference and lack of knowledge and/or misinformation contributing to an inadequate understanding of the benefits versus the risks of vaccination.

Parental freedom of choice is derived from principles of free will and it is argued that parents have the right to decide on whether or not their child should receive a vaccine (Wolfe 2015). Obviously as the children receiving the vaccination are too young to make their own decisions, decision making onus falls onto the parents or other legal guardian.

Quite often the important concept of informed consent is discussed in relation to vaccination and indeed informed consent is required for compulsory vaccinations which notes the benefits and risks (Centers for Disease Control and Prevention 2013).

### 4.2 Religious Exemption

Religious exemptions to vaccination are allowed in Australia and in all but two US states, Mississippi and West Virginia.

The idea of religious freedom is one which should be encouraged by all aspects of society. Religious freedom is contained within Article 18 of the International Covenant on Civil and Political Rights of which both Australia and the US, along with the majority of other countries in the world, are parties to (United Nations 1966).

Furthermore in the case of the US it is argued that the free exercise of religion is a constitutional right under the first amendment and as such religious exemption to vaccination is protected by this (McFall 2008).

Despite Australia and 48 of 50 US states allowing religious exemption to vaccination it is worthwhile

noting that a meta-analysis conducted reviewing religious views of vaccination found that only one major religion, the protestant Dutch Reformed Church specifically was opposed to vaccination (Grabenstein 2013).

## 5. DISCUSSION

Vaccination against measles has been regarded as one of the most successful public health campaigns in relation to infectious disease (Orenstein, Papania & Wharton 2004).

Despite this, as well as measles being one of the most contagious infectious diseases known, recent outbreaks, particularly in California, have sparked renewed debate around compulsory vaccination for measles as well as other vaccine preventable diseases.

As already noted the paper by Wakefield et al. linking the MMR vaccine to autism has been retracted and is regarded by many as fraudulent to serve self-interests and Wakefield has been stripped of his UK medical license. Research by a number of independent groups has found no link between the MMR vaccine and autism. However there are groups that hold firm to the belief that MMR vaccine causes autism and vaccines in general are the cause of a number of other health related issue.

Age of Autism and the Australian Vaccination Skeptics Network Inc (formally Australian Vaccination Network) are two such groups based in the US and Australia respectively.

Age of Autism features videos of Andrew Wakefield in relation to his ongoing anti-vaccine campaigning. Conversely they have attacked Californian Senator Richard Pan for his authoring of SB277, the bill which would remove personal belief exemptions in California. It can be strongly argued that veil of autism activism is quite obviously an extreme anti-vaccination cover.

The Australian Vaccination Skeptics Network Inc was recently forced to change its name from Australian Vaccination Network due to consumer laws regarding the misrepresentation of their name (Foschia 2014). While seemingly wanting to present a vaccine choice position AVSN clearly leans more towards being an anti-vaccination group as evidenced by the encouragement of joining a church created to allow religious exemptions in the case that philosophical or personal exemptions are no longer allowed (Medew 2015).

While some people may argue that these are extreme fringe groups their influence is ever increasing with people using the internet for personal research into medical issues at a growing rate. This is an issue of concern in the medical community (White & Horvitz 2009)

Furthermore the misinformation published by such groups may unduly influence the understanding of parents resulting in lack of meaningful choice in decision making as discussed by Beauchamp and Childress.

In regards to religious exemptions, as already discussed, no mainstream religion, with the exemption of the Dutch Reformed Church, who are not a major religious group globally, specifically prohibits vaccination. Even the Catholic church, famously anti-abortion, allows for vaccination with vaccines developed from cell lines obtained originally from aborted fetuses where no other option is available and where it is in the interests of public health (*New guidelines on abortion-derived vaccines* 2005).

While freedom of religion is a very important principle it is interesting to note that the American Civil Liberties Union (ACLU) declined to help a group of religious families who were being faced with court – ordered vaccinations for their children (Goldman 1991). While the vaccination debate has somewhat shifted away from safety concerns it has shifted to one of parental rights to choose what is best for their child. Civil Liberties Australia has addressed this taking a seemingly pro-vaccine stance arguing that parental rights or other rights do not overcome a child's right to health as well as the rights of all children in a community overcome the rights of an individual child (Rowlings & Vines 2013).

Recent research in America has found that 30% of people believe parents should decide on vaccination with younger adults 18-29 being more strongly in favour of parental choice at 41% as opposed to older adults with only 23% and 20% between 50-64 and 65+ respectively supporting parental choice. It is a very strong argument that this different is likely due to the older age groups seeing and/or remember the impact that these infectious diseases had in their community (Anderson 2015).

Vaccination policy is an important matter for any government and recently there have been comments made by potential 2016 presidential candidates in America in support of parental choice and others being unequivocally pro-vaccination (Camia 2015).

Whether or not this becomes a major issue in the official candidate nomination race and the following presidential race will undoubtedly be of interest for all parties interested in the discussion.

## 6. CONCLUSION

Virtually eradicated in developed countries, breakouts of infectious diseases such as measles continue to occur on a semi-regular basis. More often than not these outbreaks are statistically more significant in groups of people who have not been vaccinated. While it is important to observe rights such as religious freedoms it is strongly debated that these rights do not overcome rights of a child to health and rights of all children in a community. Allowing exemptions to vaccination for non-medical reasons goes against these rights and allows the non-vaccinating parents to quite often receive benefits of vaccination programs without taking on any of the risk. While politically challenging, abolishing non-medical exemptions to vaccinations will lessen the number of outbreaks of measles and other infectious diseases for the betterment of public health.

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# Ecology, Environment, and Energy

## *Session I: Environmentalism as an Investment in Happiness*

# Using the Theory of Reasoned Action in Public Participating Environmental Protection

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The skin is the primary interface between the host and everyone in this world is inseparable from environment; therefore, environmental conservation needs the action and efforts of all human beings. Over the world, many nations have been placing an emphasis on public participation and have done many relevant studies. By contrast, Chinese scholars start late in studying public participation in environmental protection. Based on China's actual conditions, people do not have strong awareness of public participation in environmental protection, while waste classification has not been conducted widely. This study mainly used the TRA method of Ajzen and Fishbein (1985) to understand the behavioral intentions that students engaged with respect to waste classification and discussed the factors affecting students' participation in waste classification.

## 1. WASTE MANAGEMENT IN CHINA

China's annual growth rate of garbage comparable to that of GDP, but capacity of waste disposal do not keep up with that rate. At present, more than a third of Chinese cities is surrounded by landfill. In Beijing, there will be no place to bury garbage in the next four or five years. While, in Shanghai, a large landfill has been adjacent to some residential areas.

Many of our so-called junk are actually misplaced resources. Waste separation and recovery are the necessary first step to make use of these resources (Zhang and Che et al. 2012). A pilot program focusing on municipal solid waste (MSW) source-separated collection was launched in eight major cities throughout China in 2000 (Tai & Zhang et al. 2011). But no significant effect.

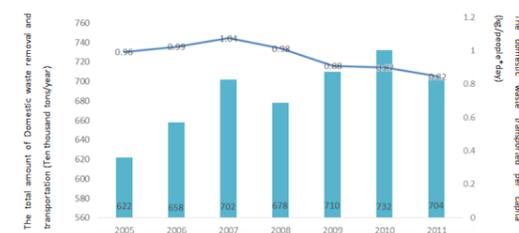


Figure 1. The Amount of Domestic Waste Transportation

## 2. RANGE OF STUDY

Young students are the backbone of society both at present and in the future; therefore, their daily behaviors and attitudes towards the environment should play a guiding role in public policy. This study works with the students of Shanghai Middle School as object to study and discuss their status and mentality towards waste classification. By 2012, Shanghai Middle School purchased with 220,000 yuan a Kitchen Waste Decomposition Machine, which daily processing capacity is 500-800 kg/d. That machine could decompose kitchen waste 100%, simultaneously producing some sewage.



Figure 2. A Picture of Kitchen Waste Decomposition Machine

Total 1000 students from the Shanghai Middle School were categorized as the population. Sampling was performed using stratified cluster sampling. The study used group-level as the lamination, and the class as the sampling unit. We chose to survey approximately 120 students among the total population of around 1000. Finally, the number of valid questionnaires is 107.

## 3. METHODS

The theory of reasoned action (TRA) was mainly used to explain and predict individual intentions (Fushun 1995). Human beings are rational individuals

who have the ability to assess the consequences of their behaviors prior to acting, which could then help them to decide whether or not to proceed. This study mainly used the TRA method of Ajzen and Fishbien (1985) to understand the behavioral intentions that students engaged with respect to campus waste classification. The TRA method is depicted in Figure 3.

A self-report questionnaire was used for this study. Socio-demographic factors included gender, years of education, occupational status of parents, and educational level of parents. Each questionnaire contained 20 questions: 2 questions to access subjective norms, 4 questions for the motivation to comply, 2 questions for attitudes, 4 questions for normative beliefs, 2 questions for desire of participation, and 6 questions for external variables.

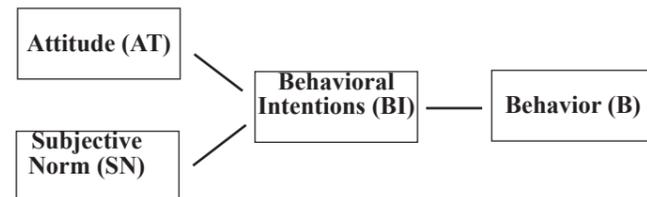


Figure 3. The Structure of TRA

### 3.1 Attitude

Two items were included to describe the desire of classifying waste (e.g., ‘Taking my time and effort to classify waste would be: ‘). This construct was measured on a 5-point scale with endpoints from 1 (Extremely willing to) to 5 (refused to).

### 3.2 Subjective Norms

Subjective norms were captured with two items (e.g., ‘Waste classification is important to everyone’). Each item was rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree).

### 3.3 Motivation to Comply

Motivation to comply was assessed using four items (e.g., ‘Law plays a role in behavior of waste classification’) on a 5-point scale of 1 (strongly disagree) to 5 (strongly agree).

### 3.4 Normative Beliefs

Normative beliefs was assessed with four items (e.g., ‘Waste classification is time-consuming’). Responses to the items were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

### 3.5 Behavior

A single item was used to measure waste classification behavior. Participants were asked to indicate the frequencies of classifying on a 5-point scale ranging from 1 (never) to 5 (frequently/at every collection).

## 4. RESULTS AND DISCUSSION

### 4.1. Current Attitudes towards Waste Classification Behavior

#### 4.1.1 survey results from all participants

According to the statistics, only 21.5% classify waste every time. However, few students do not or never classify waste. These data indicate that most people know that waste classification behavior. The problem is about frequency (Table 1).

#### 4.1.2 the status satisfaction survey

As shown in Table 2, the status satisfaction survey suggests that most students are satisfied with the Kitchen Waste Decomposition Machine. According to the options of smell and noise, the smell should be

Table 1. The Frequency of Waste Classification (n=107)

Classify waste	Every time	Always	Sometime	Don't	Never	Total
Frequency	23	39	36	6	3	107
Percentage	21.50	36.45	33.64	5.61	2.80	100.00

Table 2. The Degree of Status Satisfaction (n=107)

Satisfaction	Satisfied	Smell	Noise	Do not like	Total
Frequency	78	19	6	4	107
Percentage	72.90	17.76	5.61	3.74	100.00

controlled more stringent. Additionally, there are four students do not like the machine with no reason.

## 4.2. Behavioral Intentions

### 4.2.1 subjective norms

There were 91.6% of surveyed students believe waste classification is important, and 88.8% of them feel happy because waste classification reduce quantity of domestic waste.

### 4.2.2 motivation to comply

Answers to the questions concerning the reason of classifying waste indicate that most were because ‘following classmates’ behavior’, and next is law. Encourage (like honors and awards) and rules of school also contribute to student decide whether classifying or not.

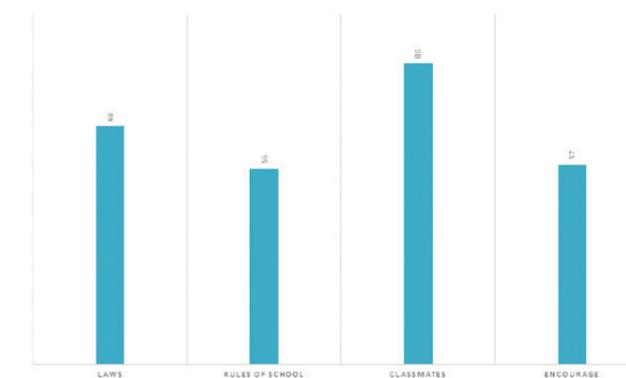


Figure 4. Diagram of Motivation to Comply

### 4.2.3 attitude

The ratio between negative attitude and positive attitude is 1:5.5; while the attitude of the students’ awareness of waste classification is positive. However, the negative attitudes still exist due to ‘time-consuming’ and ‘complication’.

### 4.2.3 normative beliefs

Total 36 of the reasons for no waste classification were due to ‘There is no terms of classification’, while 23 were due to ‘too complicated’. ‘Laborious’ and ‘time-consuming’ were for 21 and 17 respectively. The complete number distribution is shown in Figure 2. When objective factors prevented the behavior of waste classification, some people were able to overcome obstacles to adhere to this behavior; however, some people failed to do so. For this group, no option was mostly difficult to overcome

while inconvenience was another key cause of noncompliance.

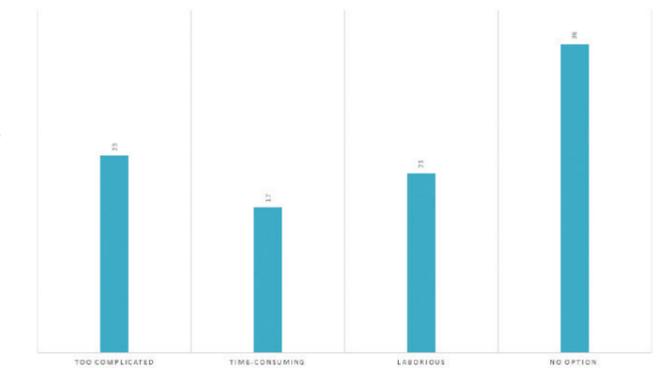


Figure 5. Population Distribution of Normative Beliefs

## 4.3. Other Factors

There were 76% believe that long time publicity could avoid forgotten to classify waste, and could remain me concerned about environmental problem. While, 96% of them think publishing the results of domestic waste reduction influence the decision of waste classification.

## 5. CONCLUSION

Public participation is a significant part of environmental protection. Nowadays, Chinese government has realized this problem. One chapter is added in the new Environment Protection Law implemented in 2015: ‘Citizens, legal persons and other organizations are with legal rights to have an access to environment information, environment participation as well as the supervision of environmental protection.’ That means information publicity will play an important role in next step. Like the 96% said ‘publishing the results of domestic waste reduction influence the decision of waste classification’.

The survey results show that waste classification behavior on campus has many benefits. Students not only set an example, but also spread the awareness of waste classification into family. Since the protagonist of on campus waste classification is students, some environmental associations that are responsible for waste research, maintenance, collection, disposal and so on should be encouraged and supported. These associations are concerned with the practice of waste classification and have a passion to bring environmentally friendly behavior to the campus, with sufficient strength to meet the goal of successful implementation of waste classification.

If school actively encourages the behavior of waste classification among their students, society will acknowledge and praise it too.

The implementation of successful waste classification and recycling must be carried out after abundant feasibility analysis and research. The theory of reasoned action could help to analysis the limiting factors towards people's environmental behavior, and could investigate the willingness to make efforts for our common homeland.

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# The Importance of Environmental Education in a Worldwide Problematic

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## 1. INTRODUCTION

Industrial Revolution marked a big step for human development, with new technologies and more efficient processes. However since then there has been no control over the indiscriminate use of environmental resources emissions and pollution caused by industrial processes and transport of raw materials and final products. The planet can no longer regenerate with the same speed as the market, resulting in the loss of biodiversity, global warming, lack of resources and polluted ecosystems that are not useful for human life.

There needs to be a change in the habit of society to demolish this problem, so plans are being developed for the recovery of the biosphere and is implementing environmental education so that each individual has a conscience in this situation. In the following essay I'm going to talk about these ideas to raise awareness in society about the importance of protecting the environment not only in Mexico but throughout the world.

## 2. OBJECTIVE

To make known the environmental situation in which we live, plans that are being made out in Mexico to respond to this situation and the need to build environmental awareness to preserve it.

## 3. BODY

### 3.1 Environment Importance

The environment gives us a place to live and gives us the resources to develop, as food, raw materials, water, and more. It is important to protect it because it maintains homeostasis in different ways:

- The trees keep the environmental conditions of the place because they retain moisture and transform carbon dioxide into oxygen. Air purification is very important to maintain the health of living beings, to prevent the destruction of the ozone layer and the greenhouse effect [1].
- Water bodies are the habitat of marine species and provide water to the land, without water there is no possibility of the development of ecosystems.

- The planet has its own cleaning mechanism, biogeochemical cycles recycle compounds and maintain a balance in the amount of these. But man caused the overall homeostasis get lost and now we must take care of them to follow its natural course.

In addition to these functions, the ecosystem contains critical information: the geographical history of the place, explains the development of customs and cultures, the genetic information of the species that inhabit it resulting in a branch of evolution that had to be adapted to the specific conditions of that environment.

In an industrial field, environment is very important for creating cosmetics, paints, fermentation, gasoline, drugs (since most of the molecules comes from a plant) and almost all human products.

Secretary of external relations, gave the title to Mexico as a megadiverse country because it is the second one with most ecosystems in the world, fourth in flora with 26,000 different species and fourth with about 200,000 total species, representing 10-12% percent of global biodiversity. That is the reason we have designated 170,000 square kilometers as protected areas [2].

### 3.2 Problematic Worldwide

The human, throughout its existence, has changed its environment to develop, survive and create a comfortable life. However in recent years there has been an exponential change and the resources we use are unsustainable and the environment has been damaged globally. The forest areas has been reduced by 20-50% of its original extent, wetlands have shrunk by half in the last 100 years, 25 billion tons of fertile land disappeared each year, we change the natural flow of most water bodies and many species have become extinct. [3].

In order to quantify the human impact on the environment we can measure the ecological footprint<sup>1</sup>. In 2009, 1.4 planets were needed every year to satisfy our needs, this means that the earth needs one year

<sup>1</sup> Global measure that estimates the demand of man to the earth's resources. Proposed in 1990 by William Rees and Mathis Wackernagel.

and five months to recover the raw material we removed, which beyond a sustainable world. Mexico requires about 3.4 hectares per person to recover from the damage that we cause in a year, occupying almost the double space that the Earth can give each individual. [3 y 4].

The indiscriminate activities of the man cause biodiversity lost and the disappearance of ecosystems like cutting trees, loss of aquifers, pollution, tourism, acceleration of global warming and more. Therefore it is required to raise awareness and initiate plans for cooperation among nations to reduce the impact and take action on the matter.

### 3.3 International Cooperation

To solve environmental problems we need everyone's help, even if a country strives to help the environment this will not be possible if other regions are not interested in the ecosystems that surround them. We live in a balloon, we share the resources of the earth and if there is any change all other places were going to be affected such as global warming.

'Environmental effects of the production of goods and services may be overlooked, because they occur far from our homes or jobs. For example, environmental and social effects of mahogany logging in the Amazon triggers on the rainforest and its inhabitants, are rarely known to Europeans or Americans who need to make his furniture.' [3]

It is important that environmental awareness develop at a national level to take action, but it is also important to have international cooperation with other countries for support and also help each other. Mexico is part of several international agreements with the United Nations [5], the most important are:

PNUMA – Environment Programme of the United Nations.

PNUD – Development Programme of the United Nations.

ONUDI – Industrial development organization of the United Nations.

FAO – Food and agricultura organization of the United Nations.

### 3.4 Environmental Education

Environmental consciousness seeks the individual respect and take care ecosystem because it is part of his life. A change in our thinking to reverse the ecological footprint we have formed over centuries,

each individual has to develop environmental awareness and take action as necessary. Importantly, not only protecting the environment surrounding also any process that will require the resources of the biosphere must have a plan or sustainable development. If a country is in trouble by excessive extraction of resources in the area all other nations must help her recover their initial situation and avoid obtaining the resources of that ecosystem.

Several aspects need to be fulfilled for the world to become sustainable: the contribution of new ideas, social participation, democracy, cultural diversity, knowledge, biodiversity conservation, manage and maintain the ecological balance of ecosystems is required [6]. For all this to take place is necessary to implement an environmental education in the education sector in a way that the problematic forms part of society that requires the cooperation of the political, scientific and technological development. Mexico integrated environmental education in schools since 1983 by the Secretary of Public Education and since then several changes have been made to raise awareness and provide better learning of environmental issues [7].

In the past ten years, we were able to promote an ecological culture that has been able to direct social processes that seek sustainable development through cultural rationality. Indigenous peoples know the importance of the species that surround them. We must learn more about their culture and take care of our surroundings like them.

'Indigenous peoples and communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and provide support due to their identity, culture and interests. We must pray for effective participation in the achievement of sustainable development' [6].

The current economy does not take the true cost of things, each resource used in the creation of a product took several years to reach what is now. So it has to be a balance between what you take and what is returned to the environment because if not, we will eventually run out of resources. For example when buying a piece of wood furniture several trees, which took them years to grow to have a usable diameter, have a cost in time and if trees are not reforest the forest will going to disappear.

## CONCLUSIONS

It is necessary to protect the environment where we live to give us the resources we need, however it is essential to have a balance between what we spend and the ability of the planet to recover. Thanks to globalization we have lost many ecosystems and pollution exists, it is time to take action and change the mindset. It is necessary for society to take an environmental awareness so that be a transformation in which each person take care of their environment, but that change begins with oneself. The educational program is not very efficient to teach the importance of the environment, there are many people who do not believe or do not realize what is happening.

Big companies have to start making sustainable plans and reverse the damage they cause to the environment. There are ways you can reduce the impact to the environment as recycling, putting treaters and water purification plants and filters that clean the air.

We can't wait for the development of new technologies to end up the problem that we are experiencing today, first because we do not know if knowledge comes before it's too late and second, damage could be irreversible. We must beware of endangered species.

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*Session II:  
Innovations in the  
Energy Sector and their  
Implementation*

**1. THE INTRODUCTION OF SULFUR****1.1 Sulfur Element**

Sulfur is a nonmetallic chemical element with atomic number 16, and its atomic weight is 32.06. The chemical symbol S is mainly used in formulae and abbreviation. It was first recognized by Antoine Lavoisier in 1777<sup>1</sup>. Ordinary sulfur is a bright yellow crystalline solid<sup>2</sup> with a faint odor, which is similar to the smell of a burning match. Many people would be surprised to learn that sulfur is odorless, however, a strong sulfurous odor is usually attributed to the presence of hydrogen sulfide or related compounds. This form of sulfur can melt at 113°C which can form a straw-colored liquid of low viscosity. As heated, it will become darker in color and more viscous. It will be a dark red mass which cannot be poured out when heated up to 200°C. That is quite unique, which is contrast to most other elements in their liquid because of the formation of polymer<sup>3</sup>.

Sulfur could not only exist as elemental, but also can as compounds in a wide range of oxidation states, which is from -2 to +6. Beyond those above, sulfur is 'generalist', which can forms stable compounds with nearly all kinds of elements.

**1.2 Inorganic Sulfur-Containing Compounds****1.2.1 elemental sulfur**

Sulfur is abundant in earth. It can be found near hot springs and volcanic regions all around the world<sup>4</sup>. Due to its abundance in native form, sulfur was known even in ancient times. Fumes from the burned sulfur were used as fumigants and sulfur-containing medicine which were used as balms and anti-parasitics medicine. What's more, sulfur is an element which plays an important role in changing the political and region pattern, due to its use as powerful black gun powder in medieval Europe.

<sup>1</sup> R. Lucy, *Sicily and the Unification of Italy: Liberal Policy and Local Power (1859-1866)*, 1998.

<sup>2</sup> H. Handbuch, *Der Pharmazeutischen Praxis (4th ed.)*. Berlin-Heidelberg-New York: Springer, 1978, pp. 672-679.

<sup>3</sup> N.N. Greenwood and A. Earnshaw, *Chemistry of the Elements (2nd ed.)*. Oxford: Butterworth-Heinemann, 1997.

<sup>4</sup> N. Wolfgang and V. Karel, *Sulfur, Ullmann's Encyclopedia of Industrial Chemistry*. Wiley-VCH Verlag, 2007.

Today nearly all elemental sulfur is produced as a side product of other industrial processer like petroleum natural gas and related fossil resource<sup>5</sup> production. In this case, hydrogen sulfide is usually undesired and it will be extracted and converted to elemental sulfur.<sup>6</sup> The world production of sulfur in 2012 amounted to 70 million tones at the price of 160 USD/T<sup>7</sup>.

**1.2.2 hydrogen sulfide**

Hydrogen sulfide, which is a colorless gas with the characteristic foul odor of rotten eggs, could be produced by treating sulfur with hydrogen. Hydrogen sulfide mainly gained from this sulfur removal process (eq 1). With the oxidation of some hydrogen sulfide, it turns into sulfur dioxide, and the two cooperate with each other can afford elemental sulfur. This way has been employed as major in 2002 across the world.

Over centuries, hydrogen sulfide was important in analytical chemistry. Heavy metal ions such as Pb (II), Hg (II) are precipitated when exposure to hydrogen sulfide. It can also be used for treating heavy metal wastewater before the emission.

**1.2.3 metal sulfides**

The principal ores of copper, zinc, nickel and other metal are also sulfides. They are formed by the reaction of hydrogen sulfide with metal salts. Until now, more than 300 kinds of metal sulfides are found, which accounted for 0.25% of the earth crust weight. The metal sulfide now is a great source of the sulfur and need to be further developed<sup>8</sup>.

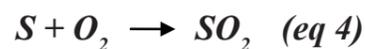
<sup>5</sup> J.S. Eow, *Recovery of sulfur from sour acid gas: A review of the technology*. *Environmental Progress* 21, 2002, pp. 143-162.

<sup>6</sup> Schreiner, Bernhard, *Der Claus-Prozess. Reich an Jahren und bedeutender denn je*. *Chemie in unserer Zeit*, 42, 2008, pp.378-392.

<sup>7</sup> U.S. Geological Survey(2013). *Mineral Commodity Summaries*.

<sup>8</sup> D. J. Vaughan, J. R Craig, *Mineral Chemistry of Metal Sulfides*. Cambridge University Press, Cambridge, 1978.

### 1.2.3 sulfur oxides



The third kind is sulfur oxides<sup>9</sup>, which can be obtained by burning sulfur (eq 4,5).

They are toxic gas with an irritating, pungent, and rotten smell. Sulfur dioxide is an intermediate in the production of sulfuric acid and sometimes used as a preservative for dried fruits, owing to its antimicrobial properties. It is notorious as an air pollutant<sup>10</sup>, which can cause the acid rain.

### 1.2.4 sulfuric acid

Another important sulfur compounds is sulfuric acid<sup>11</sup>, which is a strong mineral acid with highly corrosive nature. As a very important chemical commodity, the nation's sulfuric acid production is a good indicator of its industrial strength. In 2008, the worldwide sulfuric acids production has reached to more than 212 million tons. Most of them are consumed for the production of fertilizers, particularly superphosphates, ammonium phosphate and ammonium sulfates, which are widely used in agriculture. About 20% of them are used in chemical industry for production of detergent, synthetic resins, dyestuffs, pharmaceuticals, petroleum catalyst. About 6% are used as paints, printing inks, coated fabrics and paper, the rest are in the application of explosives, cellophane, acetate and non-ferrous metals and batteries.

## 1.3 Organic Sulfur-Containing Compounds

Organic sulfur-containing compound<sup>12</sup> is also a large branch of sulfur compounds. It widely exist in nature, such as the coal and gas, both of them contain certain amount of organic sulfur compounds. But most of them have the characteristic of the unpleasant smell, which can greatly hinder its application.

### 1.3.1 Thiol and Thioether

Thiol<sup>13</sup> is an organosulfur compound that contains

<sup>9</sup> Lide, R. David, *CRC Handbook of Chemistry and Physics (87th ed.)*. Boca Raton, FL: CRC Press, 2006.

<sup>10</sup> *Volcanic Gases and Their Effects*. [Volcanoes.usgs.gov](http://Volcanoes.usgs.gov). 2011.

<sup>11</sup> S. S. Zumdahl, *Chemical Principles 6th Ed.* Houghton Mifflin Company, A23, 2009.

<sup>12</sup> M. J. Jassen, *Organosulfur chemistry. Reviews of current research*. Interscience, New York, 1967.

<sup>13</sup> P. Saul, *The chemistry of the thiol group*, Ed. Wiley, London. ISBN 0-471-66949-0, 1974.

a C-SH group. It is easy to be oxidized<sup>14</sup>. Weak oxidant, such as air iodine, can turn thiol into disulfide. In contrast, the sulfuric acid is produced when it works with strong oxidants, such as nitric acid. This method can be used for the preparation of fatty acid. However, low-level thiol has a strong and unpleasant smell, ethanethiol is especially obvious. So it is commonly used as alert in gas in order to warn the gas leak.

Thioether<sup>15</sup> is a compound which contains the R-S-R functional group with stimulating odour. It is easy to be oxidized into sulfoxide and sulfone. Thioether with Low molecular weight always has a bad smell, which is the common gender of bivalent sulfur compounds.

### 1.3.2 sulfoxide and sulfone

Sulfoxide<sup>16</sup> is a chemical compound containing a sulfinyl (SO) functional group. The oxidation state of sulfur in sulfoxide is 0, between the thioether (-2) and sulfone (+2). So when thioether is oxidized<sup>17</sup>, we can gradually get sulfoxide and sulfone. Many chiral sulfoxide can use the achiral thioether as raw material, and in the presence of transition metal and chiral ligands, be synthesized through the asymmetric catalytic oxidation reaction. Chiral sulfoxide<sup>18</sup> could be applied in drugs such as esomeprazole. In addition, another typical sulfoxide DMSO is widely used as a solvent in the laboratory. Sulfone<sup>19</sup> contains a sulfonyl functional group. Its largest scale production is probably in the form of sulfoane.<sup>20</sup>

These organic sulfur containing compounds play a important role in the synthesis of organosulfur compounds as pharmaceutical, function material. And its drawbacks like unpleasant smell still remain a problem to be solved.

## 2. THE FUNCTIONS OF SULFUR-CONTAINING COMPOUNDS

### 2.1 Functions in Live Body

Sulfur is an essential component of human body. It takes about 0.23% by weight, behind oxygen,

<sup>14</sup> Y. Wu, *Organic chemistry*, 202, pp. 462-469.

<sup>15</sup> R. J. Cremllyn, *An Introduction to Organosulfur Chemistry*. John Wiley and Sons: Chichester, 1996.

<sup>16</sup> S. Patai, *Syntheses of Sulphones, Sulphoxides and Cyclic Sulphides*. Eds, John Wiley & Sons, 1995.

<sup>17</sup> K. M. Roy, *Sulfones and Sulfoxides*. *Ullmann's Encyclopedia of Industrial Chemistry*, Wiley-VCH, Weinheim, 2002.

<sup>18</sup> Á. Gama, A., Z. Lucía, *Oxidation of sulfides to chiral sulfoxides using Schiff base-vanadium (IV) complexes*, 2003.

<sup>19</sup> J. Hornback, *Organic Chemistry*, 2006.

<sup>20</sup> H.O. Folkins, *Benzene*. *Ullmann's Encyclopedia of Industrial Chemistry*, Wiley-VCH, Weinheim, 2005.

carbon, hydrogen, nitrogen, calcium, phosphorus, and potassium (Figure 1)<sup>21</sup>. It is an important part of amino acids, the protein in cell and various coenzyme, which can maintain the body health. Sulfur can also be good for body metabolism, and promote the digestion and absorption of gastrointestinal. In a word, elemental sulfur plays an important part in human biology.

Figure 1. Composition of the Human Body

Hydrogen	63.0	Oxygen	25.5
Carbon	9.5	Nitrogen	1.4
Calcium	0.31	Phosphorus	0.22
Potassium	0.06	Sulfur	0.05
Chlorine	0.03	Sodium	0.03
Magnesium	0.01	All others	0.01

In plants and animals, major sulfur element existed as methionine and cysteine (Figure 2). Cysteine<sup>22</sup> has antioxidant properties due to the ability of thiols to undergo redox reaction, Methionine<sup>23</sup> can serve as a source for cysteine through the reaction, but the reverse reaction cannot take place. That makes the methionine become also real important.

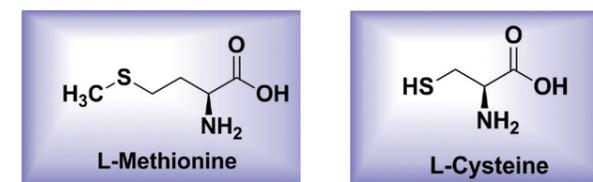


Figure 2. The Molecular Structure of L- Methionine and L-Cysteine

There are also other sulfur-containing compounds that are similar to the amino acid in structure. Homocysteine<sup>24</sup> and taurine (Figure 3)<sup>25</sup>, which are widely distributed in animal tissues. Taurine has many fundamental biological roles, and is essential for cardiovascular function, the retina function, the function of skeletal muscle, and the function of central nervous system. Biotin<sup>26</sup> and thiamine<sup>27</sup> which also contain sulfur, are two of the 13 classic vitamins.

<sup>21</sup> F. H. Nielsen, *Ultrace minerals. Modern nutrition in health and disease*, Baltimore: Williams & Wilkins, 1999, pp. 283-303.

<sup>22</sup> *Nomenclature and symbolism for amino acids and peptides Recommendations Pure Appl. Chem.* 56, 1984, pp. 595-62.

<sup>23</sup> M. P. Ferla and Patrick, W. M. (2014). *Bacterial methionine biosynthesis*. *Microbiology* 160, 8, 1571-84.

<sup>24</sup> J. Selhub, *Homocysteine metabolism*. *Annual Review of Nutrition* 19, 1999, pp. 217-246.

<sup>25</sup> R. J. Huxtable, *Physiological actions of taurine*. *Physiol Rev* .72, 1, 1992, pp. 101-163.

<sup>26</sup> *Merck Index*, 11th Edition, 1244.

<sup>27</sup> T.V. Thiamin, *Modern Nutrition in Health and Disease*. 9th ed. Baltimore: Lippincott Williams & Wilkins, 1999.

Figure 3. The Molecular Structure of L-Homocysteine, Taurine and Vitamin B

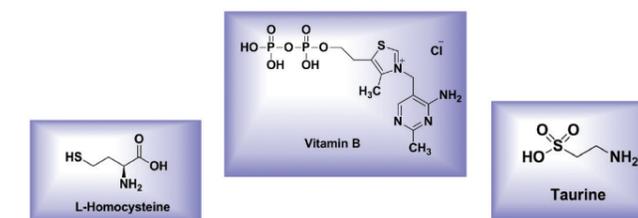
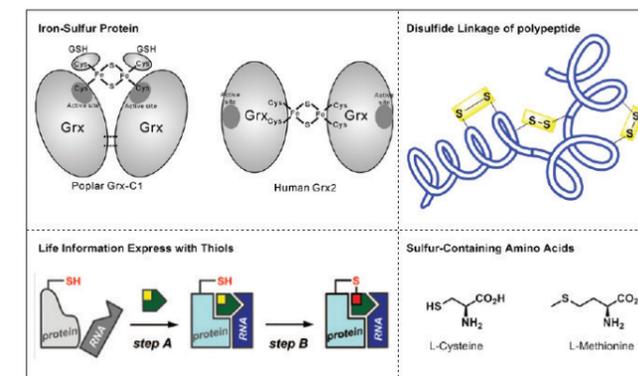


Figure 4. Sulfur-Containing Biomolecules<sup>28</sup>



Compounds containing sulfur are found in all body cells and are indispensable for life, such as protein, amino acid<sup>29</sup>, which greatly influence our human health. Studies on sulfur-containing biomolecules (Figure 4) have become more important. As we all know, organosulfur compounds widely exist in animal and plants and always share a highly special biological activities<sup>30</sup>. There are lots of natural products with unique chemical molecular structures, which is very important for the development of new drugs. Finding new drugs from the natural products which is selected by the natural has always been an important strategy. While the natural sulfur compounds have antibacterial activity, most of them are now become the antifungal drugs (figure 5,6). And the study also finds that with the decoration of some group by sulfur-containing group, can the drugs achieve a better antifungal effect<sup>31</sup>.

### 2.2 Function as Pharmaceutical

Sulfur has been used for treating variety of dermatological disease since ancient China<sup>32</sup>. Sulfur

<sup>28</sup> D.R. Breiter, T. E. Meyer, I. Rayment, *The molecular structure of the high potential iron-sulfur protein isolated from *Ectothiorhodospira halophila* determined at 2.5-Å resolution*. *J. bio chem.* 266, 28, 1991, pp. 18660-18667.

<sup>29</sup> R. J. Cremllyn, *An Introduction to Organosulfur Chemistry*. John Wiley and Sons: Chichester, 1996.

<sup>30</sup> E. Block, *Reactions of Organosulfur Compounds*. Academic Press, 1978.

<sup>31</sup> M. C. Qian, X. Fan, and K. Mahattanatawee, *Volatile Sulfur Compounds in Food*. ACS Symposium Series 1068, American Chemical Society, 2011.

<sup>32</sup> S. Parcell, *Altern Med Rev*, 7, pp. 22-44.

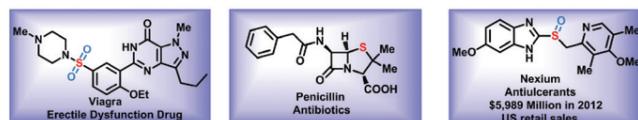
can be used in pharmaceutical skin preparation for the treatment of acne and other condition. It acts as a keratolytic agent and also kills bacteria, fungi, scabies mites and other parasites, so the sulfur always contained in antidandruff shampoos and acne ointments. Sulfur can be helpful in wound healing via keratin and has a long history of folk usage as a remedy for skin rashes, which can be dated back to the 2000 years before in ancient China.

Figure 5. Sulfur-Containing Pharmaceuticals

## Sulfur Containing Pharmaceuticals

Created by the Njardarson Group (The University of Arizona): Edna Vinha, Elizabeth A. Bardi, Joe T. Njardarson

Figure 6. Typical Sulfur-Containing Pharmaceuticals.<sup>33</sup>



And the sulfur baths are still used for the treatment of psoriasis, rheumatic pain, and infections.

Sulfur-containing architectures serve important functions in general organic synthesis, as well as applications in the pharmaceutical industry and in material science. The introduction of sulfur atoms into target molecules is an important area in organic synthesis, in particular in the synthesis of pharmaceutical compounds, and a wide variety of sulfuration agents have been developed for thionation reactions over the past few decades<sup>34</sup>, which contain different kinds of oxidative states.

## 2.3 Function as Materials

The organic sulfur-containing compounds also be widely used in the material fields. Functional oligothiophenes is one important part of them. Over centuries, there are attracting scientists' interest all over the world, and now being further used as  $\pi$ -conjugated materials, especially as active components in organic electronic devices and molecular electronics. What's more, the studies are proceeding with unprecedented enthusiasm which might make this system be extended into a higher dimensionalities and novel topologies.

## 3. THE PROBLEMS EXIST IN THE APPLICATION OF SULFUR

Despite the wide use of sulfur, there are also some problems that we cannot ignore. The first problem is about the environment. When sulfur burns in air, it will produce sulfur dioxide, which would turn into sulfuric acid and sulfites when meet the moisture in air. The high concentrated acid rain is harmful to environment and also be damaging to human breath system. Due to the strong acidity and the highly corrosive, all the plants and the building can still suffer great damage<sup>35</sup>.

The second problem is the smell and toxicity of sulfur compounds which can hinder the wide study upon sulfur. Despite elemental sulfur is non-toxic, and odorless, but some of its derivate are not so. For example, hydrogen sulfide<sup>36</sup> could be achieved by combining sulfur and hydrogen, which is as toxic as hydrogen cyanide, and has a rotten egg smell.

The third problem is mainly due to their drawbacks of poison effects on metals and unavoidable over-oxidation. In order to solve these problems, chemists have been trying to solve the problems, so do our group.

## 4. OUR GROUP'S WORK UPON SULFUR

Our studies (figure 7) mainly focus on the odorless sulfuration reagents, which are stable to oxidant and non-poisonous to metal instead of organic thiols and thiophenols. To accomplish this S-atom transfer reaction and constructing C-S bonds efficiently and practicably with cheap catalyst, and use these method into the total synthesis of organosulfur natural products.

<sup>35</sup> National Trends in Sulfur Dioxide Levels, United States Environmental Protection Agency.

<sup>36</sup> S. Ramasamy, S. Singh, and P. Taniere, Sulfide-detoxifying enzymes in the human colon are decreased in cancer and upregulated in differentiation. *Am. J. Physiol. Gastrointest. Liver Physiol.* 291, 2, 2006, pp. 288–296.

<sup>33</sup> E. A. Ilardi, E. Vitaku, and J.T. Njardarson. *J. T., Med. Chem.* 57, 2014, pp. 2832–2842.

<sup>34</sup> H. Liu and X. Jiang, Transfer of Sulfur: From Simple to Diverse. *Chem. Asian J.* 8, 2013, pp. 2546–2563.



Figure 7. Atom Sulfur Transfer Reaction

## 4.1 Intramolecular Sulfuration

As showed above (figure 8), that organosulfur compounds are widely used as pharmaceuticals, function materials, and synthetic intermediates. Due to the significance of organosulfur compounds, the development of new and efficient methods for the incorporation of sulfur into organic frameworks is today an important and challenging task. Compared to the construction of C-N and C-O bonds by transmetal catalyzed cross-coupling, C-S bond formation has been less studied due to deactivation of the metal catalysts by the strong coordinating properties of sulfur compounds. In this work<sup>37</sup> we have developed a novel method for the synthesis of substituted 1,4-benzothiazine derivatives which relies on a Pd-catalyzed coupling reaction. The important feature of this method is using stable Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> salt as sulfuration reagent which makes it free from foul-smelling thiols. The successful application of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> as sulfur source will stimulate studies on metal catalyzed C-S bond formation by employing those inexpensive readily available reagents.

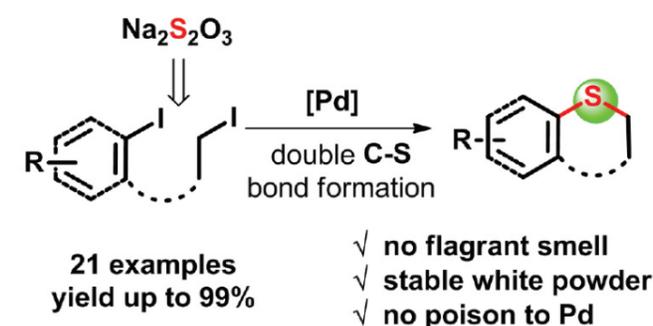


Figure 8. The Synthesis of Substituted 1,4-benzothiazine Derivate

<sup>37</sup> Z. Qiao, H. Liu, and X. Jiang, *Org. Lett.* 15, 2013, pp. 2594–2597.

## 4.2 Intermolecular Sulfuration

In this work<sup>38</sup>, we have developed a novel method for diverse aromatic sulfide by Pd-catalyzed cross coupling. The important feature of this method (figure 9) is using the odorless, stable, and environmentally friendly Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>·5H<sub>2</sub>O salt as a sulfuration reagent which is commercially available and easily handled. This method provides a free cross-coupling approach to aromatic sulfide, which is an important unit in biologically active molecules active molecules.

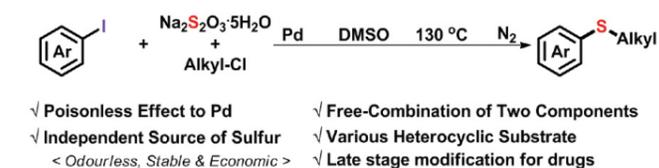


Figure 9. Intermolecular Sulfuration

## 4.3 From Amine to Sulfide

Carbon-sulfur bond formation is turn out to be important as we have discussed before. Large amounts of research also being conducted and an enormous pharmaceutical market demand indicate that highly effective and broadly tolerant C-S bond constructing methods and late-stage sulfuration techniques are urgently desired.

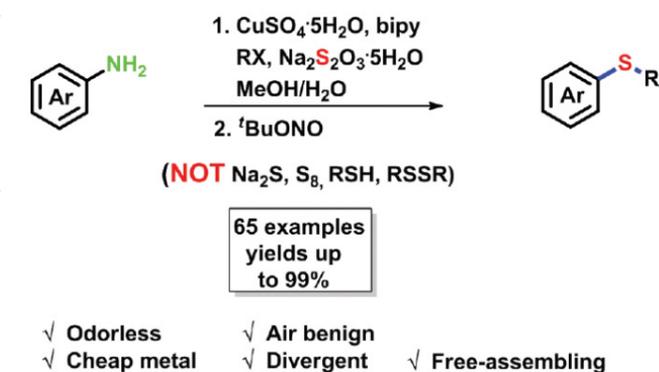


Figure 10. A Cheap Metal Catalyzed Sulfur Transfer Reaction from Amine to Sulfide

In this work (Figure 10)<sup>39</sup>, we have developed a cheap metal catalyzed sulfur transfer reaction, which could be realized by free assembly between aryl amines, alkyl halides, and Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> in alcohol and H<sub>2</sub>O under air. As a novel sulfur source, Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> shows its irreplaceability in this system. In contrast with organic thiols and thiophenols, its intrinsic properties helped us accomplish this S-atom transfer reaction efficiently and practicably. This reaction functions under mild conditions, and various useful

<sup>38</sup> Z. Qiao, H. Liu, and X. Jiang, *Org. Lett.* 16, 2013, pp. 1212–1215.

<sup>39</sup> Y. Li, J. Pu, and X. Jiang, *Org. Lett.* 16, 2014, 2692–2695.



# Social Rate of Return to R&D on Various Energy Technologies: Where Should We Invest More? A Study of G7 Countries

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## ABSTRACT

The severity of investment in Research and Development (R&D) in the energy sector is undisputable especially considering the benefits of new technologies to sustainability, security and environmental protection. However, the nature and potential of various energy technologies that are capable to improve the energy and environmental conditions globally is a challenging task for governments and policy makers that have to make decisions on the allocation of funds in R&D. To do so, the optimal resource allocation to R&D should be determined by estimating the social rate of return for R&D investments. This paper aims to estimate the social rate of return of R&D on various energy applications and technologies such as energy efficiency, fossil fuels, renewable energy sources, and nuclear for the G7 countries. The results show that primarily R&D investment on Energy Efficiency technologies and Nuclear are the ones that yield high social benefits for all G7 countries while exactly the opposite holds for Fossil fuels.

## 1. INTRODUCTION

The severity of investment in Research and Development (R&D) in the energy sector is indisputable especially considering the benefits of new technologies to sustainability, security and environmental protection. Wong, Chang and Chia (2013) have shown that fossil fuel R&D drives economic growth in the OECD countries more than actually the fossil fuels consumption does. However, the nature and potential of various energy technologies that are capable to improve the energy and environmental conditions globally is a challenging task for governments and policy makers that have to make decisions on the allocation of funds in R&D. To do so, the optimal resource allocation to R&D should be determined by estimating the social rate of return for R&D investments.

Theoretical and empirical literature has illustrated the central role of R&D as a significant contributor to growth and development. Primarily empirical studies have estimated the rate of return to R&D in regressions of productivity growth on measures of

R&D such as R&D intensity (Griliches 1994; Jones & Williams 1998; Corderi & Cynthia Lin 2011). Although, different studies accounted for various spillovers consensus has been reached that the social rate of return of R&D is positive, differs in size among countries and remains significantly above private rates. Tirole (2001) explain why the private rate of return diverge from the socially optimal rate of R&D: firstly the private sector might under-invest in R&D because there are positive spillovers included and secondly, when perfect price discrimination does not exist the social surplus from innovation is higher than the private one.

In the international context of climate change, fossil fuel dependence, high energy prices and lack of energy sustainability, there are good reasons to draw attention to the returns of R&D on energy technologies and innovations. Bointner (2014) argues that between the two major sources of learning, namely learning by doing and learning by researching (Garrone and Grilli, 2010), the energy R&D is subject to the latter. He then continues in explaining the ‘four grand patterns of energy technological change’ as discussed in Grubler et al. (2012): ‘...namely (a) clustering of related technologies and technology spillovers prevail over stand-alone technologies; (b) the ability to perform a novel energy service is more important than the cost of a new, immature technology; (c) energy supply follows demand, which is given by the available end-use applications; and (d) a low rate of technology diffusion’ (Bointener 2014). However, Sterlacchini (2012) stressed a staggering decline of energy R&D during the last two decades, due to reforms and restructuring of electricity markets.

It should be noted here that studies focusing on funding directed on energy R&D activities are rare and focusing primarily on developed economies. The reason for that is not only data availability but also, almost 85-90% of world’s energy R&D is conducted in the world’s richest nations (Breyer et al. 2010) Recently, Corderi and Cynthia Lin (2011) estimated the social rate of return to R&D in the energy manufacturing industry for a group of OECD countries. They quantified the impact of lagged R&D on total factor productivity (TFP) using a panel of data. Their results show that R&D had a positive and

Table 1. Share of the Different R&D Categories to Total Energy R&D (%)

Categories	Canada	France	Germany	Italy	Japan	UK	US
Group 1 Energy Efficiency	14.976	6.318	6.715	14.660	7.814	10.165	15.399
Group 2 Fossil fuels	29.858	10.675	7.742	2.985	9.543	10.442	15.292
Group 3 Renewable energies	8.185	4.400	23.834	12.312	4.855	20.149	10.512
Group 4 Nuclear	35.316	75.184	48.719	39.429	71.559	43.008	23.026
Group 5 Hydrogen and fuel cells	7.038	4.661	5.155	3.290	4.905	5.092	6.322
Group 6 Other power and storage technologies	4.252	0.562	3.736	13.938	2.841	3.838	4.073
Group 7 Other cross cutting technologies	5.151	1.032	7.597	15.622	1.935	10.760	29.665
Statistical differences	-4.776	-2.830	-3.498	-2.237	-3.452	-3.456	-4.290
<b>Total</b>	<b>100</b>						

Source: International Energy Agency, IEA 2014.

significant rate of return with a different magnitude for the various countries.

However, the R&D spending on energy is broad. The International Energy Agency (IEA) has classified the energy R&D in seven categories according to the technologies and innovations. Table 1 presents the share of these groups in each of the country’s total R&D expenditures on energy. It can then be seen that the great majority of the energy R&D in all countries is spent on the nuclear sector, while the cross-country variation of the rest of the energy R&D groups is high.

This paper aims to estimate the social rate of return of R&D on various energy applications and technologies such as energy efficiency, fossil fuels, renewable energy sources, and nuclear for the G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom, United States) by using panel data estimations (primarily fixed effects). As used mostly in the literature, we will quantify the impact of lagged R&D intensity to TFP of the countries. Energy R&D Data will be derived from the IEA databases while economic data will be provided primarily by the OECD STAN database. All in all, this paper’s purpose is to identify which of these energy technologies yield a higher social rate of return of R&D (if any) and make important policy recommendations.

## 2. METHODS AND DATA

A Cobb-Douglas production function is adopted in this analysis of the form:

$$Y_t = e^{\mu t} Z_t^\gamma K_t^\alpha L_t^{1-\alpha} \quad (1)$$

$$Z_t = R_t \quad (2)$$

Where Y is the output produced, Z is the R&D expenses, K is the capital, L is the labor and R is the expenditures in R&D. Equation (2) shows no depreciation of stock.

In a growth accounting exercise, we derive the relationship between TFP and R&D:

$$TFP_t = \frac{Y_t}{K_t^\alpha L_t^{1-\alpha}} \quad (3)$$

Equation (3) can finally be transformed in:

$$\Delta \ln(TFP_t) = \mu + \frac{\tilde{r} R_{t-1}}{Y_{t-1}} + \varepsilon_t \quad (4)$$

Where  $\tilde{r} = \left(\frac{dY}{dZ}\right)$  is the rate of return to R&D.

As can be shown in equation (4), TFP is regressed on the R&D share of output lagged by one period. As Jones and Williams (1998) mention, if the coefficient r is measured at the industry level, it represents the social rate of return.

In another way of interpreting equation (4), the coefficient r will measure the magnitude of the impact of R&D at time t-1 to the country’s productivity (TFP) at time t.

Table 2. Descriptive Statistics

	US dollars millions, PPP, Constant prices 2005	%	US dollars millions, PPP, Constant prices 2005	%
	Size in terms of total R&D in energy	Relative size to the group	Size in terms of GDP	Relative size
Canada	520.024	4.844	982145.345	4.329
France	976.124	9.093	1687321.462	7.437
Germany	660.136	6.150	2454303.972	10.818
Italy	732.646	6.825	1547616.286	6.822
Japan	3470.010	32.326	3538803.193	15.598
UK	311.286	2.900	1757612.186	7.747
US	4064.117	37.861	10719327.596	47.248
Total	10734.342	100.000	22687130.041	100.000

The data used are derived primarily from the International Energy Agency (IEA) database 'Energy Technology RD&D budgets', the OECD STAN database and the World Development Indicators of the World Bank for the G7 countries during the period from 1985 to 2012. The group of countries was selected because according to Coderi and Lin (2011) these countries conduct on average 88% of the energy R&D in the OECD countries.

Table 2 shows the gross domestic product (GDP) and R&D expenditures in the seven countries as well as their relative size to the group in percentages. In both indicators, it can be seen that US has the highest share in the sample while Japan follows suit in the group.

### 3. EMPIRICAL RESULTS

The model specification has a regression equation of the form:

$$\Delta \ln(TFP_{it}) = \mu_i + \tilde{r}_i(RDint)_{it-1} + \beta \text{Period}_t + \varepsilon_{it} \quad (5)$$

Where TFP is the total factor productivity for each of the countries  $i$  in each growth rate (differenced natural logs); RDint is the R&D intensity (lagged 1

period) defined as the ratio of R&D expenditures to value added in each country;  $\mu$  is the country fixed effects and  $\varepsilon_{it}$  is the error term which is assumed to be heteroskedastic (by country) and serially uncorrelated. The parameter  $\beta$  is the one to be of interest here since it is denoting the country-specific social rate of return of each of the groups of energy R&D. Following Coderi and Lin (2011), 'we used fixed effects rather than random effects panel estimation model since we believe that time-invariant country-level unobservables are potentially correlated with some of the regressors' (Coderi & Lin 2011, p.2782).

The dependent variable as seen in equation (5) is growth in total factor productivity and the regressor is the lagged R&D intensity. The White's robust error variance estimation procedure is used accounting for the possibility of heteroskedastic errors. Table 3 presents the social rate of return to the various groups of energy R&D.

The first interesting fact that can be observed is that the coefficients for Groups 1 (Energy efficiency) and 4 (Nuclear) are all positive and statistically significant. In a sense, the results for Group 4 were expected as the majority of spending occur in that

Table 3. Social Rate of Return Estimates by Country (Percent)

	RD1	RD2	RD3	RD4	RD5*	RD6	RD7
Canada	1.423	-0.635	-2.082	3.640	-25.259	-1.590	-0.777
France	1.122	-0.558	-0.271	4.861	2.216	1.035	1.136
Germany	1.125	-0.294	-7.780	3.571	65.884	-0.726	0.689
Italy	1.183	-0.204	-9.257	3.341	-2.560	-3.971	0.473
Japan	1.236	-0.693	1.480	5.603	10.685	1.775	0.405
UK	0.931	-0.487	1.299	2.611	-0.185	2.666	-0.588
US	1.234	-0.635	0.591	2.897	-3.837	0.723	-0.102

Note: in grey, the cells show estimates that were statistically significant; \* RD5 is the only group with no consistent existence of data.

group. The results for Group 1 are showing how important is for the economics that betterment of the use of energy overall. Secondly, it is crucial to note that none of the coefficients for Group 2 (Fossil fuels) is either positive or statistically significant denoting that the society as a whole do not benefit by the investment in technologies for fossil fuels usage. The rest of the groups show a variety of results depending on the country. It is interesting to see that although US invests most than the other countries, it does not receive the same social return from the investment shows a statistically insignificant coefficient only for Groups 2 and 3 (Fossil fuels and Renewable energies).

### 4. CONCLUSIONS

In this paper we have estimated the social rate of return of R&D on various energy applications and technologies such as energy efficiency, fossil fuels, renewable energy sources, and nuclear for the G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom, United States) by using panel data estimations (primarily fixed effects). Following the literature, the impact of lagged R&D intensity to TFP of the countries was quantified to do so. All in all, this paper's purpose was to estimate a lower limit for the social rate of return by using a narrow definition of spillover effects.

Following the approach used by Coderi and Lin (2011), our results yield a lower bound estimate of the social rate of return due to the assumptions and limitations of our approach. The primary focus is on contemporaneous within-country R&D spillovers, we do not account for R&D spillovers between industries, intertemporal or inter-country spillovers. Also, the way of measuring productivity here does not adjust for improvements in human capital.

The results show that primarily R&D investment on Energy Efficiency technologies and Nuclear energy are the ones that yield high social benefits for all G7 countries while exactly the opposite holds for Fossil fuels. There several policy implications of these results. The results show the variety of social benefits gained by various groups in various countries showing that not one policy fits all. Policy makers can count on promoting R&D in the fields of energy efficiency and nuclear in giving them high social returns. They should hence rethink on distinguishing the investment accordingly. By no means, the results suggest that R&D investment should be quit for all the other energy technologies apart from those that improve energy efficiency and nuclear production. It might on the contrary be argued that the lack of

sufficient and properly directed R&D investment in other Groups of energy R&D is the main reason for the absence of social returns. One should always keep in mind though that our estimates are lower bound estimates and the need for funding nationally and internationally as well as the need for incentives may be even greater.

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# Shale Gas as a Part of the New Global Energy Strategy

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Interaction of humanity with the surrounding nature outgrew forms of the reasonable consumption which isn't causing it damage long ago.

It is possible now to allocate a number of burning problems which the mankind faces both on local, and at the global levels:

- The climate change connected with greenhouse effect;
- Pollution of a space;
- Pollution by technological waste, including radioactive materials;
- Weakening of an ozone layer of Earth;
- Pollution of the World Ocean;
- Desertification of arid regions;
- Planet overpopulation;
- Exhaustion of natural resources, first of all hydrocarbons.

The main sources of energy which humanity now use are oil and gas. Natural gas nowadays is considered one of the most harmless fuel resources in use. Gas – effective low-carbonaceous power raw material with large supplies. Nevertheless, as we know, world resources reserves of are exhausting.

The reconnoitered traditional fields are exhausting, we have less perspective fields, its development demands big capital investments, and it means increasing of prime cost of gas.

Thus there is a need of search of alternative approaches to gas production. Shale mining was known at the beginning of the XIX century when William Hart drilled the first commercial well in shale fields. However this technology seemed further the unprofitability in comparison with traditional gas production. Improvement of technology for production shale gas, namely a combination of vertical and horizontal drilling allowed to reduce cost of production, and opportunity to develop this technology.

It should be noted that shale production is ambiguous technology. The world resource market in itself often becomes a subject of political speculations, and production of gas doesn't avoid this speculation.

Cost of production of shale gas is still a disputed issue in comparison with cost of traditional production.

The most indisputable fact is that technology of production of shale gas – ecologically dirty, dangerous for environment and for the population of territories near which its production is conducted. And therefore improvement of technology of production, improvement of cleaning technology for polluted soil in a result of production, underground waters, prevention of surrounding landscape change has to become the purpose for the mining companies specializing on shale gas.

## 1. DANGER OF SHALE GAS PRODUCTION FOR ECOLOGY

Shale gas is a kind of the natural gas which is stored in a type of small gas forms, co-called collectors in the thickness of a shale stratum of sedimentary rocks. Stocks of separate shale gas collectors are small, but in total it is enough for the organization of industrial production. High prime cost of the extracted gas from shale originally was connected with need to open big areas, with use of technology of hydraulic fracturing of stratums and continuous drilling of a large number of long horizontal wells with creation of cracks in a well through certain intervals and pumpings out of gas. Hydraulic fracturing – is process which assumes introduction of mix of water, sand and chemicals (proppants) in gas-bearing breeds under extremely high pressure. As it was already stated above, the combination of technology of vertical and horizontal drilling allowed to reduce cost of gas production, so to begin its industrial development.

The modern technology of shale gas production includes drilling of one vertical well and several horizontal wells with multibranches at one depth, and also multistage horizontal wells with a length of horizontal branch not more than 3-4 kilometers. In the drilled wells mix of water, sand and chemicals is pumped, as a result of hydroblow walls of gas collectors collapse, and all available gas is pumped out on a surface.

Here comes the basic moment which calls into question environmental friendliness of this way of production. Before the 'shale revolution' began in

the United States, the considerable changes in the American legislation which allowed to begin shale production were required. The oil and gas industry of the USA was excluded from the Act of safety of drinking water, from the Act of protection of air and from other ten laws on environment protection. The law of 2005 received the name 'Halliburton opening' as it was lobbied by this corporation, and the technology of production of Halliburton began to be used widely in 34 states.

Thus, up to this point shale production was strictly forbidden just because of unpredictable consequences for ecology. The main danger to ecology at shale gas production consists in use of a large amount of chemicals which mix up with water and sand. As a result such technology conceals in itself a number of dangers which regions in which production is conducted already faced.

## 2.1 Water Pollution

Production of shale hydrocarbons with method of hydraulic fracturing promotes pollution of ground waters, including sources of drinking water, with toxic chemicals. At gas production in a subsoil millions of tons of special chemical fractions which destroys layers of combustible shale are downloaded and releases a large amount of gas methane. The main problem that shale gas together with the pumped chemicals which doesn't manage to be extorted, starts coming to a surface from a well, filtering through the soil, polluting ground waters and a fertile layer. Hydroexplosive liquids contain a set of dangerous substances. The list of chemical additives includes from 80 to 700 (the mining companies don't open exact "recipe"). And, by various estimates, in the earth there are 70-80% of chemicals.

Near the wells water becomes non drinkable, so the risk of health deterioration of locals grows, mortality can increase. Some companies are already compelled to provide on a constant basis locals with coasting drinking water. And, unfortunately, pollution abatement of ground waters is limited only to such measures so far.

Excessive expenditure of water. Process of fracturing demands use of a huge amount of water (5700 tons for one well) that is especially dangerous to the droughty regions which are already suffering from its shortcoming. In the course of production millions of liters of water mix up with chemicals, and then download under pressure in breed.

## 2.2 Air Pollution and Climate Change

There are considerable losses of methane at production of shale gas that leads to strengthening of greenhouse effect. In some areas so strong pollution is already made locals to use respirators. Emissions of greenhouse gases at production and use of shale gas and oil are much higher, than at production of usual gas and oil. According to a number of researches, harm of shale raw materials for climate is comparable with harm from coal use. According to Energy Information Administration, leak of methane at production of shale gas is at least one third higher, than at production of natural gas.

## 2.3 Pollution of the Soil

As it was noted above, use of chemicals threatens with pollution of ground waters, and it means that infiltration of already polluted waters into the soil becomes inevitable. Thus, the agriculture of areas in which gas production is conducted under threat.

## 2.4 Land Use

It is necessary to recognize influence of shale production on change of a surrounding landscape. This time, in view of local nature of gas extraction, change of a landscape are imperceptible. However in the future production of shale gas can lead to destruction of a landscape, cause damage to agricultural grounds. For example, the area of a standard field in the USA makes about 140 - 400 square kilometers, thus the territory which is taken away under actually boring platforms occupies 2 - 5% of this space. On such site about 3000 wells usually have.

## 2.5 Seismic Activity

Cases of seismic activity of local character around fields also became known. The fulfilled waters from fields often download under the earth (it is a kind of utilization). Similar cases were registered in states Arkansas, Oklahoma and Ohio in the USA. Earthquakes, to some extent, increase probability of leaks from gas wells.

It should be noted that there are no systematic researches about influence of shale development on ecology now. Only five of 24 American states keep regular public account of accidents, connected with production of shale gas. Researches on influence of the chemicals used by shale production still aren't studied in view of the fact that the composition of the chemical mix entered into wells is unknown.

### 3. ECONOMIC AND SOCIAL FACTORS

Negative influence of shale production for ecology of areas in which its development is conducted, is aggravated with that economic forecasts aren't absolutely unambiguous. There are both optimistic and pessimistic forecasts of rather further development of shale production commercially.

Cost of production from the very beginning caused disputes in a scientific, public and financial community. There was a situation when because of sharply increased volumes of production of shale gas price in the United States sharply fell. I will address to data on gas prices. According to data of Energy Information Administration production of shale gas in the USA was definitely unprofitable in 2009 and in 2011-2012. Nevertheless, rates of production remained and even were increased, and there was it at the expense of grants of the federal government and, first of all, was compensated by prices of oil. In 2008 cost of production of shale gas made \$147, in 2009 – \$135, in 2010 – \$132. It is much higher than internal gas prices in the American market, but this price doesn't exceed the cost of the Russian gas for Europe. So, it somewhat can be a competitor Russian. Other question is the cost of its liquefaction and transportation to Europe and Asia. Besides, expenses of the extracting companies are compensated for the account of sale of associated gas. And it is favorable. It follows from this that until recently growth the high prices of oil compensated the expenses of the companies arising at production of shale gas. Support and subsidizing of shale gas production by the U.S. Government testifies that are laid hopes on this type of mineral resources for long term, so, soon industrial gas production will increase. It is part of policy of the non-volatility declared since the presidential term of Richard Nixon. This policy has to result the USA in non-volatility, independence of sharp jumps in prices of energy carriers. Current reduction of oil prices (and as a result the world prices for gas) can be provoked partly just by growth of production of shale oil in the USA.

In 2013 the United States completely provided themselves with gas and overtook Russia on production indicators. According to Energy Information Administration in 2012 the USA extracted 290 billion m<sup>3</sup> of shale gas. Despite achievement of such results in rather short terms, many scientists and financiers as in the USA, and abroad criticize the policy aimed at the development of shale production.

The matter is that Barack Obama used speculative indicators in the pre-election speeches in 2012 promising 100 years of non-volatility for the USA. In general, indicators of reserves of gas share on probable, possible and speculative. It is clear that speculative always more than other indicators, but in practice it is the most unreal figure.

Moreover, according to Energy Information Administration, 24 trillion m<sup>3</sup> of shale gas or 10% of world reserves are concentrated in the United States – according to these calculations at preservation of the operating growth rates of production and consumption of shale gas will be enough for 65 years. According to their data rates of gas production will grow by 2040. However, according to the research conducted by scientists with the scientific magazine "Nature" in 2014, firstly, reserves of gas are twice less predicted, secondly, stabilization of production will take place in 2020 that means the termination of development of new fields. The termination of development of new fields will provoke a new increase in prices for gas that further, in turn, will lead to falling of profitability of production. It is logical to assume that the companies should spend huge amounts of money for maintenance of profitable production level and development of new fields. It should be taken into account that open wells develop the resource for 30-40% a year.

According to optimistic forecasts and aspiration of the U.S. Government, America has to become competitive in the market of gas in the long term. For this purpose it is necessary to adjust gas export to Europe where it will become the competitor Russian. So far promotion of these projects is slowed down first of all because of reduction of energy prices in the world. But Europe, first of all, East, wishing non-volatility from Russia nevertheless seeks to develop projects on production of shale gas. Though by estimates of the European institute of a sustainable development and the international relations, shale production brings an economic benefit in limited scale – on the example of the USA – only within separately taken staff. In Europe, because of other geology, special ecological reasons and the big time which is required on development of fields, the positive effect will be even less noticeable. Here it should be noted that before this technology of production started being applied in the USA, passed decades of persistent researches and fight against the ecological legislation. In the European Union the ecological legislation is much more strict that actually rejects possibility of development of shale gas production. In many countries of Western Europe it is already forbidden.

According to the scenario of the European institute of a sustainable development and the international relations, by 2030-2035 the European Union will be able to provide from 3 to 10 percent of the needs for gas at the expense of shale fields. Thus, the conclusion is drawn that shale gas, most likely, won't solve power problems of Europe. All this means that production of shale gas in medium-term prospect can remain 'the American phenomenon'.

It is known that in the world market gas price depends on price of oil. There are various forecasts for prices of oil in the next years, but by estimates of OPEC, reduction of oil prices in the world to 90 dollars can already result in bankruptcy of many shale production companies in the USA. Thus, gas prices will also undergo big change. The shale boom for the objective reasons is braked.

The expert from direct investment fund of Pinebrook Road Partners Howard Newman claimed several months ago that the most part of the American shale fields will be profitable only until the price of oil doesn't fall lower than 80 dollars for barrel. Analysts of Morgan Stanley call more optimistic figure, 64 dollars for barrel, but thus don't consider the cost of the earth which can be enormous.

The first signs of the crisis phenomena were outlined in the shale sphere in 'pre-crisis' 2014. The Chesapeake Energy company in 2013 sold 1 million acres in the Perm oil and gas basin (Texas) twice cheaper, than counted, and plus reported on losses in some billion dollars. And at the beginning of 2014 the Hess company sold a site on Eagle Ford (Texas) four times cheaper, than counted. New owners also, to put it mildly, don't prosper: according to fresh data of the Baker Hughes oilfield services company, the number of drilling rigs on Eagle Ford since the end of October decreased at least by 10%. The same occurs on a Bakken field (North Dakota) and other shale fields. And the number of demands for permission on drilling of new wells was reduced already at least by 30% in comparison with 2012. One more large company, Conoco Phillips, declared plans to reduce capital investments in 2015 for 20%, and also completely to freeze drilling on several shale fields.

Pressure upon petrogetters increases, and the weak companies are threatened reduction of investments, by problems with production, the compelled sale of assets and possible bankruptcy. The company which now take the strongest positions better than others will achieve success increase efficiency of activity. They can hope to overcome difficulties and to wait

for the moment when prices of oil are restored, and also probably to get the underestimated assets.

Eventually, it is necessary to mention social and economic consequences which can arise because of shale production. The beginning of production of shale gas can lead to short economic boom in the region, some of American states experience shows it. However further deterioration of ecology, bankruptcy of the mining companies can provoke their withdrawal from regions, and as a result the emergence of unemployment in places with already destroyed traditional spheres – agriculture, tourism.

### 4. CONCLUSION

To sum up, the modern world which is completely depending on hydrocarbonic fuel at the beginning of XXI century faces with problems of its shortage. Growth of a world's population, growth of consumption of oil and gas compel us to look alternatives for traditional ways of production and in general to look for alternative energy sources. Production of shale gas nevertheless, in my opinion, is extensive way of development. Anyway, production of shale gas is necessary to our planet as part of the general strategy for an exit from hydrocarbonic crisis. But it needs to be considered together with development of alternative renewables, after all shale gas, as well as usual gas will sometime end. So far shale gas remains to the unknown, despite PR in the USA and Europe, the technology causing a significant damage to environment, comparable with consequences of deforestation, desertification. Nowadays its technology of production can cause to the planet not a smaller loss, than, for example, nuclear tests as the toxic substances used at its production can devastate environment and leads to lethal. Therefore unpredictability of shale production still remains the important factor which is slowing down its further development. There are no exact data on gas reserves (it is constantly change). There are no the exact data on substances used in cocktails for hydroexplosive works (proppants). Thus, it is difficult to predict exact influence of waste from production for humanity. The technology of hydraulic fracturing of layers already is in many countries of the world under a ban. Moreover, in July, 2014 in the State of New York the authorities gave out permissions to municipalities to forbid gas production in case of constitutes danger for locals.

Shale production should take place, as well as traditional ways of gas production and oil made a long way to formation more environmentally friendly, not breaking an ecosystem of the planet productions. Especially as we have negative pollution

experience from a traditional way of production of hydrocarbons. Creation of the principles, general for all planet, on production of shale gas is necessary. We need to develop the legislative measures regulating technologies of production and activity of the mining companies. It is eventually necessary to develop safe technology of extraction of resources from shale layers. Certainly, it needs huge capital investments and time, but one more large inaccurate intervention, comparable with underground nuclear explosions, the nature cannot sustain.

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## **Design, Technology, and Innovations**

*Session I:  
Introduction of  
Technological  
Innovations*

# Power Optimization

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## ABSTRACT

This paper presents comprehensive analysis related to operational amplifier (opamp) sharing methodologies, which are applied in delta-sigma ( $\Delta\Sigma$ ) analog-to-digital converter (ADC). To reduce the power consumption and chip die area, the opamp sharing could be utilized in  $\Delta\Sigma$  ADCs. Based on various topologies for the system, horizontal and vertical opamp sharing could be applied in the  $\Delta\Sigma$  ADCs. Obviously, tradeoffs exist in the various opamp sharing topologies. In this paper, more details and analysis would be presented for the tradeoffs and possibilities for utilizing this technology.

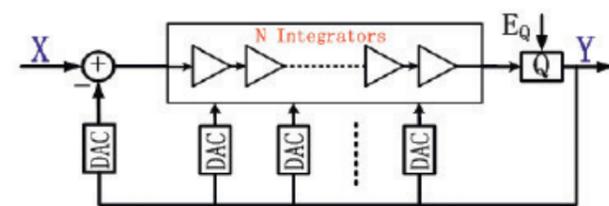
## 1. INTRODUCTION

Wireless communication systems typically require high-performance analog and RF circuit building blocks with low power operation, thus battery life could be extended well. According to our best knowledge, the ADC is the key building block in the communication systems. The types of the ADC could be classified in two main categories: Nyquist-rate and over sampling. Compared to Nyquist-rate ADCs, oversampling ADCs use digital post processing, making it possible to reconfigure the converter for various specifications, which could be a significant advantage in the mobile application. Oversampled delta-sigma ADCs also have the advantages of relaxed matching requirements on analog components, while still achieving medium to high resolution (Norsworthy, S.R 1996). Furthermore, oversampling ADCs do not need steep anti-alias filtering or even exempt it, which is typically required in Nyquist-rate ADCs, thus reducing the power consumption for the system. Conceptually,  $\Delta\Sigma$  ADCs could provide high resolution and better linearity, while using a low-resolution quantizer, by taking advantage of oversampling and noise shaping.

Fig.1 shows the general block diagram of an Nth-order single-loop delta-sigma modulator with multi-feedback branches and no feed-forward. The main feedback ensures the quantizer output tracks the input. And other feedbacks can be used to adjust the signal transfer function (STF) and control the stability. Always, quantizer resolution, oversampling

ratio (OSR), and loop filter order are three basic parameters to improve the delta-sigma modulators' performance (Jiang, R. 2004). However, increasing any of the above three parameters creates trade-offs with several other system design parameters, such as power dissipation, die area, speed and complexity. Utilizing a high resolution quantizer increases the power dissipation, due to the increased number of comparator units in the quantizer. And also as for the feedback DAC, the requirement for the matching would be increases, as well as the complexity of the implementation. As for the parameter OSR, it is desirable to increase it. However, as for the high signal bandwidth application, the higher OSR, the higher the required clock frequency, which could not be implemented, due to the limitation of the opamp. Boosting the modulator order would increase the total power consumption, due to the utilization of the more active blocks. Furthermore, the high order of the modulator would bring about the stability of the system. The alternative solution to these high-order architectures is the cascade of the low order modulators (also named MASH, multi-stage noise shaping).

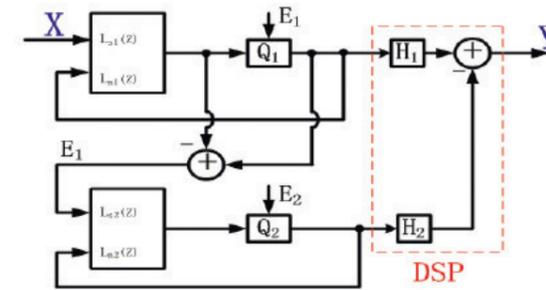
Figure 1. Conceptual Diagram of the Nth Order Single Loop Delta Sigma Modulator



The MASH does the same with a  $\Delta\Sigma$  modulator in the cells, further to the digital output; provide the quantization noise as the input to the following stage. The combination of the digital result makes it more complex to facilitate the cancellation of the quantization error contributions, due to the non-ideal effects of the real circuit. A block diagram of the two-stage MASH is shown in

Figure 2. The overall output of the two-stage MASH modulator is given by:  
 $V = H_1 * V_1 - H_2 * V_2 = STF_1 * STF_2 * U - NTF_1 * NTF_2 * E_2$ ,  
where  $H_1 = STF_2$  and  $H_2 = NTF_1$ .

Figure 2. Block Diagram of a Two-stage MASH Delta Sigma Modulator



## 2. OPAMP SHARING TECHNIQUES FOR DT DELTA SIGMA MODULATOR

In the discrete time (DT)  $\Delta\Sigma$  modulator, theoretically, the opamp always work in one phase, in the other phase, it is idle, which is quite power hungry. This property makes it possible to reuse the opamp all the time, thus reducing the power consumption a lot. That is to say, utilizing the opamp sharing techniques, the function of two original opamps could be replaced by one opamp, reducing the required number of the active blocks. However, in order to make the opamps could be shared, the separate working phases should be ensured. Actually, the Nth single loop modulator could be implemented in two categories:

- 1) The Chain of Integrators with Weighted Feed-forward Summation (CIFF);
- 2) The Cascade of Integrators with Distributed Feedback Branches (CIFB), as shown in the Fig.1.

Therefore, with reasonable choices of the feedback and feed-forward topologies, the opamp sharing technique could be utilized in the system, thus reducing the power consumption. However, tradeoffs would be brought about among the timing complexity, crosstalk effect and so on. Next the exhausted analysis would be presented about the various opamp sharing topologies, according to the specific architecture of the system.

### 2.1 Horizontal Sharing In Single Loop Modulators

Horizontal sharing techniques for opamps have been applied to single loop modulators, according to a lot of previous publications.

### 2.1.1 horizontal sharing between two active blocks

Originally and generally, horizontal sharing technique could be applied between two integrator blocks in a second order modulator. In this paper (Zierhofer 2006), the author paid the total attention to this classical and fundamental implementation with respect to opamp sharing technique. Effects due to the circuit imperfection are investigated. Mismatch between two feedback capacitors only results in gain and dc-offset errors. Using the standard SC technology, the crosstalk effect between the two integration capacitors could be kept small.

### 2.1.2 horizontal sharing among N (N>2) active blocks

In addition to the above work, one opamp could be shared to implement an Nth-order (N>2) modulator (Kanemoto 2011). Utilizing this technique, the required number of the opamps could be reduced from three to one, which reduces the corresponding analog power consumption and area. However, this technique makes the timing more complicated, which would increase the corresponding digital power consumption. As for the digital power, it could not be ignored especially in the high speed application. And in order to make the sharing possible, it leaves shorter time for the opamp to settle, depending on the order of the modulator. Consequently, the requirement for the single opamp would be increased a lot compared to the original one. Also, the more extra switches should be added to make the opamp-sharing technique possible among N (N>2) integrator stages. The resistors brought about by the extra switches would increase the requirement for the settling ability of the amplifier, which also increases the power consumption for the amplifier. Furthermore, the parasitic capacitance at the input of the amplifier (virtual-ground) would be increased. As a result, it makes the circuit more sensitive to the crosstalk effect. Therefore, to avoid the clock timing complexity and reduce the crosstalk effect, it is desirable to share one opamp between two active blocks.

### 2.2 Vertical Sharing In MASH Architecture

In addition to the classical horizontal sharing techniques, vertical sharing techniques could be applied in the MASH structure. In this paper (Ramin Zanbaghi 2012), the author proposed this special technique in the MASH 2-2 architecture, as shown in the fig.3.

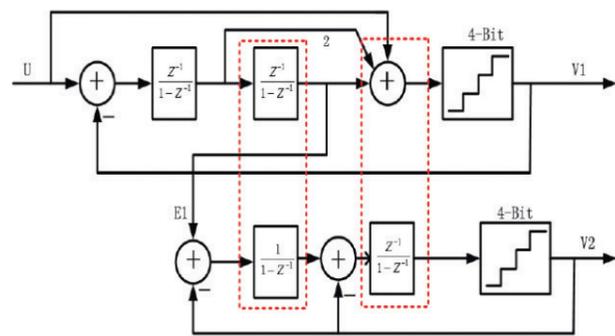


Figure 3. Block Diagram of the MASH 2-2 with Vertical Sharing

The first stage is based on the CIFF structure, while the second stage is based on the CIFB structure. To implement the original MASH 2-2 architecture, the number of the required active blocks is five. Four amplifiers are used for the integrators, while one amplifier is used for the active adder because of the CIFF structure. Using the proposed approach, the second integrator's amplifier is shared with the third integrator's amplifier in the second stage, and the adder's amplifier is shared with the fourth integrator's amplifier in the second stage. Through reusing the amplifier in this way, the power consumption could be kept small with ensuring the stability of the system. Furthermore, one opamp is shared between two active blocks in this vertical way, which ensures the simple clock generator and insensitivity of the crosstalk effect. However, in this paper, the author did not try to share the first integrator with the other one. Actually, without any noise shaping contribution, the first integrator is always the most power hungry. It should be shared with the other one, thus making the power consumption reduce more.

### 3. CONCLUSION

In this paper, comprehensive analysis is presented, with respect to the opamp sharing methodologies, which are applied in the  $DT\Delta\Sigma$  modulators. Different opamp sharing methodologies are utilized, according to the corresponding structure of the modulator. For every opamp sharing methodology, tradeoffs exist among the power consumption, the timing complexity, the sensitivity to the crosstalk effect and so on. According to the requirement for the application, proper opamp sharing method should be selected for a good balance in the tradeoffs.

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## Research on the Grassroots Innovation Mechanism in Chinese Rural Areas in the Internet Era With 'Taobao Village' as the Study Case

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### 1. BACKGROUND

#### 1.1 Rural Development Remains the Focus of China's Economic and Social Development Strategies

Since China is an agricultural big power, 'issues of agriculture, farmer and rural area' directly influence the national quality, economic development, happiness of the people, social stability and prosperity of the nation. It is the fundamental requirement of building a moderately prosperous society in all aspects that we should focus on the "issues of agriculture, farmer and rural area" and balance rural and urban development. In terms of development patterns, we should strive to improve the organizational degree of agricultural production and management, facilitate the family-run operation to adopt advanced technologies and production means and promote the transformation from unified management to joint and cooperative management by peasant households. The rural market is an essential part of China's socialist market economic system and it is an important aspect of the construction of a new socialist countryside and an overall harmonious society that we should invigorate the rural commodity circulation and build a prosperous rural market. As the core position in China's financial system, bank has deep impacts on Chinese financial consumers. In 2014, the total amount of financial assets in China's bank institution has reached 162 trillion Yuan, which accumulated more than 98% of the total amount of financial assets in China's financial institution. However, as the competition among the bank institutions becoming more intense, they are more inclined to make more short-term-profit than long-time client relations. All the banks prefer to make up high expense on service and even fabricate misleading propagandas to the customers. These activities seriously hurt the financial consumers' self-interest. In another aspect, as the Gini coefficient continuing rising, the poor will face the higher loan interest rate and the lower deposit interest rate. On the contrary, the rich will have the right to choose lower loan interest rate and the higher deposit interest rate. This situation helps China easily enter the poverty trap, and further more injure the relative poor financial consumers.

#### 1.2 The New Commercial Civilization Has Already Emerged – Transformation of Consumer Goods Circulation to Internet

E-businessmen, net goods and netiquette are the three elements that constitute the new commercial civilization. Among them, e-businessmen are the subject of the new commercial civilization; net goods are the object and netiquette is the relationship between the subjects. As of the end of June 2010, the scale of e-businessmen in China has reached 77 million. In 2010, the overall transaction scale of China's e-commerce reached up to RMB4.8 trillion Yuan, in which B2B e-commerce accounted for 88.3% while network retail transactions accounted for 11.7%. Currently, due to the presence of the digital divide between rural and urban China, the overall level of rural e-commerce applications is relatively low, which has accordingly restricted the development of rural e-commerce theories. The success stories of a number of rural online shops in Shaji Town and other places have provided a new perspective of research and valuable research materials for the series of issues of rural development and rural e-commerce theories yet to be resolved. The theoretical issues of rural e-commerce also require in-depth discussion, for example, industrialization model of agriculture, how to carry out rural urbanization, low prices of agricultural products, no distribution channel and ways to improve farmer employment and farmers' income. In addition, a series of theoretical issues of new commercial civilization also require in-depth research, including e-businessman, net goods and netiquette related problems and the issues of value-added foods, etc.

#### 1.3 Grassroots Mechanism Innovation – the Rise of County E-Commerce

Viewed from a global perspective, the dominant force of modernization is gradually shifting from industrialization to informatization. The industry no longer plays the dominant role, but is a basic industry as agriculture, and the strategic emerging industries represented by the information industry has become the new dominant industry, because modernization needs the leading and driving role of informatization. To adapt to the changes of the times, China has

proposed the modernization policy of ‘informatization stimulating industrialization’ and ‘integration of informatization with industrialization’. (Shi Wei, Ma Conghui & Wang Jianmei 2010 ). However, over the years, industrialization has always taken the dominant role in rural areas, making the rural areas lag behind the overall situation of the modernization. Under such circumstances, it is of great practical significance to explore new ways that can adapt to the times and keep up with the times and to seek new driving forces in particular.

In China, e-commerce has become the ‘connector’ between the Internet and the real economy and the e-commerce economies have emerged, attracting worldwide attention. The scale of China’s e-commerce economies reached RMB8.2 trillion Yuan in 2012 and will increase up to RMB50 trillion Yuan in 2020. (Liang Chunxiao 2013 ). Since 2011, the spreading speed of Internet among China’s rural permanent populations has surpassed that in the urban areas and China’s rural net citizens reached 165 million in June 2013 (Statistical reports on the Internet development in China 2013). Against such background, the county e-commerce with rural e-commerce as the main content is on the verge of rapid development. E-commerce has changed them from producers to operators and the new subjects in the rural area, namely farmer net-businessman and service providers, are emerging in large numbers. The new e-commerce environment is forming and the regional economic development model driven by e-commerce begins to emerge.

## 2. TAOBAO VILLAGES: NEW RURAL ECONOMIC DEVELOPMENT ROUTE

### 2.1 Introduction to Taobao Villages

**The wave of e-commerce is sweeping across the nation.** Since 1995, e-commerce has developed gradually in China and has gone through four stages of development, including: tool, channel, infrastructure and economy; it has become the important force influencing China’s economic growth and development pattern. Its influence has also been spread to rural China. The combination of the rural area which covers the most land and has the most population with e-commerce will have huge effects. (Wang Xiangdong 2013) ‘Taobao Village’ is a representative product of the combination of the two. The term ‘Taobao Village’ first appeared in the media report about Dongfeng Village in Shaji Town, Suining County, Xuzhou City, Jiangsu Province in 2009. There was previously no furniture industry in this small village. But in only a few years, an ecosystem with

thousands of e-businessmen as the core and supported by surrounding express enterprises, third partners, hardware accessories, supply of raw materials, packaging supplies and other service providers have been formed and it has greatly boosted development of rural economy. (YeJianmei 2012). There are other Taobao Villages of the same period of the rise of Dongfeng Village, including: Donggao Village in Qinghe County, Hebei Province and QingyanLiu Village in Yiwu City, Zhejiang Province. Since the rise of Dongfeng Village, Donggao Village and Qingyanliu Village, the domestic Taobao Villages has sprung up like mushrooms in recent years and there were 20 Taobao Villages found across the nation as of the end of 2013, involving a total number of 15,000 online shops. Taobao Villages are leaping from single points to planes and has become a new economic wave in the rural area which cannot be ignored.

It is believed by Alibaba Research Center that ‘Taobao Village’ refers to the phenomenon that a large number of e-businessmen gather in the countryside which utilizes Taobao as the main trading platform and form the e-commerce environment which has both scale effect and synergistic effect. There are three principles to determine whether it is a Taobao Village, including:

1. village: automatically formed by e-businessmen in the village;
2. scale: the number of e-businessmen accounts for over 10% of the number of local households and the scale of e-commerce transactions reaches over RMB10 million Yuan. The e-businessmen of the Taobao Village mostly trade the same category of products, thereby forming an Internet industry cluster. For instance, e-businessmen in Dongfeng Village mainly trade plank furniture; those in Zaomei Village mainly trade iron arts and Wantou Village mainly trades straw and wicker plaited household articles;
3. synergy: a relatively complete industrial chain is formed, which is featured with synergetic development. Due to the social attribute of the rural ‘acquaintance society’, there is significant ‘synergy’ among the e-businessmen in Taobao Villages despite competition. Synergy is mainly reflected in such aspects as internal circulation of products, experience sharing, etc. (Lu Man 2014).

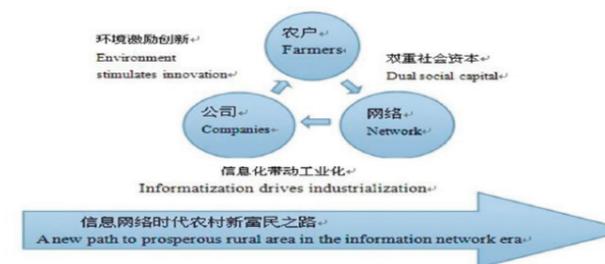
### 2.2 Shaji Model

#### 2.2.1 formation and performance of Shaji model

The Shaji Model is a typical case of the rural economy which stimulates industrialization with informatization and promotes informatization with

industrialization. Specifically, the core of the Shaji Model is ‘network + companies + farmers’, in which farmers are the subject, companies are the basis and the network serves as the leader. In the ‘Shaji Model’, farmers running their own household businesses are the main body which plays the leading role and entity companies are the basis of rural industrialization while the Internet represented by the e-commerce platform is the driving force stimulating rural industrialization. The Shaji Model is a specific embodiment of rural modernization which stimulates industrialization with informatization and informatization with industrialization.

Figure 1. Diagram of the Shaji Model



#### 2.2.2 start Oout with household as the basic unit

The development of e-businessmen of Shaji Town is based on family-run operation, which can significantly stimulate initiative of farmers. All the family members can work together and share both risks and profits, reflecting in the real sense ‘all the people pulling together in times of trouble’ (Wang Yanghua 2011). Besides, the rural family-run operation has the advantage of ‘flexible’, since e-businessmen can adjust their products and prices based on market demand at any time. The survey conducted shows that 74.58% of start-up capitals of online shops in Dongfeng Village came from household savings and the division of labor among the family members shows that the young people are usually responsible for online shop operation while the parents usually help with packaging and odd jobs. Viewed from operation premises, although large e-businessmen will rent spacious factories, the majority of them undertake production and management of furniture sold online at their homes.

#### 2.2.3 informatization drives industrialization

Internet sales have facilitated the birth and growth of the furniture industry of Shaji Town. There was originally neither furniture processing industry nor resource or geographical advantages such as capital,

timber and transportation in Shaji Town. It started with several farmers who set up their online shops to sell easy assembled furniture. Then more farmers began to copy their business. Thus, more online shops were opened and more furniture processing plants of large and small scales were set up, thereby leading to the birth of the furniture industry. The online-sales furniture industry brought about huge demand for raw materials, logistics and spare parts, etc. and the participation of other industries, and stimulated the development of the upstream and downstream industry chain. The Shaji Model demonstrates that as long as the intrinsic initiative of the farmers is motivated and their interests are linked to e-commerce, everyone can join the process of “integration of industrialization and informatization”. Even though farmers are not proficient in computers, they also stand a chance to benefit from the inclusive growth. The ‘Shaji Model’ has provided a very convincing evidence to correct the long-standing prejudices that e-commerce is not suitable for rural areas. (Ye Xiumin 2014).

#### 2.2.4 promote the construction of industry chain and the ecology

The ‘Shaji Model’, with farmer e-businessmen as the core, has stimulated the birth and improvement of the entire industrial eco-system with online shops. In the “Shaji Model”, farmers sell furniture through online shops, which has facilitated the production of furniture, the development of logistics, timber and other links of the industry chain as well as the optimization of the power supply, credit and loan and other system environment. There is clear self-positioning in all aspects of the local business ecosystem. The optimization of online sales environment in turn promotes the development of the online sales industry on a larger scale and a higher level. (Ye Qi 2012)

### 2.3 Suichang Model

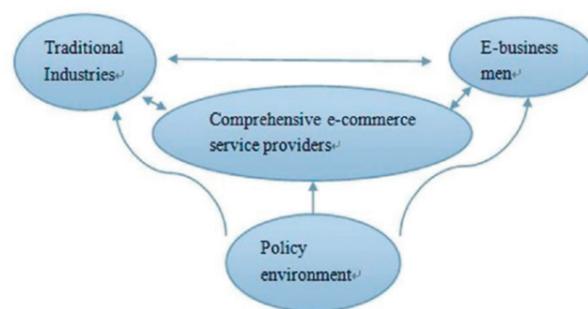
#### 2.3.1 formation and performance of Suichang model

County e-commerce is growing rapid. Meanwhile, the rapid rise of the e-commerce industry in Suichang has formed the positive cycle of ‘e-commerce development - the rise of e-commerce service industry - improvement in e-commerce ecosystem - upgrading of traditional industries – increase in residents network consumption’, thereby further promoting the county economic progress. The integrated e-commerce service providers jointly formed by NET UNION and Suiwang E-commerce Company as well as the loose superior e-commerce hardware and

software are key factors in development of Suichang's e-commerce. On this basis, the 'Suichang Model' of service-driven county e-commerce development is eventually formed. In March 2011, Suichang Suiwang E-commerce Company was established, which set up the MYSTOREMALL distribution platform soon afterwards. The platform will divide the quality agricultural products of each agricultural cooperative in the county into different packages and display them on the platform. Then these packages will be sold by the various e-businessmen of the county at their online shops while the platform will be responsible for the uniform distribution and logistics, thereby resolving all at once the three major problems facing the county's e-commerce of agricultural products, namely, products, sales and logistics. All these have facilitated the rapid development of the county's agricultural e-commerce. The distribution platform completed in 2011 the turnover of RMB10 million Yuan; in 2012 the number increased to RMB35 million Yuan, while in 2013 the distribution scale reached RMB80 million Yuan (Liu Hu, Jiang Guohai & Deng Xiao 2013).

The Suichang Model can be defined as a county economic development path in the information era which is driven by the local comprehensive e-commerce service providers, drives the development of the e-commerce environment and promotes the e-commercialization of local traditional industries, especially agriculture and agricultural products, on the basis of interaction between 'comprehensive e-commerce service providers + e-businessmen + traditional industries' and under the influence of the policy environment. Among them, the local comprehensive e-commerce service providers are the core of the Suichang Model; the e-businessmen are the basis and the traditional industries are the driving force while the policy environment is the catalytic agent of the Suichang Model. (Xu Zhiwei & Yang Jianyuan 2013).

Figure 2. Diagram of the Suichang Model



### 2.3.2 cluster development of e-businessmen and overall marketing of clusters

As of the end of June 2013, Suichang NET UNION had over 1473 members, of which 1268 were e-businessmen, 164 were suppliers, 41 were service providers (including logistics, express delivery, banks, operators, as well as photography, web design and other service providers); the rural permanent registered households accounted for 621 and there were 432 college students. A relatively complete e-commerce ecosystem is formed in Suichang, providing 5000 jobs for urban and rural young population. Taobao has actively carried out close collaboration with the provincial and municipal governments since 2010, jointly promoting the online retail market of local specialty by selecting high-quality specialty products and businesses. So far there have been nearly 20 local pavilions opened up across the nation. In Suichang Pavilion, consumers across the nation can get all Suichang specialty products. The launch of the Suichang Pavilion is the 'overall marketing' made by Suichang county. With Suichang NET UNION as the subject of operation and strong support from local county government, it has admitted many online sellers, net goods suppliers, agricultural cooperatives, travel agencies in the county and other production and marketing parties, thus greatly enhancing the popularity of this small county Suichang on the Internet (Li Xiaofeng 2014).

### 2.3.3 featured with agricultural product e-commerce, e-commercialization of traditional industries is speeding up

Compared with the rural e-commerce of Shaji Town of Jiangsu, Yiwuliu Village in Zhejiang Province and other places which trade furniture and petty commodities, the 'Suichang Model' is significantly different in that it trades mainly the agricultural products. Therefore, it's typical agricultural product e-commerce. Unlike agricultural product e-commerce of other counties which trade mainly one or two products (such as: Anxi tea and forest products of Qingchuan), the varieties of agricultural products of Suichang sold online are increasingly abundant since 2010. Snacks, nuts, tea, dry goods, fresh fruits and vegetables all take a considerable proportion. The agricultural product distribution platform established by Suichang NET UNION has accelerated the e-commercialization process of traditional agricultural product processing industry. In the first half of 2013, Suichang NET UNION had 164 suppliers. This distribution model has promoted

online sales of Suichang agricultural products (Wang Chongjin 2013).

### 2.3.4 the government actively provides software and hardware environment of e-commerce

The favorable loose hardware and software environment of e-commerce is an important guarantee for rapid development of e-commerce of Suichang. E-commerce facilities mainly include transportation, broadband, industrial parks, etc. The LONGLI Expressway put to use in 2006 laid the foundation for the rapid development of e-commerce. In terms of industrial parks, NET UNION has constructed a distribution center covering 3000 m2 with the supporting funds and policies of the Suichang government, to guarantee smooth operation of the Suichang Pavilion. In terms of food security, RMB3 million Yuan has been invested to construct the Suichang Agricultural Product Testing Center.

## 3. INFLUENCE OF E-COMMERCE ON THE COUNTY'S ECONOMY

### 3.1 E-Commerce Facilitates the County Economy

#### 3.1.1 taobao villages develop from stage 1.0 to stage 2.0

As an emerging economic pattern growing from bottom up, the grassroots characteristics of Taobao Villages are quite significant. These characteristics have facilitated the rapid growth of Taobao Villages at their early stage of development and will also inevitably face Taobao Villages with bottleneck problems in such aspects as homogeneous competition, talents, space and organization at certain stage of development. However, we have seen from some of the Taobao Villages with relatively high degree of development that they have entered Stage 2.0 of Taobao Villages from the grassroots 'Stage 1.0 of Taobao Villages'. Stage 2.0 has mainly the following features: intensive, branding, ecological and diffusive.

- Intensive

At Stage 1.0 of Taobao Villages, the operation forms of peasant e-businessmen are scattered, with most operators being peasant households or individual households and the mode of production taking the form of small workshops. At this stage, the exchange and communication between peasant e-businessmen rely mainly on social acquaintances in rural areas, which lack unified planning and coordination, and therefore anti-risk capacity and core competitiveness of the e-businessmen are both weak. At Stage 2.0 of

Taobao Villages, individual e-businessman began to develop into online enterprises and the production mode is shifting from small workshops to factories. At this stage, the associations, alliances and other organizations formed by local e-businessmen began to play a substantive role in coordination and organization, and e-businessmen formed clusters for further growth. Moreover, the development of Taobao Villages had relatively clear planning. For example, the seven shareholders of Dongfeng Village in Shaji Town, Jiangsu Province, including Han Sun, Han Sun, Yue Wang, established the first joint-stock company. These 7 e-businessmen divided their labor according to their respective advantages in production, marketing and other aspects and have grown stronger and bigger by joining hands. E-commerce associations have been established in Daji Town in Caoxian County, Shandong Province, Junpu Village in Jieyang City, Guangdong Province, Dadongba Town in Songyang County, Zhejiang Province and other places (Shen Kunhua 2014).

- Branding

At Stage 1.0 of Taobao Villages, the vast majority of the e-businessmen operated in the state without brand management and their products imitated each other and were low value added, for instance, the plank furniture of Dongfeng Village in Shaji Town, Jiangsu Province, the straw and wicker plaited household articles of Wantou Village in Boxing Town, Shandong Province, the bags and suitcases of Baigou in Hebei Province, etc. This situation is associated with the peasant e-businessmen's brand awareness and complies with the objective capacity of peasant e-businessmen at the early stage of development.

With the continuous improvement in the overall operation level and brand awareness of e-businessmen of Taobao Villages and the transition of a large number of mature e-businessmen from Taobao Marketplace shops to Taobao Mall shops, branding is gradually becoming an important feature of Stage 2.0 Taobao Villages. Currently, the best e-businessmen in each Taobao Village have basically registered their brands and trademarks and established certain brand recognition on the Internet, such as MUNUAN home furnishings of Wantou Village in Boxing County, Shandong Province, Xishan Wood of Xishan Village in Songyang County, Zhejiang Province, Meiyijia of Dongfeng Village in Shaji Town, Jiangsu Province, etc. It should be noted that e-commerce has also provided a channel with relatively low market entry barriers for farmer e-businessmen to build their own brands (Qi Zhiqiang 2012).

- Ecological

‘Ecological’ is also an important feature of Stage 2.0 of Taobao Villages. The appearance of logistics, express delivery, marketing and promotion, training, thirdpartnars and other service providers has not only improved the work efficiency and operation capability of the e-businessmen but also made the entire industry chain of Taobao more complete, thus enhancing collective competitiveness of e-businessmen of Taobao Villages. During upgrade and transformation of Taobao Villages, local express delivery enterprises appeared from scratch and increased to 37 as of the end of 2013. Average monthly income of local Deppon Delivery branches was about RMB1 million Yuan and income of an entire year can reach over RMB10 million Yuan. Their performance ranked the first among the many Deppon branches in East China.

- Diffusive

Despite rapid copy and expansion inside Taobao Villages, they have strong radiation effects to the outside. From the original 3 Taobao Villages to the 20 Taobao Villages at present, it only takes three or four years. It’s predicted by Alibaba Research Center that with the influence of e-commerce on counties of China gradually deepened, the number of Taobao Villages will grow rapidly in the following several years. The variety of products will also be more diverse, not limited to household supplies, costumes and petty commodities (Luo Jianfa 2013).

Once a single Taobao Village grows up, it will stimulate the e-business entrepreneurship in surrounding villages and counties and promote the expansion of the Taobao Village from ‘village’ into ‘town’, thereby forming the prototypes of industrial clusters. For example, the several villages surrounding Dongfeng Village in Shaji Town started selling plank furniture on Taobao under the influence of Dongfeng Village, which has stimulated the development of the entire Shaji Town into an e-commerce clustering zone. Even Gengche Town in Suqian City, Jiangsu Province has been influenced by e-businessmen of Shaji Town and given birth to a new ‘Taobao Village’ – Dazhong Village. Similar phenomena have emerged in such places as Qingyanliu Village in Yiwu City, Zhejiang Province, Wantou Village in Boxing County, Shandong Province, Daji Town in Caoxian County, Shandong Province, etc.

Expanding from the town level upward, Taobao Villages are likely to develop into ‘Taobao Counties’. Compared with villages, counties have natural advantages in such aspects as transportation, living conditions, talent recruitment, supporting services,

etc. Therefore, they have significant attraction for rural e-businessmen, but county e-commerce still requires more planning and support from the government. In Shuyang County in Jiangsu Province, Yiwu in Zhejiang Province, Qinghe County in Hebei Province, the trend that Taobao Villages are expanding to the county level is quite obvious and Taobao Villages are serving as the ‘incubators’ for e-businessmen. Mature e-businessmen are gathering in the urban area for further development, thereby stimulating the development of county e-commerce. For instance, on the basis of Qingyanliu Village, the number of local Taobao sellers in Yiwu, Zhejiang Province has reached 100,000 as of mid-2013 (Feng Jie & Chen Yue 2014).

### 3.1.2 e-commerce has changed rural strength

1) E-commerce has resolved the problem of obtaining effective information facing the county. The key of the problems that the agricultural products produced in the countryside are difficult to be sold and the farmers haven’t enough capital for mass production is whether farmers can obtain effective information about the market. Through sales channels of the e-businessmen, they can make promotion of their products from multiple aspects and they can easily get part of the production fund and abundant orders through alipay and other online payment methods.

2) E-commerce has effectively resolved the problems of rural ‘empty nest’ household and social security and realized inclusive growth. In quite a long period of time, the people staying behind in the countryside of China were mostly old people, women and children while most of the young adults are working in other places, resulting in abundant social problems, including neglected old people and children, long-term separation of couples, etc. But since people of Shaji Town can “make money by selling furniture on the Sunhan Internet without getting outside”, under the influence of this, many migrant workers come back home to start businesses of their own. With the entire family sticking together, business of their own and every household engaged in their proper businesses, they will not make trouble out of nothing and the local public security is improved. The number of criminal cases and civil disputes has both decreased significantly in recent years. The countryside has realized overall inclusive growth, which is of great social significance.

3) E-commerce has made rural people realize the power of knowledge and understand that ‘science and

technology are the primary productive forces’. The literate rural workers who that previously went outside for work at their best age now returned home to start their businesses and the knowledge-based economy starts taking root in their hometown. In contemporary Chinese society, the waves of industrialization and urbanization have attracted almost all the rural elites, which have resulted in the decline and downfall of many villages and the loss of village civilization. Therefore many far-sighted people are shouting ‘we should save the countryside’. Meanwhile, e-commerce has made farmers of Dongfeng Village realize the power of knowledge. The ‘Shaji Model’ is a new way explored by knowledgeable young people represented by Sun Han. The core of all these is knowledge, since science and technology are the primary productive forces.

4) E-commerce has expanded the single-product rural economic pattern and led it on the way to large-scale and diversified development. Cluster effect has shown its appearance and the division of labor and collaboration has taken shape. The express delivery benefits the most from online sales. There are at present 15 logistic & express delivery companies and 1 special network service provider to provide services about laws and network knowledge.

5) E-commerce has provided a new road for farmers to get rich. In 2009, net profit of online shops of Dongfeng Village was about RMB12 million Yuan, equivalent to about RMB2470 Yuan per capita income. Their salaries were as follows: carpenters: 150 ~ 200 Yuan/day; bull cooks: 50Yuan/day; customer service: 1000 ~ 1500 Yuan/day. Heshan Xia is a college student who returned home in 2009. He told the reporter that his business volume per year was over RMB1 million Yuan with a profit margin of 10% and he’s earning more than those white-collar workers working in ‘Beijing, Shanghai and Guangzhou’ (Wang Xiangdong & Wang Bufang 2011).

6) The grassroots e-commerce management pattern is one way to break the ‘big city malaise’ and realize innovative urbanization (Jia Huaqiang 2012). China is at the stage of faster urbanization. For a long time, the resource allocation model and the development strategy of “towns supplementing cities” under the guidance of administrative instructions have left the majority of the public investment in big cities and more and more people swarmed into the small number of big cities, resulting in the expansion of urban areas, increasing allocation of public resources, the formation of a vicious cycle and increasingly worse ‘big city malaise’. The e-businessmen of Shaji

Town include not only college students returning home but also village women with low literacy, both young people at the age of about 20 and old and handicapped people of about 50 to 60 years old. In the operation of online shops, young people are responsible for managing the online shops while the old and the handicapped are engaged in simple packaging and polishing work. The farmers take their respective position in the operation of online shops, winning abundant income, realizing their individual social value and significantly reducing the social issues caused by migrant labors.

### 3.2 Challenges Brought by E-Commerce to County Economy

At present, the ‘Taobao Village’-style online sales industry has begun to take shape. However, its sustainability and healthy development are faced with bottleneck problems. The most prominent problems include: the lack of leading enterprises, product homogenous competition, constant occurrence of shockingly low prices, product quality problems, brand and intellectual property rights, etc.

#### 1. The Lack of Leading Enterprises and Low Overall Production Level of Projects

The overall level of the “Taobao Village”-style online sales industry is low and there is the lack of leading enterprises. For example, despite the fact that there are a large number of rural households in Shaji Town engaged in online sales, these online shops are newly established and approximately 70% of the peasant households have no physical plants but only virtual online stores. Besides, the plants of the majority of the peasant households still haven’t broken away from the production form of family workshops and there is still much to do to become a modern standard plant. At present, there is no large scale enterprise in Shaji online sales industry which can play a guiding and leading role for other enterprises.

#### 2. Homogenous Vicious Competition

The most important reason for the rapid spread of Shaji Model is simple mutual imitation and quick replication. Many online shops have no design or product of their own and they just copy directly the photos posted by other online shops. Once an order is placed, they will get goods from other online shops. There are still other online shops which conduct marketing and promotion through constantly holding down their prices, with the aim to expand sales volume and win over credit lines, which has resulted in increasingly lower prices of the entire assembled furniture market. Since price fall has reduced profit

margins, some e-businessmen have no alternative but to select low-quality wood as their raw materials, leading to the overall decline in product quality and affecting brand reputation of Shaji.

3. Lack of Talents, Especially Top Versatile Talents  
Talents have become one of the important factors limiting the development of online sales industry. The survey of the e-businessmen of Dongfeng Village shows that talents are an important factor restricting the development of online shops. Currently, the major difficulties concerning talents include: lack of talents (74.50%), excessive staff mobility (74.50%), difficulty in employee training (29.80%) and low quality of employees (17.00%).

4. Potential Intellectual Property Issues and Lack of Self-owned Brand  
Although there have been some large e-businessmen starting to register companies, apply for trademarks and design original furniture, most e-businessmen are still at the stage of low-level imitation and there is the lack of independent brands. Because of the limited knowledge structure and growth experience, the majority of the e-businessmen of Shaji Town are furnished with neither the knowledge of intellectual property rights nor full awareness of intellectual property rights. In the operation process, there are to some extent such hidden hazards as infringement of trademarks and patents.

5. Lack of Regional Strategic Layout  
Through spontaneous rise and fission development, the 'Taobao Village'-style online sales industry has evolved to certain scale. However, there is still no overall development plans or ideas concerning the future development, including: the development strategy for the entire online sales industry of Shaji Town, rational regional layout, brand building and modern management ideas, etc. At present, the overall level of development of the 'Taobao Village'-style online sales industry is still relatively low and the regional division system has not yet been formed. There is still distance from the development goals of specialized production, integrated management, socialized services and enterprise-style management.

6. Supporting Service Environment Still Requires Further Improvement  
The survey also finds that e-businessmen have expressed their complaints about the telecommunications and electricity services. About telecommunications, there is difficult access to broadband, high broadband prices and poor stability; in terms of the electricity supply industry, application

for commercial power is difficult; for the financial industry, there are such problems as difficult loaning, low amount of loans, short cycle and complex process; the logistics industry has high logistics fees and poor services; the village and town authorities cannot satisfy the e-businessmen's demand for vast land to build factories; they also hope that the Taobao platform can formulate more clear trading rules and give peasant e-businessmen more training and preferential policies.

7. Restrictions of the Government's Traditional Concepts of Industrialization  
The government's concepts of industrialization also play a crucial role in the development of rural online sales industry. For example, the other important factor for the fast growth of Shaji online sales industry is the local government's proper support for the online sales industry. However, there are also some leaders and cadres who are indifferent to the rural online sales industry. Many cities in China have attracted investment to develop local economy and mainly operate major industrial projects and supporting industry projects. Besides, the capital also flows to large projects and policies are favorable for large projects. Even the performance evaluation of basic-level leaders is performed based on the investment attraction quantity and scale. The traditional ideas of industrialization are not conducive to the development of e-businessmen, the formation of cluster effect, or the appearance and growth of new things.

#### 4. FUTURE PATH OF COUNTY E-COMMERCE ECONOMY

County economy is an important part linking the national macro economy with the grassroots micro economy. It not only constitutes the cornerstone of the country's macroeconomic development and is also playing an increasingly important role in solving such regional problems as 'issues of agriculture, farmer and rural area', towns, industrial restructuring and social management. Meanwhile, the county economic development is also faced with many problems. For instance, the county industries are 'low, small and scattered'; a good industrial ecology has not yet been formed and the pressure concerning resources and the environment is high. To solve the problems of e-commerce generated in the county's economic development process, the 'Taobao Village'-style online sales industry must explore a new development path, so as to sail through the wind and waves of economic development. The paper has proposed the following specific suggestions:

#### 4.1 Innovation and Differentiation of Grassroots E-Commerce

The popularity of e-commerce has brought about free competition and increasingly slim profit margins. To solve this problem, one way is to reduce the cost per unit product through scale expansion. Another way is to take the differentiated and personalized road. But it is in dire need of originality which is precisely the scarcest element.

In the information era, the e-commerce economy has provided a new idea about the development of county economy. With the guidance and support of the policy environment, the new development model of service-driven county e-commerce, with integrated e-commerce service providers as the core, has gradually been formed, which has successfully promoted the rapid development of local agriculture and service industry, boosted the local domestic demand and endowed the development of county economy with new contents.

Concerning the relationship between e-businessmen, it is recommended to guide the cooperation of e-businessmen and support the establishment of business alliances led by e-businessmen, to give full play to their functions. Strengthen trade exchanges and self-discipline through business alliances; improve product quality through specifications and standards; guide the e-businessmen onto a personalized, branding and diversified road and resolve the bottleneck problem of vicious competition in the development of e-businessmen. The positively interactive industrial chain should be built for the e-businessmen ecosystem or e-businessmen service providers. The faster and richer the expansion of online sales production line grows, the better. To strengthen the tracking and research of the e-businessmen ecosystem and the industrial chain, the construction of supporting upstream and downstream industries should be carried out.

The qualified local e-businessmen are encouraged to stand out and form the leading enterprises and industry benchmarks, so as to stimulate development of other online shops and enhance the overall competitiveness of industrial clusters. The government should offer the necessary help and guidance for relatively large enterprise prototypes and support and encourage social capitals to be invested in operation of local online shops by means of shareholding, supporting projects, etc.

Enhance the overall brand image and form better external environment. On the basis of carefully building their brand images, they should win over more external support, strengthen study and communication across the nation with open mind and mentality and conduct all-round cooperation with national resources in terms of capital, technology, raw materials and production, etc.

#### 4.2 National Policy Support

Taobao Villages represent an advanced productive force and show the great creative spirits of Chinese peasants. This new economic model plays an important role in improving the income of farmers, development of county economy, promotion of entrepreneurship and employment in rural areas and promotion of urban-rural integration. It has both provided a new perspective for county informatization and explored an effective path to address the 'issues of agriculture, farmer and rural area'. In order to promote the popularization, growth and upgrade of Taobao Village model and accelerate the county e-commerce development, the paper proposes the following suggestions:

1. The central government should continue to give strategic priority to county e-commerce and make county e-commerce the core of county informatization;
2. The local government should improve the government's ability in providing public services for e-businessmen and focus on the resolution of prominent problems facing Taobao Villages in the development process, such as land issues, financial issues and personnel issues, so as to help peasant e-businessmen to enhance their competitiveness;
3. Encourage the bottom-up county e-commerce model represented by Taobao Villages and the promotion of advanced models; guide the farmers to take the intensive, branding and eco-oriented development path to avoid vicious competition;
4. Stick to the farmers' leading position in the development of Taobao Villages and county e-commerce, and the government should adopt the policies of making the best use of the circumstances and ruling with laws without intervention or aggressiveness and provide favorable services and support;
5. Continuously improve the transportation, logistics, telecommunications, electricity and other infrastructure in the county.

### 4.3 Improve the Grassroots E-Commerce Operation Quality

Motivate the new generation of farmers, especially young farmers; stimulate their entrepreneurial potentials and help them to play an exemplary role in constant reform and innovation; guide them to follow market demand and develop new industries and new products to solve bottleneck problems of large-scale homogenization and vicious competition in the development of e-businessmen; enhance the overall competitiveness of industrial clusters. Strengthen education and training of the extensive villagers and improve farmers' entrepreneurial skills. Improve the professional network knowledge of the villagers by opening up specialized training courses and inviting senior network technician. Meanwhile, training in market environment analysis, application of marketing skills and other aspects should be strengthened to help farmers seek advantages while avoiding disadvantages. Attention should be paid to spreading modern service concepts among the farmers, so as to build service awareness of farmers. Moreover, successful peasant entrepreneurs should be invited to share their experience and provide farmers starting businesses with successful experience and motivations.

### 4.4 Improve County E-Commerce Legal System

To improve the county e-commerce legal system, supervision of the county e-commerce activities should be strengthened. The development of e-commerce requires the establishment of a sound e-commerce legal system to strengthen market surveillance and improve the credit environment, so that e-commerce can develop in a healthy and orderly manner. Meanwhile, the supervisory mechanism of county online market should be improved to ensure regularization of online trading channels and to form a favorable online market environment.

The grassroots innovations of Taobao Villages have been activated by the Internet and a new industrial ecology has been created and cultivated. It represents a beneficial attempt of the surging county e-commerce at present and has shown the broad prospects of the combination of county economy with e-commerce. It has relatively prominent significance. In the past period of time, the e-commerce of China's agricultural products has achieved rapid development and both the varieties of trade items and the number of online agricultural product shops have experienced rapid growth. However, due to the special nature of the agricultural products and the environment of

the county, the emerging grassroots e-commerce is still faced with many difficulties and challenges. But we firmly believe that the infrastructure of the county e-commerce will continue to improve and more innovative models will continue to emerge. The Chinese grassroots regional e-commerce will continue to triumph and sail forward.

## 5. CONCLUSION

The grassroots innovations of Taobao Villages have been activated by the Internet and a new industrial ecology has been created and cultivated. It represents a beneficial attempt of the surging county e-commerce at present and has shown the broad prospects of the combination of county economy with e-commerce. It has relatively prominent significance. In the past period of time, the e-commerce of China's agricultural products has achieved rapid development and both the varieties of trade items and the number of online agricultural product shops have experienced rapid growth. However, due to the special nature of the agricultural products and the environment of the county, the emerging grassroots e-commerce is still faced with many difficulties and challenges. But we firmly believe that the infrastructure of the county e-commerce will continue to improve and more innovative models will continue to emerge. The Chinese grassroots regional e-commerce will continue to triumph and sail forward.

## 6. ACKNOWLEDGEMENT

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# Porous Revetment Structure: New Adaptation Strategies for Disaster Mitigation in Taiwan

Yi-Lin Tsai

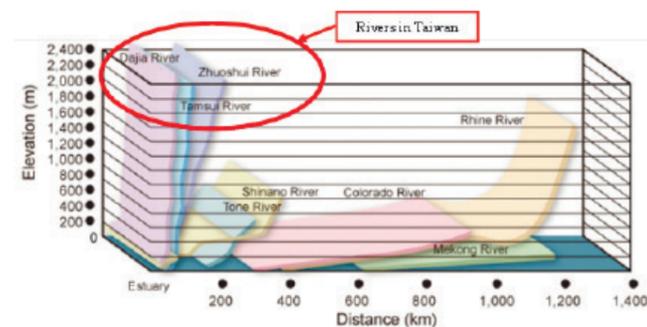
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## 1. INTRODUCTION

### 1.1 Environment in Taiwan

Taiwan, which was exclaimed 'Ilha Formosa' by ancient Europeans, is located in the east of Asia. The topography of Taiwan is very substantial, such as plains, mountains, hills, gorge, and so on. The shape of the main island of Taiwan is long and narrow, similar to a sweet potato. Especially, rivers in Taiwan are in an east-to west direction and compares very precipitous with most of the main rivers around the world because of the large elevation difference between mountains and plains, as shown in figure 1. That is, water in the river rushes all the way to the ocean immediately during rainfall events. Moreover, Taiwan is in the subtropical region; typhoons come frequently in the summer. The impact of global warming and the properties of environment in Taiwan cause the increasing uncertainty and frequency of extreme events, serious floods and droughts for example. Based on the complicated environment in Taiwan, new adaptation strategies for disaster mitigation should be mapped out carefully to guard lives, property, and the time-honored reputation – 'Ilha Formosa'.

Figure 1. Comparison of the Slope of Rivers around the World

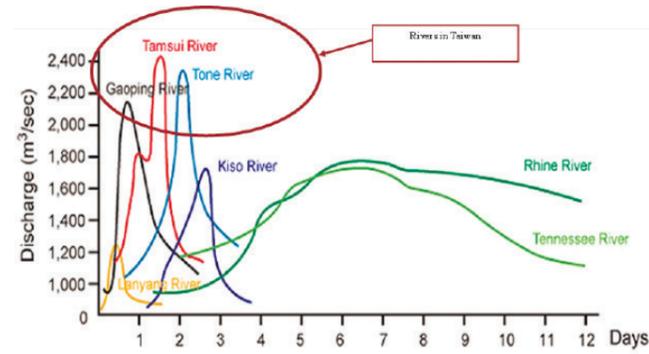


### 1.2 Importance of Revetment Structure in Taiwan

Revetment structure is crucial in Taiwan due to local geology, climate and intense density of population. Taiwan is in the region of circum-Pacific seismic belt; therefore, high frequency of earthquakes cause fragile and unstable geology. Young and fragile

geology of Taiwan tends to induce landslide or debris flow. Furthermore, uneven distribution of rainfall is a problem: in the wet season, the peak of the rainfall event happens sooner than other rivers worldwide, as shown in figure 2 (Water Resources Agency, Ministry of Economic Affairs 2011); in the dry season, the river course is too dry to retain a stable sand transport, resulting in the unbalance of erosion and siltation in the rivers. (Tsai & Yi-Lin 2013) Therefore, the water course changes drastically when landslide and flood happen at the same time. In the meanwhile, the density of Taiwanese population is ranked as one of the top in the world. Residents in the neighborhood of rivers are in the danger of floods once levees are not strong enough and collapse. As the above reasons, revetment structure plays an important role in protecting the riverbank and the coast in Taiwan.

Figure 2. Comparison of Hydrographs

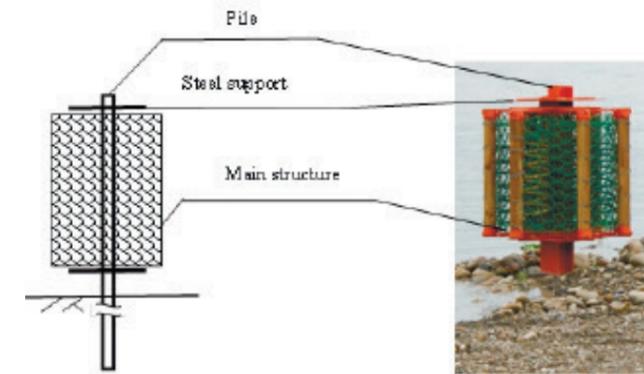


However, the most common revetment structure, such as groin, consolidation works, and roll gabion revetment, cannot prevent riverbanks from destroying of floods. Taiwan government has to rebuild the revetment very often since the changing and unstable properties of the rivers in Taiwan. Based on the cause, new strategies for disaster mitigation, new porous revetment structure for example, should be developed to response to the challenge of climate change and dynamic environment in Taiwan. Cheng-Kung Porous Basket (Chin-kun 2006), which is named after National Cheng Kung University by Prof. Huang, is the main adaptation strategy in this paper.

## 2. POROUS REVETMENT STRUCTURE – CHENG KUNG POROUS BASKET

### 2.1 Basic Components of Cheng Kung Porous Basket

Figure 3 shows that Cheng Kung Porous Basket is the porous revetment structure that composed of the following main components – the main structure of the porous basket, the pile for stabilizing the porous basket, and the steel support for anchoring the pile.



As the figure 3, the main structure of the porous basket contains ultraviolet resistant one-piece net made of polyethylene or polyvinyl chloride, stainless steel wire, Southern Yellow Pine, and Pinus Radiata. The pile for stabilizing the porous basket can be H-shaped steel pile, steel tube, and polycarbonate pile. The steel support for anchoring the pile can be iron plate or steel framework. (Chin-kun Huang 2011)

### 2.2 Properties

Cheng Kung Porous Basket whose abbreviation is CKPB is a porous revetment structure. Usually, a cluster of Cheng Kung Porous Baskets is constructed in front of the riverbank or the coast which tends to be destroyed by floods in a straightforward direction. Cheng Kung Porous Basket is mainly composed of permeable materials which allow the water penetrate the porous net to deposit silt in the rear of the porous structure. As the flow of water passes by a cluster of Cheng Kung Porous Baskets, the water will scour off the sand beneath the porous basket. Then, the sand is deposited after it is transported to the downstream, which is a region behind the porous basket with lower flow velocity. That is, the side near the center of the river appears a region of scour while the side near the riverbank forms a region of deposition, as shown in figure 4. By this natural way, Cheng Kung Porous Basket develops an apparent mechanism of the balance of scour and deposition to divert the course of the river and then shelter riverbanks or the coasts from scouring after floods (Chin-kun Huang 2011).

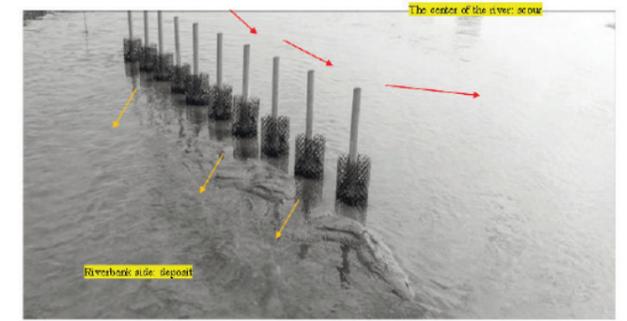


Figure 4. The Stream Way is Diverted to the Center of the River by CKPB.

### 2.2.1 the influence of Cheng Kung porous basket on flow field

When water flows through Cheng Kung Porous Baskets, the flow velocity is slowed down in sheltered area, which is just behind the CKPB, due to the effect of energy dissipation of ultraviolet resistant one-piece net made of polyethylene or polyvinyl chloride. On the sides of Cheng Kung Porous Basket, the effect of constriction causes the flow velocity increase in that the holes of the net of CKPB are narrower than the ones in the sheltered area if CKPB is viewed in a projection plane, which is perpendicular to the direction of water flow (Chin-kun Huang 2011).

Figure 5 and Figure 6 are extracted by 3-dimensional acoustic Doppler velocimeter (ADV). Figure 5, which is viewed on the top of Cheng Kung Porous Basket, signifies the distribution of the mean flow velocity changes with positions water flows through. Figure 6, which is a side view of Cheng Kung Porous Basket, indicates that the distribution of the main flow velocity changes with water depth.

Figure 5. The Mean Flow Velocity Distribution in the Top View of CKPB

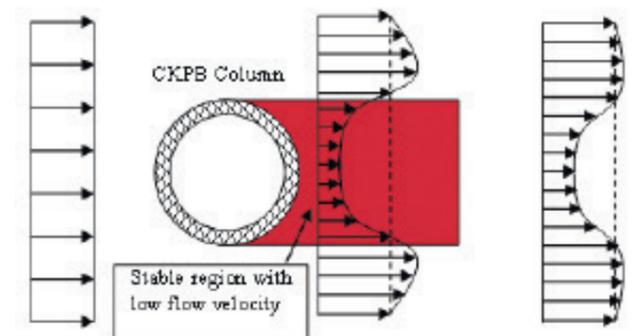
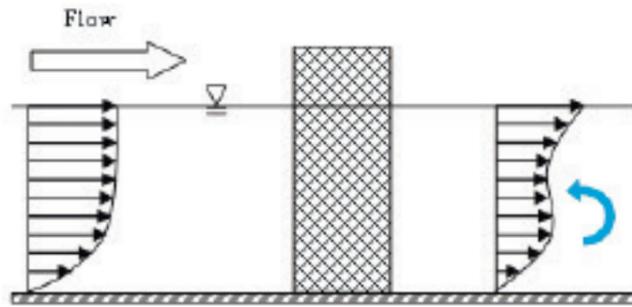


Figure 6. The Mean Flow Velocity Distribution in the Side View of CKPB



### 2.3 Occasions for Application

Turning to the occasions for application of Cheng Kung Porous Baskets, the following are some situations that Cheng Kung Porous Basket is a good fit for disaster mitigation in a long term. If the head of groins is destroyed due to floods, which may be harmful to levees, it is a proper opportunity of placing a cluster of Cheng Kung Porous Baskets in the upstream of decaying groins for fear that the neighborhood of riverbank is in the danger of floods. In this case, Cheng Kung Porous Baskets have a great capability of stabilizing the groins and even create a region of deposition near decaying groins, which means the life span of the revetment-related structures, groins for example, can be extended. In addition, dredging a river channel is another proper occasion for using Cheng Kung Porous Baskets. Once the clusters of Cheng Kung Porous Baskets are applied to stabilize the course of the river, the water is able to flow freely without influenced by changing sediment transport. Furthermore, Cheng Kung Porous Baskets can be combined with levees to reinforce the toe of the revetment structures and even side slopes of riverbanks. The above occasions are proved to show a good efficacy in several cases in Taiwan and will be discussed in 'CASE STUDY' (Chin-kun Huang 2011).

### 2.4 Condition

The conditions of applying Cheng Kung Porous Baskets are limited in the following aspects. For the purpose of this kind of revetment structure, Cheng Kung Porous Basket is mainly applied for preventing riverbanks from scouring by floods rather than debris flow. Moreover, only midstream and downstream are good fits for applying Cheng Kung Porous Basket. Since the upstream is too steep and the velocity of upstream is too high to allow the sediment to deposit in the rear of Cheng Kung Porous Basket, it can be a failure of using porous revetment in the upstream.

Based on different properties of riverbed and geology, different kinds of pile and porous basket should be taken into consideration. In terms of scales of discharge, bank-full discharge and annual maximum peak discharge are the two main standards of choosing porous baskets (Chin-kun Huang 2011).

In this way, Cheng Kung Porous Basket is able to divert the course of rivers in ordinary occasions with low and moderate velocity; the diverted stream course, which is away from riverbanks, can be an effective shelter for the residence near rivers. By the above mechanism, Cheng Kung Porous Basket is recognized as an effective adaptation strategy for disaster mitigation.

## 3. CASE STUDY

### 3.1 Application to Riverbank

Cheng Kung Porous Basket have been applied in many rivers and coasts successfully in Taiwan since 2006. Take Shia-tan levee in the Bazhang River for example, Cheng Kung Porous Basket adapted the riverbank of Shia-tan levee to several rainfall events (Chin-kun Huang 2010).

#### 3.1.1 the problem in the Bazhang River

The Bazhang River, whose source is Alishan, flows through Chiayi County and Tainan City for 80.9 kilometers. (Water Resources Agency, Ministry of Economic Affairs Profile 2011, p. 3) Figure 7 signifies that right bank was a convex bank and the left bank was a concave bank in the upstream of Shia-tan; however, the course of Bazhang River was shifting to the left bank, concave bank, in 2006. In terms of this situation, the water flows directly to Shia-tan, the sharp bend of the downstream of the Bazhang River. That is, the Shia-tan levee was scoured seriously and the neighborhood was under danger of floods.

#### 3.1.2 the effects of Cheng Kung porous baskets

In order to divert the Bazhang River, three rows of Cheng Kung Porous Baskets were placed in the highland of the convex bank in the upstream, as Figure 8. From 2006 to 2007, floods happened several times in this area and Cheng Kung Porous Baskets caused a deposition in the sharp bend of the downstream of the Bazhang River. Figure 9 shows that the deposition formed in the sharp bend after floods of plum rain in 2007. Figure 10 and figure 11 indicate that the deposition area was wider after typhoon Wipha and typhoon Krosa hit Taiwan. Even plantation appeared

on the deposition in 2008, as figure 12. From figure 13 to figure 15, the deposition extended to the center of the Bazhang River gradually. Figure 16 shows that the deposition was stable enough and the main stream way have been diverted to the left bank by Cheng Kung Porous Baskets successfully. That is, the neighborhood of Shia-tan has been under sound protection since 2008.

## 4. FUTURE RELATED RESEARCH

### 4.1 The Project of Disaster Mitigation in the Touqian River

The project of disaster mitigation in the Touqian River is started in the course of River Engineering Design by Yi-Lin Tsai, a senior in the department of



Figure 7. Construction Site



Figure 8. CKPB in the Convex Bank



Figure 9. Topography after Floods of Plum Rain



Figure 10. Topography after Typhoon Wipha



Figure 11. Topography after Typhoon Krosa



Figure 12. Plants Grew on the Deposition



Figure 13. Topography after Typhoon Kalmaegi



Figure 14. Topography after Typhoon Fung-Wong



Figure 15. Topography after Typhoon Sinlaku



Figure 16. Topography after Typhoon Jangmi

Hydraulic and Ocean Engineering at National Cheng Kung University. The main project region, in the bend of the Touqian River, is the neighborhood of Hsinchu Station of Taiwan High Speed Rail, which is in the red square of figure 17. The pink lines along Touqian River refer to the current levees.



Figure 17. The Project Region – Hsinchu Station of Taiwan High Speed Rail

#### 4.2 The Problem in this Case

Since the establishment of Taiwan High Speed Rail in Hsinchu County, the density of population has been becoming higher than before. There are many schools, government buildings, and residence area in the neighborhood of Hsinchu Station of Taiwan High Speed Rail. As shown the area in the red circle in figure 18, this region was under good protection by roll gabion revetment previously; however, it is proved that this kind of revetment would be destroyed by floods after several years. In other words, roll gabion revetment is not a sustainable method to protect the levee and the neighborhood.

In this region, the main stream way has been shifting to the right bank, causing the piers of Taiwan High Speed Rail and Taiwan Railways under the danger of scouring. Once the piers are destroyed, the transportation, economy, and tourism will be influenced. Moreover, the consolidation works in the downstream of the piers has sunk into the course of the main stream way for 85 meters in length while

the roll gabion revetment in the upstream of the piers has been destroyed for 580 meters in length, as shown in figure 18 and figure 19. The Second River Management Office has decided to rebuild the roll gabion revetment in this region. Undoubtedly, this area will be in the same trouble of decaying revetment in several years. As the above reasons, Yi-Lin Tsai suggests using Cheng Kung Porous Basket as an adaptive strategy for the disaster mitigation in Touqian River.



Figure 18. This Region is Under Danger of Flooding Disaster



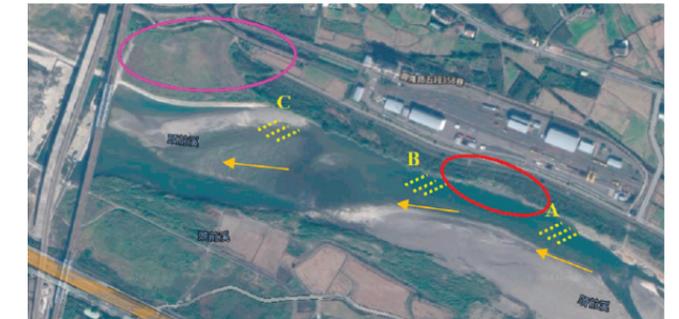
Figure 19. The Roll Gabion Revetment Has Been Destroyed for 580 Meters in Length. (Extracted by Google Earth)

#### 4.3 The Expected Effect of Adaptive Revetment

In this project, three areas of Cheng Kung Porous Baskets are considered to be placed in the right bank of Touqian River and three rows will be constructed for each area respectively. The expected effects of placing Cheng Kung Porous Baskets are related to the following three aspects. For area A, it is expected to divert the direction of water flow and cause part of the deposition among the roll gabion revetment, the region in the red circle. The function of area B is to stabilize the river channel for fear that the changing river channel results in the failure of the project construction. As for area C, it is important to protect the highland, in the rear of area C, because based on the current trends of the stream way of the Touqian River, it is possible for floods to rush all the way to the neighborhood of Taiwan High Speed Rail and Taiwan

Railways, which is indicated in the pink circle. The yellow rows of dots are referred to the Cheng Kung Porous Baskets and the orange arrows signifies the expected flow direction due to the existence of three rows of Cheng Kung Porous Baskets, as shown in figure 20.

Figure 20. The Configuration of CKPB in the Project



#### 5. CONCLUSION

Because of the steep rivers and the increasing frequencies of extreme floods, new adaptation strategies for disaster mitigation should be taken into consideration. In this research, Cheng Kung Porous Basket is a recognized porous revetment by taking advantage of the natural properties of water flow. The main reason that Cheng Kung Porous Basket can be regarded as an adaptive methods of disaster mitigation is that Cheng Kung Porous Basket allow the water flows through the porous net and form deposition between Cheng Kung Porous Baskets and the levees. In a long run Cheng Kung Porous Basket creates a sustainable balance among the sediment transport, revetment protection, and the safety of the neighborhood. Instead of obstructing the water flow and change its direction to another way directly as concrete structure does, Cheng Kung Porous Basket conforms to the nature of water and stays in the harmony in the water environment and then create stable highland for sustainable development of ecosystems. In the future, it is an integrated strategy that should be mapped out, including urban planning, politics, social sciences, and hydraulic and ocean engineering. It is believed that Cheng Kung Porous Basket can be a sound adaptation strategy for disaster mitigation not only in Taiwan but around the world.

#### ACKNOWLEDGEMENTS

Gratitude is expressed for instruction to Chin-Kun Huang, an associate professor at National Cheng Kung University, Taiwan.

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## Education and Youth

### *Session I: Globalizing Education*

# The Analysis of Comparison on the Curriculum Provision and Teaching of Public Elective Courses in China and Japan

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## 1. INTRODUCTION

Public elective courses are a common type of courses in the universities. By comparing course content and teaching method between China and Japan, advice can be given for the future development of Chinese elective course system. Through the analysis of public elective courses in Japanese colleges and universities, Chinese universities should establish integrated course selection system and retrieval platform, enrich curriculum, give priority to the application of electronization and intellectualization, and cultivate students' ability of independent learning.

## 2. THE DEVELOPMENT OF PUBLIC ELECTIVE COURSES

Unlike compulsory courses, public elective courses are optional. During May Fourth Movement, the system of public elective course was imported. Peking University is one of the first universities to launch and implement the system of public elective course. In 1918, the system of public elective course was officially implemented. Today, most Chinese universities have adopt credit system. An increasing number of universities adopt the system of students independent choosing courses and give students the right to arrange their study and life. Public elective course is regarded as an effective way to carry out liberal education and quality education for its wide coverage of Literature, Aesthetics, Experimental Science, and Social Science. Acquiring enough credits of such subjects is one of the necessary conditions of obtaining diploma.

All colleges and universities in Japan have strict requirements on the public elective courses called Subjects of Liberal Education. Gradually, their own elective course mode are formed.

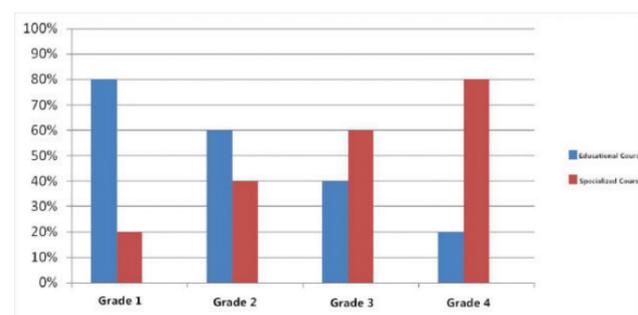
## 3. COMPARISON BETWEEN THE CURRICULUM PROVISION OF PUBLIC ELECTIVE COURSES IN CHINA AND JAPAN

### 3.1 Curriculum Provision of Public Elective Courses in Japanese Universities

#### 3.1.1 elective courses offering and characteristics of Kyoto University

The courses of Kyoto University can be divided into 'Educational Courses' and 'Specialized Courses' according to their educational aims and contents. And the former one can be explained more specific as 'Common Course' which can be described as public elective courses in China. And then, it also can be further divided into A group ( subjects of Humanities and Social Science), B group (Natural Science Subjects), C group( Foreign Language Subjects), D group ( Health and Physical Education Subjects) and EX group ( University International Agreement Kyoto Unit Exchange Subjects). And the university set up different courses to adapt students' academic levels and to involve a wide range of academic areas. Even though students have the right to choose which course they will attend, they only can graduate when they have obtained enough number of credits required by the university. During the four years in the university, the numbers of these two types of courses will change consistently as shown in Figure 1.

Figure 1. Elective Courses Offering and Characteristics of Kyoto University<sup>1</sup>



The four classifications of public elective courses of Kyoto University includes different subordinate classification. The specific classification and distinguished teaching method are shown in the Table 1.

<sup>1</sup> Promotion Center of High Learning Research and Development of Kyoto University: <http://www.highedu.kyoto-u.ac.jp/>.

Table 1. Elective Course Provision of Kyoto University

Subordinate Classification	Philosophy / Thought, history/ civilization, Art / Language and Culture, Action Science, Regional Culture, Social Science
Distinguished Teaching Methods	Classroom Teaching / Small-Class Basic Seminar Matched with Classroom Teaching (Speaking and Reading and Practical Exercises)
The number of courses is more 300, covering many fields. This kind of courses enables students to maintain their interests in the various aspects of human society and guide them to care about the world.	
Subordinate Classification	Mathematics / Physics / Chemistry / Biology / Earth Science / Information Science and Interdisciplinary Applied Teaching / Experimentation / Practical Exercises.
Distinguished Teaching Methods	Classroom Teaching /Experimentation / Practical Exercises.
Core curriculum of Science and advanced courses are included in the these subjects and courses for the students of Liberal Arts are also provided.	
Subordinate Classification	English / German / French / Russian / Chinese / Italian / Spanish / Japanese / Korean / Arabic / Japanese ( International Students)
Distinguished Teaching Methods	Actively import and utilize the "self-disciplined CALL" <sup>2</sup>
The goal of foreign language education is to develop academic knowledge, cultivate practical language ability, actively promote the formation of different cultural understanding and the improvement of language skills.	
Subordinate Classification	Sports practice / health-related classroom teaching
Distinguished Teaching Methods	Play football / tennis / volleyball / table tennis / badminton /basketball in sports practice sports. Learn scientific knowledge related to body and neural science in classroom teaching.
Pay close attention on the development of students physically and mentally.	

<sup>2</sup>self-disciplined CALL<sup>2</sup>  
Elective Course Provision of Osaka University<sup>3</sup>

#### 3.1.2 curriculum provision of public elective courses in Osaka University

Elective courses offered by Osaka University can also be classified into four parts, namely Parenting Education Subject, Language and Intelligence Education Subject, Basic Seminar and Health-Sports Education Subject. Three characteristics of public elective courses are summarized in Osaka University : firstly, all students are required to attend public elective courses for one and a half years after enrollment; secondly, teachers of elective courses come from various fields of the university; lastly, course contents boasts a wide coverage.

## 3.2 Curriculum Provision of Public Elective Courses in Chinese Universities

### 3.2.1 curriculum provision of public elective courses in Peking University

<sup>2</sup>CALL is the abbreviation of Computer-Assisted Language Learning , refers to the way to learn foreign language through one's personal computers.

<sup>3</sup> The Institution for Promoting All-around Education in Osaka University: <http://www.celas.osaka-u.ac.jp/>.

Public elective courses in Peking University are divided into six general areas, namely, Mathematics and Natural science; Social Science; Philosophy and Psychology; History; Linguistics, Literature, Art and Aesthetic Education; Social Sustainable Development, a total of 306 courses<sup>4</sup>.

At the beginning of each semester, students select courses with the guidance of course-selecting system and the selecting guide. The school releases the DOC version of course menu through the network including the basic information of courses (course title, teachers, classroom information, time etc.). Other information need to query the course details.

### 3.2.2 curriculum provision of public elective courses in Nankai University

According to Interim Measures of Public Elective Courses Teaching Management of Nankai University, the school offers the following four elective courses based on the principle, the purpose of providing public elective courses and the characteristics of current subjects: Natural Science and Technology; Humanities; Social Sciences; Art and Sports and

<sup>4</sup> The Catalogue of Elective Courses in Peking Universities, 2011.

Table 2. Elective Course Provision of Osaka University

Parenting Education Subject	There are subjects for learning Humanities and Science to broaden international comprehensive vision, developing basic academic ability and required ability for adapting to the society and cultivating research ability.		
	Basic Education Subject	Providing basic knowledge of such professional fields as Art and Science and the significance of research though learning entry-level knowledge and basic cultivation, changing their thinking modes and holding comprehensive lectures.	
	Modern Education Subject	Providing scientific thinking for complex and changeable modern society through many perspectives by using knowledge in many professional fields, in the view of such poignant questions as human rights, exchange, juvenile delinquency, safety and environment protection.	
	International Education Subject	Providing subjects that can catch up the time, including Language and Culture (the formation of language and its history), Japan' Theory (modern history, contemporary history and Japan' international status).	
	Most advanced Education Subject	Distinguished off campus scholars provide concise and comprehensive introduction of the most cutting-edge research in various fields in Osaka University so as to enable students to truly appreciate the charm of study.	
Language and Intelligence Education Subject	Osaka University also establish curriculum to keep pace with internationalization and cultivate information communication ability including practice-oriented foreign language education curriculum and information processing courses for learning rudiments of computer.		
	Language Education Courses	First Foreign Language	English (cultivating students' comprehension ability by do more reading and fast reading and raising English writing ability)
		Second Foreign Language	German, Spanish, Russian, Italian, Spanish, Korean, Chinese
		Optional Foreign Language	English, Greek, Latin and so on
		Special Foreign Language	Swahili, Mongolian, Burmese, Turkish
	Information processing courses	The Basics of Information Effective Use; The Structure of Computer, Introduction to Information Science, Information Society and Ethics, Introduction to Computer Simulation, Introduction to Information Search.	
Basic Seminar	Teachers are fixed who provide several students a theme for discussion. Students are required to present and discuss their independent investigation so as to develop the basic attitude of study, arouse the desire to learn and creativity.		
	Clinical philosophy conference, human geography seminar, thinking and action modern children, the world of nano science, instrument making - introduction to music science, thinking on delivery, life and drug, the universe exploration , l functions of material, aircraft and rocketry, street, the wonderful world of quantum mechanics.		
Health-Sports Education Subject	Offering courses for cultivating independent health management ability sports practice ability, and the spirit for further ascertaining health science.		
	Sports Practice A, Sports Science A, Health Sciences, Sports Practice B.		

Practice (339 subjects in total). Its classification catalog will be published before students pick out classes in each semester<sup>5</sup>.

In terms of taking public elective courses, the school proscribes that students shall obtain enough elective credits before graduation. Generally, students are supposed to take a course in each category. The choice of minor double degree can exempt students from elective courses.<sup>6</sup> At this point, it is basically similar when we compare it with the universities in Japan, that both of them specify compulsory credits got in certain kind of public elective courses.

As for selection, the school releases the PDF version of the course handout to help students to select courses via the internet, and the handout normally contains the details such as course title, teachers, classroom information, time, information for textbooks, course content and so on.

### 3.3 On the Similarities and Differences of University Elective Curriculum in China and Japan

#### 3.3.1 similarities

Both of them tries to specify the curriculum, covering humanities, natural science, social science and other aspects with corresponding provisions for students' courses practice. Which not only can expand students' knowledge scope, but also can give full consideration to the interests and wishes of the students.

#### 3.3.2 differences

Elective platform in Chinese universities is relatively too simple, presented mostly in the form of text while that of Japanese universities are more intelligent.

Japanese universities generally set up Syllabus, a kind of elective course system, based on the network. Syllabus, an education concept, provides students with the teaching goal, course content, the teaching method, and process. Moreover, students can get reference books of each course and study advice through it. Syllabus is widely used in colleges and universities around the world. The platform is characterized by: (1) Students can retrieval course by keyword and set retrieval conditions. (2) Students can search courses in different categories which is

<sup>5</sup> *Interim Measures of Public Elective Courses Teaching Management of Nankai University, 2010.*

<sup>6</sup> *Interim Measures of Public Elective Courses Teaching Management of Nankai University, 2010.*

more convenient for students to compare curriculum. (3) More details about courses are shown. Therefore, Syllabus are more convenient than PDF and DOC version of elective system in China.

## 4. COMPARISON BETWEEN THE TEACHING OF PUBLIC ELECTIVE COURSES IN CHINA AND JAPAN

### 4.1 Teaching of Public Elective Courses in Japan

#### 4.1.1 accomplishment evaluation

Japan universities formulate strict score evaluation standard and academic year compliance standards. Students' final grades are determined by comprehensive evaluation including attendance, the quality of small papers and the main thesis, the participation in class discussions and the mid-term grades and final grades. Generally, attendance rate accounts for 30%-40% of classroom performance and the final grades, investigation, the paper for 60%-70%. All Japanese universities lay out different common curriculum evaluation standard and mode according to its own features and characteristics.

#### 4.1.2 the reform of elective courses

In recent years, Japan has been paying an increasingly emphasis on establishment and education of common courses and carrying out a series of reforms and trials. For example, each university can choose the mode of teaching by taking such modes as research, instructing and experiment. The core curriculum mode are diversified with imitating American courses and their own innovative ones. Based on differences on the nature of the Arts and Science, the school offers diversified subjects of common education and platform. In the way of teaching, small-class-teaching is adopted and courses are held with research model. At the same time, they share good teaching resources by using the network.

#### 4.1.3 existing problems

There are some problems in the development of liberal education courses in Japan<sup>7</sup>, such as content and form education, such as courses content formalized. Naming system is very common in Japan due to unfavorable learning attitude, light lesson

burden and learning just to pass. Big-class-teaching has been questioned in the teaching effect.

<sup>7</sup> *Xin Li, The Reform of Japan University Undergraduate Education since 1990, Doctoral Dissertation. Nanjing Normal University, 2009.*

## 4.2 Teaching of Public Elective Courses in Japan

### 4.2.1 the goal of teaching

Public elective course content are diversified in Chinese universities, and combine perfectly with general education advocated in international education. The public elective courses provide conditions for the comprehensive development of students for covering human heritage classics, containing philosophical wisdom, embodying humanistic care and highlighting the aesthetic essence.

### 4.2.2 accomplishment evaluation

There are different elective courses evaluation standards in each school, generally consisting of attendance rate, homework results and final results etc. At the same time, teachers adopt a flexible assessment methods, such as paper, report, group presentation etc, according to the subjects.

### 4.2.3 existing problems

Due to different professional backgrounds between teachers and students, students of liberal arts may have difficulties in understanding and absorbing knowledge in science and technology courses,. In addition, problems are existing in such aspects as attendance rate, students' learning interests and participation in class.

## 4.3 On the Similarities and Differences of University Elective Curriculum in China and Japan

### 4.3.1 similarities

Elective courses are provided mostly to students' interest and its form becomes more and more exchange-oriented. There are similarities among favorite electives. One is to pay attention to the interaction between teachers and students; two is to put emphasis on the exchange; three is integrating the

current hot spots into teaching by drawing help from today's epidemic factors.

### 4.3.2 differences

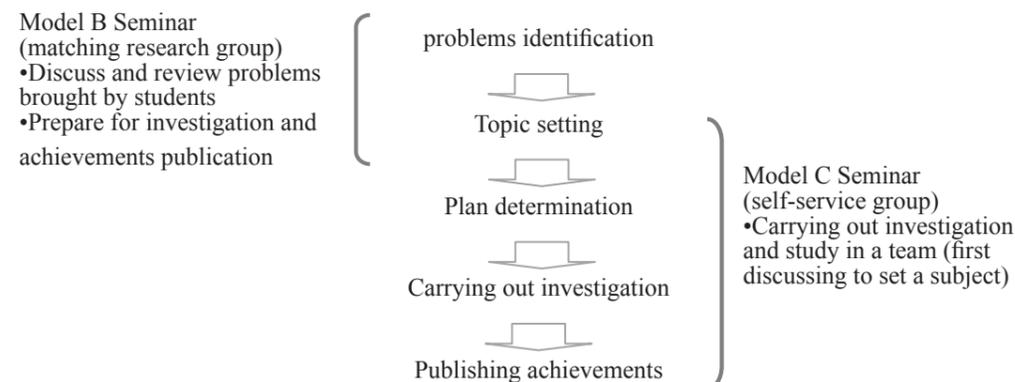
'Large class' teaching are preferred in public elective course teaching in Chinese universities and the capacity of some courses can reach 100. Generally, lectures are given on scientific research and survey method, and small class teaching of this kind is less. While Japanese universities attach great importance to cultivate students' research ability, therefore specialized courses are provided, which pay attention to the cultivation of students ability to identify, solve problems. Small-classes-teaching and group discussion are more common and more effective in their teaching effect.

For example, Osaka University provides students with several-student-class and carry out dialogue-oriented courses – basic seminars to stimulate students' learning desire and creativity. The teacher set themes close to modern society and launch small class teaching.

The school also provides dialogue education expanded form – discovery seminar, which is known as inspiring students potential . University education is to enable the students to identify problems, solve problems and acquire fresh knowledge, so Osaka University set up 'discovery seminar', and further subdivided into basic courses for finding our problems and advanced courses problems and thinking of for thinking the solutions to problems.

Some universities in Japan made Intellectualization in some of their common curriculum come true. Like Kyoto University adopt CALL, a distinguished teaching method. Some Japanese universities provide courses for traditional language teaching, at the same time utilizing CALL to support language teaching to alleviate the adverse effects of large-class teaching.

Figure 2. The Formation of the New Type Basic Seminar in Osaka University



Students can learn at their own speed and class time is flexible. Follow- along-with-learn can avoid conflicts between course times.

## 5. INSPIRATIONS FROM ELECTIVE COURSES SETTING AND TEACHING EXPERIENCE IN JAPANESE UNIVERSITIES

### 5.1 The Establishment of a More Complete Elective System and Retrieval Platform

The establishment of a course database like SYLLABUS in Chinese universities can better integrate curriculum, provide more description of course content and coordinate one-week trial of public elective course after the beginning of the new semester. At the same time the database can avoid causing misunderstanding because of course title, so as to avert that the original intention is contrary to the result.

### 5.2 Further Enrich Curriculum

Besides the general educational significance, elective courses have a very strong capability of information dissemination and the inspiration of creativity. This requires the university to ceaselessly update public elective courses and build A double bridge to the knowledge and practice for students. For example, Osaka University sets up such courses as Starting a Dialogue with the Kansai Economic Circle Leaders, invites well-known industry leaders and masters to teach, communicates with students by asking and answering questions which enable students to understand the latest industry trends and social trends.

### 5.3 Paying Attention to the Application of Electronization and Intellectualization

The implementation of CALL used by the Kyoto University is a great innovation of teaching mode and opens the door of educational intellectualization, which prompt exploration in future education mode to make full use of technical means, improve the efficiency of teaching and introduce teaching methods of high flexibility.

### 5.4 Focusing on Cultivation of Students' Independent Study Ability

Elective course aims to cultivate students with all-round development who should be equipped with highly independent research ability. Therefore, importance should be attached to the cultivation

of research ability in the elective course teaching. Course setting and teaching methods of Japanese universities focus on helping students solve problems by themselves through group discussion, proposing research topics within the group, division of labor of solving problems independently. Through the practice, students' scientific research ability is obviously improved.

## 6. CONCLUSION

At present, although there are many problems in China's colleges' elective course system, the exploration and reform are going on. More and more colleges and universities begin to realize the great role elective courses are playing in quality education of students. And more and more teachers and students are tended to participate in the formation of curriculum and system. We believe, through continuous exploration and study, Chinese universities will certainly train a number of high-quality talents with independent thinking ability, innovative consciousness and innovative ability who are well versed in different knowledge.

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## “Presence” Is Just the Beginning: Achieving Quality Education for All

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### ABSTRACT

Our achievement of ‘Education for All’ (EFA) (UNESCO 2014a) is assured through commitment to the goals of ‘presence’ measured through student ‘access’, ‘participation’ and ‘retention’ in formal educational environments, such as schools or universities. There is, however, a risk that we may overlook the need to understand the impact of ‘quality’ on students’ learning if we focus too much attention on simple measures of ‘presence’. Using illustrations from Nepal and Australia (a low income and a high income economy (World Bank 2015), we argue that the ‘Education for All’ agenda can only be meaningfully achieved through the provision of high quality educational opportunities to students regardless of social or geographical location. We argue that whilst the EFA movement is driven by a ‘development agenda’ and thus speaks loudly to low and middle income economies, the lessons to be learned from the project in relation to ‘quality’ are relevant across all educational systems.

### 1. YOUTH AND EDUCATION

Higher Education was once the exclusive domain of the elite, but in many countries, including Australia, study beyond the compulsory levels and into tertiary programs has become ‘the majority experience’ (White & Wyn 2004, p.122). Even though geography can present challenges to accessing post-secondary educational opportunities in parts of regional Australia (Edwards & Baxter 2013), at May 2014, 82% of those aged 15 to 19 years remained engaged in formal study (ABS 2014). By way of contrast, it is estimated that a little over 50% of those of secondary school age (10 to 16) in Nepal are enrolled in formal education (DoE 2012). It is simply not the case that educational opportunities are shared equally across the globe.

*‘Access to education has improved in the past decade for millions of children. But far too many of the world’s most disadvantaged children remain excluded from school, and many of the children in*

*school do not learn the basic skills they need to lead productive lives. Education systems around the globe must do more than increase resources to engage the children excluded because of location, gender, disability, ethnic origin, violence or natural disaster. Addressing these challenges requires more than business as usual.’* (UNICEF 2015)

Recent decades have seen concerted efforts in relation to the universalisation of ‘basic education’ through Education For All (EFA), the United Nations Millennium Development Goals and other forums. Whilst there are robust debates within these forums, the fundamental importance of formal education is unquestioned – it is a human right:

*‘Education is a fundamental human right and essential for the exercise of all other human rights. It promotes individual freedom and empowerment and yields important development benefits. Yet millions of children and adults remain deprived of educational opportunities, many as a result of poverty.’* (UNESCO 2014b)

The education system is recognised as having significant functional importance at both societal and individual levels. Alongside a number of other key institutions, it is through our engagement with the education system that we access the knowledge and skills that enable us to meaningfully contribute to society. Giroux and Giroux (2006, p.7) make particular reference the post-school (tertiary) sector when asserting that ‘...formal sites of pedagogy must provide citizens with the kinds of critical capacities, modes of literacies, knowledge, and skills that enable them to both read the world critically and participate in shaping and governing it’, but this demand is equally applicable to all levels of education. International consensus is that an ‘educated citizenry’ is important, not simply on ideological grounds, but on social, political and economic grounds (Bhatta 2011).

Whilst facilitating societal level requirements for an educated citizenry, formal education also supports

the attainment of social and cultural capital and social mobility. That is, researchers have consistently highlighted the relationships between education and informed and empowered decision-making and access to satisfying and often life-sustaining employment. Whilst conventional wisdom suggests that education necessarily leads to upward social mobility, debate is robust (see for example, BJSE 2013). It is clear, for example, that education systems work to reproduce existing privilege by selectively preparing students for different occupational roles. In this sense, education is often conceived as ‘a stage in the reproduction of inequalities, linked to the transmission of advantage between generations and as a process through which groups of young people may be marginalized’ (Furlong 2013, p.49). Consequently the identification of good quality education is seldom only based on objective evaluation of the impacts that teaching has on student achievements, and is – to put it mildly – invariably subject to considerable political debate (Ball 2013).

## 2. THE EDUCATION FOR ALL (EFA) MOVEMENT

At the 1990 World Conference on Education held in Jomtien, Thailand, delegates from 155 countries defined a set of targets, including the provision of early childhood or primary level education for all children by the year 2000. The ‘World Declaration on Education for All’ resulted from the conference and made note of the fact that, whilst the Universal Declaration of Human Rights had established the ‘right to education’ some 40 years before, more than 100 million children were still without access to basic education (WCEFA 1990). Further to this, significant numbers of adults were illiterate, were not able to access the resources required to enable them to negotiate the realities of their circumstances and were unable to take programs to completion even when these were provided (WCEFA 1990). An ambitious set of targets and strategies were adopted at the Jomtien Conference to address these problems. The Education for All (EFA) movement was launched at Jomtien by a consortium of organisations, including UNESCO, UNDP, UNICEF and the World Bank. The goals included: ‘universal access to learning; a focus on equity; emphasis on learning outcomes; broadening the means and the scope of basic education; enhancing the environment for learning; and strengthening partnerships by 2000’ (UNESCO 2014c). These targets were not achieved by 2000.

Whilst there were several more global summits held throughout the 1990s, the 2000 World Education Forum in Dakar, Senegal was the next key moment

in the history of the EFA movement. The ‘Dakar Framework for Action’ adopted at the forum set six goals to be achieved by the target year of 2015:

1. *Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children;*

2. *ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality;*

3. *Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes;*

4. *Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults;*

5. *Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls’ full and equal access to and achievement in basic education of good quality;*

6. *Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills. (UNESCO 2000, p.8. Emphasis added).*

Six regional frameworks were developed at the Dakar Forum to acknowledge the context-specific barriers to the achievement of these goals. The context-specific complexity of educational reform in countries targeted by the EFA and MDG is evident in the agendas of subsequent forums and subsequent publications (see for example, GSE 2011). The point has been repeatedly made that initiatives that have been shown to lead to success in one context cannot be guaranteed to be effective in another. Notably, whilst three of the above goals make reference to quality, it remains the case today, perhaps as a consequence of the relative ease of data collection, that our attention is routinely drawn to rates of access and the other measures of ‘presence’ rather than to the more complex issue of quality.

The United Nations’ Millennium Development Goals (MDG) was also launched in 2000. The

second of the eight goals (MDG 2) echoes the EFA agenda in seeking to ‘ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling’ (UN 2013). While progress has been remarkable with the estimated global figures for ‘out-of-school’ children falling 42% between 2000 and 2012 (UNESCO 2015), interim reports for both the EFA and MDG goals have asserted that it is unlikely that targets will be met (UNESCO 2014b; UN 2013) – in the case of the prospects for the EFA targets – ‘not a single goal will be achieved globally by 2015’ (UNESCO 2014d, p.5) and the UN (2013).

Fundamentally, whilst access to primary education has increased significantly and the gender gap narrowed in many countries, universal participation has not yet been achieved (UN 2013). In addition to this, significant numbers of children continue to lack basic literacy and do not complete primary school. As noted by various agencies and stakeholders, a debilitating mix of political and military instability, poverty, gender and social inequality, and geographical factors continue to make it difficult for young people to access, participate in and complete formal education. These may form formidable barriers to education, but a relative lack of interest in ensuring the quality of education provided often reduces demand for the ‘goods’ that education provides, which van Dijk (2006) refers to as a lack of ‘motivational access’.

## 3. WHY IS ‘ACCESS’ SIMPLY THE BEGINNING?

As is the case in many countries with relatively high levels of access and participation, discussions about education in Australia often focuses on ‘retention’. There is considerable concern about both the discursive and material marginalization of ‘early school leavers’ (see for example, te Riele 2006). Researchers note that, ‘compared with Year 12 graduates, non-completers are more likely to experience extended periods of unemployment; and those who succeed in finding work are more likely to obtain jobs in a narrow field of occupations. Non-completers are also more likely to be reliant on government assistance’ (ACER 2000, 1). Notably, discussions often unfairly individualise the issues – they emphasise ‘what is wrong with youth, rather than to what may be wrong with schooling’ (te Riele 2006, p.141). These early school leavers readily become the subjects of increased governmentality and responsabilisation (Kelly 2007; te Riele 2006). Alongside the focus on retention, there is evidence of an explicit ‘quality’ agenda – a drive towards ensuring

that educational opportunities provided to Australian students are of an appropriate quality. Amongst recent initiatives we have seen critical discussion about the quality of education provided through the expanding private provider sector, the emergence of TEQSA whose explicit responsibility is the oversight of quality in the tertiary education sector and calls to require teaching degree candidates tested for numeracy and literacy before qualifications.

Whilst retaining students through to the completion of secondary school is an issue in some parts of the world, there remain a great many children and young people who are simply cannot avail themselves of the benefits of formal education, either due to the external factors outlined earlier or because of the inadequacies of the education they have received. Advances are, however, being made. For example, a recent UNESCO (2015) lists Nepal amongst 42 countries in which ‘out-of-school’ figures for primary school children more than halved between 2000 and 2012. There has been massive proliferation of both ‘community schools (supported by government) and institutional schools (supported by parents and trustees)’ (DoE 2012, p.12) in Nepal. Whilst the number of pre-schools, for example, increased from 19 936 in 2007 to 33 104 in 2011 (DoE 2012, p.8), thousands of new schools have also been established (see Table 1, below). At the same time, and perhaps reflecting emerging middle-class aspirations, a voracious private provider market has emerged – the focus being the preparation of Nepali students for access to overseas educational markets (see Liechty 2003).

Table 1. Numbers of Schools in Nepal by Level – 2004 and 2011

Level	2004	2011
Primary Level (Grades 1-5)	24 746	33 881
Low Secondary Level (Grades 6-8)	7 436	13 791
Secondary Level (Grades 9-10)	4 547	7 938
Higher Secondary Level (Grades 11-12)	NA	3 382

Source: DoE 2012, 9.

The context out of which these figures have been reached is important. During this period Nepal featured amongst the list of ‘conflict-affected’ countries, relevant here due to the potential for disruption to education:

*‘Schools in areas affected by violence may become temporary shelters for those who have been uprooted or may even be closed down. Add to this the problems*

of recruiting or retaining teachers in areas affected by conflict, the disruption of examinations and education supplies, and the woeful lack of funding for education in conflict-affected countries..., and even schools that manage to stay open will struggle to provide a reasonable education.' (UNESCO 2015, pp.48-9)

Research examining the impact of the 10-years of armed civil conflict is beginning to emerge and paints a complex picture in which educational opportunities for young women may have even been enhanced across this period:

*'Education, particularly female educational attainment, appears to have benefited from the societal changes induced directly or indirectly by the insurgency...potential mechanisms suggested by the existing anthropological and peace studies literature include Maoist efforts to remove barriers to schooling for all children from the lower castes and to reduce teacher absenteeism...the Maoist influence in encouraging or coercing parents to send girls to school...and the Maoists' effect on female empowerment.'* (Valente 2013, p.379)

In common with almost all states, Nepal intends to enshrine the right to basic education in legislation (Bhatta 2011). Whilst the period of armed conflict ended in 2006, political stability in the country remains elusive. Despite the ongoing failure to promulgate a new constitution, Nepal's 2007 interim constitution offers some hope with respect to a continued emphasis on education and cultural rights by asserting the following:

1. Each community shall have the right to get basic education in their mother tongue as provided for in the law.
2. Every citizen shall have the right to free education from the State up to secondary level as provided for in the law.
3. Each community residing in Nepal shall have the right to preserve and promote its language, script, culture, cultural civility and heritage. (NLC 2014)

The 'presence' related progress evident in Nepal thus far appears to be very good – some 94% of children in Nepal are recorded as being in the education system (Lohani et al. 2010). Notably, marginalisation along gender, ability/disability and ethnicity/caste lines remain a concern (DoE 2012). 'Access', 'participation' and 'retention' are, however, only part of the equation:

*'Education means more than just going to school – it is about learning and acquiring knowledge and skills. The human right to education includes not only access to education but also its quality. Education should enable learning and development. And while access to education has improved significantly in many countries over recent years, the quality of that education is often poor, so that the human right to education is not fulfilled.'* (GIZ nd)

Poignantly, whilst international goal setting in relation to universal provision of basic education has occurred at several junctures across recent decades, 'most of these declarations and commitments are silent about the quality of education to be provided' (EFA 2005, p.27). And yet, quality in education must surely be our principal aim. In fact, universal participation in education may fundamentally depend upon providing quality educational opportunities (EFA 2005).

#### 4. WHERE FROM HERE?

A whole-of-student, whole-of-system framework such as that suggested by UNICEF in 2000 provides a foundation from which we can discuss and measure performance in relation to quality education. Quality education encompasses:

- *Learners who are healthy, well-nourished and ready to participate and learn, and supported in learning by their families and communities;*
- *Environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities;*
- *Content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention and peace;*
- *Processes through which trained teachers use child-centred teaching approaches in well-managed classrooms and schools and skilful assessment to facilitate learning and reduce disparities; and*
- *Outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society.* (UNICEF 2000, 4)

The appeal of this framework is that it accepts, embraces and advances the complexity of the pursuit of quality in education. The commitment and

investment required of a shift away from measuring our success by 'presence' to measurements of 'quality' will be significant and given that Bhatta (2011, p.14) has observed that some, 'participate in these targets for reasons that have little to do with their actual achievement, and more with the symbolic and financial significance of participation (and the repercussions of non-participation)' the challenges will be greater in some contexts than others.

If, as is expected, the 2015 EFA Global Monitoring Report due for release on the 9th of April confirms overall failure in relation to the Dakar targets, it is beholden upon us to seek an explicit re-setting of the agenda. Fundamentally, 'presence' is just the beginning - our efforts must be directed to providing for the successful completion of quality educational experiences regardless of social or geographical location. The stakes are too high for us not to seek to achieve more.

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## Internationalization of Higher Education: The Issue of Common Approach to Quality Assurance

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### 1. INTRODUCTION

As today the world is becoming more and more globalized, institutions of higher education find it difficult to operate without introducing internationalization policies and practices. Traditionally higher education institutions have remained the bridge between countries and cultures without being politically corrupted. In terms of the contemporary situation in the international arena this is the sphere of higher education, which can become the reconciling point for the international society. The issue that still remains is quality assurance. In terms of internationalization policies introduction, the commonly recognized quality assurance approach would be extremely required. However the approaches vary almost in each particular country and remain confined to national boundaries. It is found obvious that up till now universities have been a product of a nation-state. In this regard university internationalization could be assessed as a myth, a modern trend and a good marketing action intended to veil the dependence of institutions on the national governments. Starting from the second half of the 20th century universities all over the world have become inevitably involved in the processes of higher education expansion and democratization. Thus, on the one hand, universities have initially grown within national political frame and have established specific nationally-oriented rules and regulations adapted to meet domestic requirements while, on the other hand, modern universities can't dispense with global outlook if they intend to be in demand. Globalization processes are pushing universities to develop new forms of internationalization efforts adapted both to national regulations and global trends. Yet internationalization activities can meet a wide range of objectives such as diversification and growth of financial input by recruitment of fee paying foreign students, expending curricula and international experience for domestic students, interregional networking. These two opposite trends – national embedding of universities, on the one hand, and globalization and internationalization processes on the other hand, create numerous challenges and problems such as recognition of degrees, diplomas,

qualifications and credits. These problems could be possibly resolved by creation of a common quality assurance system.

### 2. GENERAL DEFINITIONS OF INTERNATIONALIZATION AND QUALITY ASSURANCE

In order to understand and assess the importance and interconnection of internationalization and quality assurance it would be of paramount importance to define each of those. Internationalization could 'refer to the activities of higher education institutions often supported or framed by multilateral agreements or programmes, to expand their reach over national borders' (Dirk Van Damme 2000, p.2). Quality assurance can be defined as '...planned and systematic processes that provide outside stakeholders with confidence in the quality of a service or product' (Adinda van Gaalen, p. 6.).

### 3. WHY IS QUALITY ASSURANCE IMPORTANT FOR INTERNATIONALISATION?

Quality assurance is rather new in the sphere of higher education though it covers numerous internationalization activities. One of the most significant questions concerning this matter is How can the quality of internationalization of higher education be assured? Internationalization itself is a very complex process in all fields including the sphere of higher education. Internationalization requires certain conditions such as:

- transparency of the country;
- sufficient language skills of academic staff;
- flexible curriculum so that both tutors and students could take part in internationalization activities;
- innovative management;
- comfortable academic environment;
- constant intercultural communication.

In this regard quality assurance becomes an essential tool for institutions in order to remain on top of the internationalization pedestal. Today these

two concepts are traditionally mentioned in pair. In fact, these phenomena should be recognized in the context of a 'two-way street' perception. On the one hand, one can talk about quality assurance of internationalization, on the other hand there should be internationalization of quality assurance. The first one mainly concentrates on internationalization as the main subject and quality assurance as the way to improve internationalization strategies. The second one, on the other hand, mainly concentrates on quality assurance as the main subject and puts it through the lens of international activities.

Quality assurance in general is important to assess whether an institution of higher education actually provides the services it is expected to deliver. It can help reveal the strongest and the weakest points of certain education programs offered by an institution. Moreover, it can provide the required information to students, their parents and future employers.

Quality assurance of internationalization covers various aspects such as:

- Internationalization of the curriculum;
- Student and staff mobility;
- Implementation of international projects;
- Internationalization of staff;
- Introduction of internationally friendly services and facilities;
- International student recruitment;
- Selection of high quality partners.

#### 4. FORMALISING QUALITY ASSURANCE

One of the main issues that exist concerning quality assurance of internationalization is setting up an internationally recognized common approach. As it has been mentioned before quality assurance systems can vary significantly in different countries. Thus making higher education global and transparent turns out to be complicated as reciprocal degree, diploma and credit recognition seems to be challenging. One of the ways to make quality assurance of higher education internationalization feasible is creating one global system of it. Some steps toward this initiative have already been undertaken. Thus there are some international bodies have been founded to accredit professional programs beyond the borders. For example, the US Accreditation Board for Engineering and Technology (ABET) is involved in accreditation of engineering courses around the world. It acts worldwide using the same accreditation criteria, policies and procedures as during accreditation visits to U.S. courses. Another example is EFMD

Programme Accreditation System (EPAS). It was established for international degree programs in business and management that recruit international students. There is also European Association for Public Administration Accreditation (EAPAA), the Network of International Business Schools (NIBS) and other organizations.

#### 5. INTERNATIONAL COOPERATION ON QUALITY ASSURANCE

The increased student and staff mobility contributes to the need for common or at least comparable standards in higher education. In this regard numerous national quality assurance agencies have been performing internationally. For instance, cooperation takes place within such organizations as:

- INQAHEE (International Network for Quality Assurance Agencies in Higher Education);
- ENQA (European Association for Quality Assurance in Higher Education);
- ECA (The European Consortium for Accreditation).

With the increased academic mobility, there is a need to compare curricula so that they would correlate to the sufficient extent. In Europe this need resulted in a common currency in credit points: the European Credit Transfer System (ECTS). It is now applied in many countries even other than European.

The most important obstacle in internationalization and unification of quality assurance is wide disparity between the systems.

Creating comparable internationally recognized standards could eventually result in establishment of a real international quality assurance agency.

#### 6. FROM THEORY TO PRACTICE: EUROPEAN EXPERIENCE

One of the most vivid examples of a common approach to quality assurance and internationalization of higher education is the Bologna process launched by the European Union in 1999. One of the initial goals of the Bologna process has been the promotion of European cooperation on comparable education criteria and methodologies. Though quality assurance was not on the agenda in the very beginning it was proclaimed in Bergen in 2005, when the European Standards and Guidelines for Quality Assurance (ESG) were established.

#### 7. CASE STUDY: RUSSIAN INTERNATIONALIZATION EXPERIENCE

Each higher education institution shall meet the requirements for developing appropriate mechanisms to perform internationalization strategies. Certain policies and initiatives can differ at each institution. In this article the example of Saint Petersburg National Research University of Information Technologies, Mechanics and Optics (ITMO University), St. Petersburg, Russian Federation will be considered and analyzed. On the one hand it will reflect the experience of a certain institution; on the other hand, it will cover the relevant practices accepted in Russia in general.

One of the key points of the Russian Federation's policy has been the integration into the Bologna process. Accordingly, ITMO University has been pursuing the internationalization strategy through this prism.

ITMO University's internationalization efforts will be considered with reference to those bullet points specified in Section 3 of the article.

##### Selection of high quality partners

Currently ITMO University has more than 170 valid cooperation agreements with the institutions worldwide. Under these agreements a number of joint initiatives such as joint and double-degree programs have been launched. An issue that arises concerning this matter is quality assurance. As a matter of fact, the Russian and the European academic standards differ significantly in various aspects. Consequently integration into the European education system turns out to be challenging for Russian students and academic circles. Traditionally ITMO University cooperates with the leading institutions worldwide in order to implement high quality joint programs and projects and adopt the best practices for their further implementation at the University.

##### Student and staff mobility

Currently ITMO University is carrying out a wide variety of joint education and research programs in collaboration with its partners. Students, academic and administrative staff of both Parties take active part in such initiatives. Among the ongoing education programs it would be important to emphasize double degree master's and PhD programs, summer camps, international intensive weeks, staff training programs and workshops. The programs contribute much to development of cross-cultural communication.

##### Internationalization of staff

Realizing the importance of international outlook, ITMO University employs some of the most reputable scholars from the leading foreign institutions who deliver lectures and workshops to the students and academic staff. Moreover such an initiative ensures a chance of getting acquainted with the foreign education policies, adopting the best practices and elaborating joint projects.

##### Internationalization of the curriculum

Lately ITMO University has launched a number of new education programs delivered in English. This encourages foreign students, who come to Russia, to absorb academic knowledge much easier. Thus their studies at ITMO University become much more efficient.

##### Introduction of internationally friendly services and facilities

ITMO University has set up numerous initiatives aimed at making international students' and staff's stay in Russia as much comfortable as possible. Among such initiatives the following can be mentioned: education programs in English, brand new English web site of the University, various services available in English and the facilities fitted with the information in the English language. All these contribute to quality improvement of the education services delivered by ITMO University and creating internationally friendly environment.

##### International student recruitment

Implementing the above-mentioned initiatives has promoted the growth of the number of international students coming to ITMO University. The figure has risen up to 1007 foreign students in 2014/2015 academic year. The fact that more and more foreign students choose ITMO University for pursuance of their academic studies and research activities proves that the quality of the services rendered by the institution has been improved to the great extent.

##### Implementation of international projects

ITMO University has been participating in numerous international projects aimed at obtaining global outlook. Specifically one of the projects that have been recently initiated by ITMO University is aimed at solving the problem of quality assurance with regard to the Russian national aspects. The project seeks to adopt ENQA certification at the University.

## 8. CONCLUSION

Quality assurance has become one of the primary concepts in international education. Today the idea of cooperation would seem meaningless out of this concept. However in order to reach it, some constraints and obstacles have to be overcome. There are different goals to be achieved in this process, for example, to help eliminate diversity, create common approach to quality assurance and inspire joint efforts on establishment of mutually recognized standards. Thus internationalization correlated to quality assurance could become an efficient tool in creating a global multicultural learning community favoring flexible education programs. This would then facilitate international social integration based on mutual understanding.

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# Academic Mobility of Russian Students as a Key Factor in Developing their English Academic Language Skills and Participating in International Academic Mobility Programmes

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## 1. INTRODUCTION

Academic mobility development is not a novel requirement that Russian universities must meet in order to be competitive. Nowadays, academic mobility is an essential part of learning and teaching processes. International academic mobility programmes play an important role in training and providing students with high-quality learning opportunities to increase their skills and knowledge, develop their future career interests and pursue their professional goals. However, there are some obstacles to students' progress and academic mobility development in particular. Some key factors to take into account when considering an issue of major challenges Russian students have to overcome in a new academic environment include the following: low level of English, lack of basic knowledge about teaching-learning process typical of a certain university, students' adaptation problem, and etc.

## 2. ROLE OF ENGLISH LANGUAGE SKILLS

**Berman and Cheng (2001) note that international students at English-speaking universities have major challenges to overcome in their academic study.** English may be one such challenge, especially at the beginning of their academic study, and particularly for non-native speakers of English. Research into English for Academic Purposes (EAP) has shown that these students need to be competent in certain language areas and skills to be able to cope with academic demands (Cumming 1994; Ferris & Tagg 1996a; 1996b; Graham 1987; Sarudin 1994; Zhao 1993). The difficulties faced by these students are different depending on the level of their studies, whether they are undergraduates or graduates, and on the subject areas they study for especially at the graduate level (Cheng 1996; Light, Xu & Mossop 1987; Xu 1991).

Dudley-Evans and Jo St John (1998) state that EAP refers to any English teaching that relates to a study purpose. Students whose first language is not English may need help with both the language of academic disciplines and the specific 'study skills' required of them during their academic course. The study skills

may involve any of the main skills depending on the context. It is very important to be aware of how, as the study situation changes, the emphasis on different skills also needs to change. The key aspect here is the extent to which either English or the national language is used as the medium of instruction for subject courses.

Engineering students from St. Petersburg Polytechnic University are highly motivated but their level of English is quite low. That is why most of them find it difficult or almost impossible to participate in international academic mobility programs. However, they realise the fact that language skills play a vital role in providing them with an opportunity to study in a completely new academic environment. Professor Michael McNally (2011) claims that as Civil Engineering students studying abroad, undergraduates will gain exposure to different modes of problem solving, leading toward different approaches to the design and implementation of civil engineering projects. In the light of the increasing globalization of engineering practice, this acquired knowledge will likely be beneficial in their future engineering career. EAP programmes often have more academic support staff to assist engineering professors with computing, wet/dry, and field labs, which leads toward more meaningful laboratory experiences. Not only with EAP will it be one of the most memorable times in their life but also the international experience will open a world of engineering opportunities in students' future.

Therefore, one of the most urgent issues impeding engineering students' progress is lack of English language skills. However, there are EAP programmes offered by our university. The programmes are aimed at training students to become successful in a new academic setting.

## 3. INTERNATIONAL STUDENTS' ADAPTATION PROBLEM

As we have mentioned earlier, one more challenge faced by international students is their adaptation to new academic situations and their host country in

particular. Zhou, Jindal-Snape, Topping and Todman (2008) emphasise that students attending universities in a culture different from their own have to contend with novel social and educational organisations, behaviours and expectations – as well as dealing with the problems of adjustment common to students in general. This is difficult enough when the newcomer is aware of the differences in advance, but even more difficult when the newcomer is unaware and falsely assumes that the new society operates like their home country. Newcomers easily become ‘lost in translation’. The collective impact of such unfamiliar experiences on cultural travellers in general has been termed ‘culture shock’. Student sojourners are an example of such travellers, increasing in numbers in many English-speaking countries (Zhou et al. 2008).

There are estimated to be more than a million students and scholars attending institutions of higher education abroad (Hayes 1998; Taylor 2005). The quality of psychological, sociocultural and educational experiences of this large group of people is important, not least in promoting global intercultural understanding (Zhou et al. 2008). It is no surprise that the literature has been concerned with students’ adaptation problems. Student sojourners are probably the best-researched group of cross-cultural travellers, as they tend to be easily accessed as research participants. Many studies have explored social and friendship networks, social skill acquisition, and inter-group perceptions and relations (Zhou et al. 2008).

Tran (2008) notes that all students perceive the interaction they establish with their lecturers to be imperative in enabling them to enhance their understandings of the academic expectations and facilitate their adaptation to academic practices. There are three main forms of dialogues, which students establish with their lecturers: face-to-face consultation with lecturers, emails to lecturers, and discussion with lecturers in class (Tran 2008). In particular, students transform their own practices through seeking ways to contact their lecturers, either through written forms or through direct dialogue, to deepen their understandings of disciplinary expectations, ask for feedback on draft versions of writing assignments and go through redrafting process.

As we can see, there is an inextricable link between sociocultural adaptation and communication and language competences. Kim (1988), in his grounded theory of communication and cross-cultural adaptation, pinpoints that effective social communication is a key to successful adaptation in a new culture. Many international students are too

reserved to admit they do not understand what is being said, and may nod their heads out of politeness (Palmer 2009). ‘Language skills are important because they affect the quality and quantity of intercultural interactions’ (Ward 2004, p. 190).

Yeh and Inose (2003) conducted a study of international undergraduate and graduate students in a large, urban university in the Northeast. The results showed that a lack of English language fluency was ‘a significant predictor of acculturative distress, with a lower level of self-reported English language ability resulting in more acculturative problems’ (Wilson 2011, p. 8). Acculturative distress is a form of psychological stress and an increase in psychological stress has been shown to be related to more difficulty in adapting socioculturally (Ward and Kennedy 1999).

The language ability of international students is related to their overall adaptation and academic success (Barratt & Huba 1994; Lewthwaite 1996). As ability with the host language increases, so do the academic performance and adaptation of students. Communication skills and language ability corresponding to the new environment are keys to assimilating and adapting more quickly into the new culture (Ward & Kennedy 1999).

#### 4. STUDY SKILLS AND ACADEMIC SUCCESS

Bamford (2008) pinpoints that differences in study methods compared to the country of origin present a difficulty for international students. In many countries, students spend a much greater amount of time in class. There is less emphasis on independent study and more focus on developing the information provided by lecturers in their sessions. Obviously, the extent of this varies, but it is true to say many experience a great deal of difficulty with making the transition required in a very short period of time. For example, students have to cope with what is expected and this is usually an increased amount of required reading (in another language) as well as developing the ability to synthesise that information in a critical way (Bamford 2008).

De Vita (2001) shows differences of approach in addressing a piece of assessment, discussing the different discourse styles experienced by students from different countries. This creates tensions that affect a students’ performance. Groupwork may also be an issue – the cultural diversity of groups requires that students acquire intercultural skills which can be an onerous additional requirement in certain subjects.

Bamford (2008) agrees that it is clear that students from different cultural groups react to these stresses in different ways. There are clearly cultural groups of students that find class interaction more difficult than others, for example, those from more collectivist cultures.

In addition to this, it must not be forgotten that many students are suffering from the above-mentioned ‘culture shock’ and are still trying to adjust to a new academic environment when their first assessments are due. As one student put it, ‘even little things, like how to submit your essay if you are in a different country are problematic’ (Bamford 2008, p.4).

Many students think that being a good student means just showing up for classes, taking a few notes, reading the textbooks, and studying right before the tests. However, learning, like many other activities, involves a complex set of skills that require practice. Moreover, learning to study in a new environment has some of the same challenges as learning to live in a new culture. Students’ lack of academic study skills may lead to their lack of initiative and resourcefulness.

Knowing how to study can be the key to academic success for students, so teaching them beforehand how to study abroad is very important. Students can become discouraged if they are unable to find techniques that suit them. Many do not think that they are cable of achieving great results but it has been shown that learning useful techniques for study can make it possible.

Study skills are not subject-specific. They can be generalised across all subjects, helping students to acquire the key knowledge and skills for any subject and therefore enhancing their learning. Students who improve their study skills benefit through reduced test anxiety and through increased confidence, competence and self-esteem (*Study skills – the key to academic success* 2015).

#### 5. SIGNIFICANCE OF STUDENT MOBILITY

Student mobility has been growing in scale and significance alongside the developments in the Bologna Process and the integration of the European Higher Education Area (EHEA) over the last decades. Between the start of the Erasmus programme in 1987 and the academic year 2012-13, over 3 million students had participated in the Erasmus mobility programme (*The Erasmus impact study* 2014).

Previous research and studies of student mobility revealed important consensus that international experience offers a potentially rich opportunity for significant personal change. For example, a large-scale research study on the impact of overseas experience on undergraduate students studying professional education programmes (Shaftel et al. 2007) showed essential improvement in basic characteristics such as open-mindedness, flexibility, cross-cultural adaptability and appreciation of diversity, in addition to increasing understanding of the need for the study of foreign languages and culture, as a result of international study. The impact of the opportunity for international study depended on the length of the programme, with four-week stays resulting in a greater change in personality traits than shorter stays. Other studies provided evidence on the emergence of a new type of citizen, the global citizen, as a result of international mobility (Killick 2011).

In some of the previous studies, the main focus was on social and intercultural competences. According to Hofstede (2009), the acquisition of intercultural competences, in particular, generally defined as ‘the ability to communicate effectively and appropriately in intercultural situations based on one’s intercultural knowledge, skills and attitudes’ (Dearnorff 2006, p.247), could be regarded today as an important strategy for preparing students to live and work within a globalised and complex world. Social and cultural competences are therefore an attribute of increasing relevance to educational policies (*The Erasmus impact study* 2014).

Leask (2009) found that students’ development of intercultural competences is a key outcome of an internationalised curriculum. Such a curriculum requires a campus environment and culture that motivates and rewards interaction between international and home students inside and outside classroom.

The existing literature and studies argue that a wide range of competences and skills are increasingly valued by employers in Europe. This comprises skills such as disciplinary knowledge, foreign languages, adaptability, flexibility, resilience, greater intercultural awareness, the ability to assess one’s own strengths and weaknesses, to make decisions and to be a problem solver (*The Erasmus impact study* 2014).

The increased academic mobility can help to make both individuals and institutions more aware of the role of language, intercultural competence and all the

above-mentioned skills, which in turn will guarantee students' success in a completely new academic environment.

## 6. CONCLUSION

Universities must consider the difficulties that international students have in adjusting to a new academic environment and the impact of recruiting large numbers of students who are non-native speakers of English, who have been educated in a national education system other than that of a certain country. The institution also needs to consider whether or not teaching and learning strategies would address the specific study needs of these students.

There is no question that international student mobility has transformed the higher education landscape in the last decade. It has brought diverse benefits to students, institutions, communities and countries. However, there are unanticipated outcomes and risks as well (Knight 2012).

As student mobility evolves, it is important to monitor intended and unintended results so that benefits to individuals, institutions, nations and society outweigh the risks, both now and in the future (Knight 2012).

St. Petersburg Polytechnic University is one of the most highly regarded in Russia. However, the challenges that Russian students and international students in particular have to overcome are the same. One of its basic institutes is the Institute of Humanities. Its representatives are always ready to assist undergraduates and especially engineering students to solve the above-mentioned problems more effectively and efficiently.

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## *Session II: Practical Knowledge: The Most Effective Education Tool*

### 1. INTRODUCTION

Whether in the development of economy or in society, education plays a key role. In many poor countries, with each added year of schooling, people earn 10% higher wages and these wages, as a result, serve in favor of national economic growth (AlMunajjed & Sabbagh 2011). No country has ever achieved continuous and rapid growth without reaching an adult literacy rate of at least 40%. Educated people know everything about the challenges of their countries and thus can help in finding solutions and can contribute to progress. Educated people act as the backbone of their nations' well-being.

Saudi Arabia is going nowadays through a significant demographic era. It is clear that the Kingdom is a young country. Statistics show that around 37% of the Saudi population is under the age of 14. Others below the age of 25 account approximately for 51% of the population, and by adding those under 29 to the statistics, youth will represent two-thirds of the kingdom's population (AlMunajjed & Sabbagh 2011). The number of youth and children surpassing the number of the adult population in the Kingdom is a more reason why the education sector should be nurtured in the country. Specifically, physical education.

Physical education may not seem as a major element contributing to a country's success, however, this paper will seek out to prove that it a crucial element that positively contributes to several factors such the public health and the economy.

### 2. BENEFITS OF LEGITIMATE IMPLEMENTATION PHYSICAL EDUCATION IN THE KINGDOM

#### 2.1 Improvement of Academic Achievement

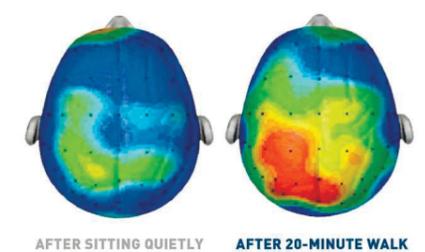
Having physical education introduced to children at a young age sets children to grow into healthy and active adults, both physically and mentally (PHIT America). Sports and physical activity increase longevity, lower the possibility of depression, ease

mobility and improve sleep (USDA). Participation in sports aids in creating social bonds and teamwork spirit, as well. The combination of these outcomes provides an environment where a student can excel academically. Refer to figure 1 to an illustration of brain activity pre-physical activity and post physical activity. It can be seen that brain activity after 20 minutes of simply walking becomes more heightened. Moreover, study done over 3 million schools in the states of California and Texas has also shown that academic achievement is significantly superior in students who are involved in sports or physical activity in comparison to other who were not (PHIT America).

A significant amount of the Saudi annual budget is pooled into education. It receives the largest share of the budget at 25% of total spending, which is considered among the highest in the world (U.S. Saudi Arabian Business Council 2014). This shows how the kingdom is adamant to develop and grow a generation that will support its future.

The 25% of funding the Ministry of Education receives is divided through general school education, higher or college education, training, development of facilities and building of new projects (U.S. Saudi Arabian Business Council 2015). To spend it wisely in the system, some measurements and studies must be taken to benefit from this huge budget. The kingdom still requires a focused strategy that combines developing facilities suitable for students perform physical activities.

Figure 1.



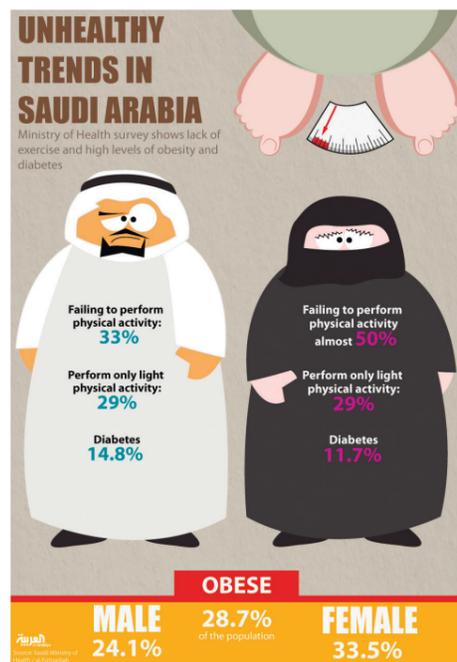
Source: PHIT America [http://www.phitamerica.org/Benefits\\_of\\_P\\_E\\_in\\_School.htm](http://www.phitamerica.org/Benefits_of_P_E_in_School.htm).

## 2.2 Reduced Spending on Cures Due to Prevention

In Saudi Arabia's recent development plan, Education and healthcare remained the priority of the Kingdom's budget, accounting for 37 percent of total spending (U.S. Saudi Arabian Business Council 2014). That static was in 2014. In 2015, the kingdom increased health care funding from 28.8 billion dollars to 42.7 billion.

'World Health Organization (WHO) estimates that: physical inactivity is the fourth-leading risk factor for global mortality and physical inactivity is responsible for 6% of deaths globally around 3.2 million deaths per year, including 2.6 million in low- and middle-income countries, and 670,000 of these deaths are premature,' (C3 Collaborating for Health 2011). In high-income countries, heart disease, stroke, and cancer have long been the leading contributors to the overall disease burden. The loss of economic output associated with chronic disease in 23 low- and middle-income nations, which together account for about 80 percent of the total chronic disease mortality in the developing world (Suzman & Beard 2011). The potential estimated loss in economic output for the 23 nations as a whole between 2006 and 2015 totaled US\$84 billion. Refer to the following figure showing the levels of physical inactivity among Saudi men and women.

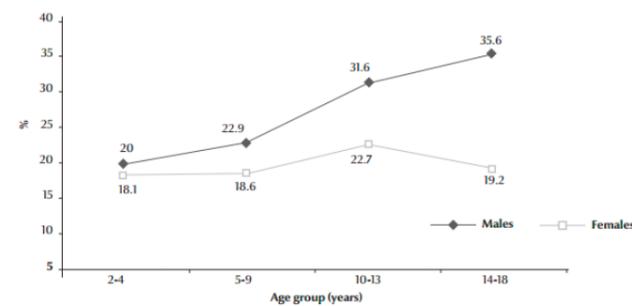
Figure 2.



Source: Al Arabiya News, 2014.

In a study published in 2010 about child obesity in Saudi Arabia, a total of 7056 children between the ages of 2 and 18 were selected from schools and the outpatient department of a hospital. The overall prevalence of overweight students was 19.0% and of obesity was 23.3% (Al-Dossary, Sarkis, Hassan, El Regal & Fouda 2010). More than 50% of children between 14 and 18 years had weight above the 85th percentile. These statistics are on the rise and obesity is becoming a real threat to the Kingdom's population. According to Al-Dossary, Sarkis, Hassan, El Regal and Fouda (2010), Saudi males show continuous weight gain from the age of two until the age of 18. Refer to figure 3 for illustration.

Figure 3. Distribution of Obesity by Age Group and Sex



© 2 Distribution of obesity by age group and sex

Source: Eastern Mediterranean Health Journal, 2010.

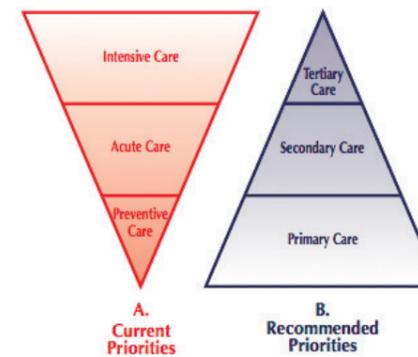
Another study has reported that Saudi is spending up to SR500 billion a year on curing illness resulting from obesity, diabetes being at the head of the list (Khan & Fouzia 2014). Moreover, the Kingdom is in the process of establishing a number of six center of obesity surgery around the county. Health insurance does not cover the cost of obesity surgery (Khan & Fouzia 2014); therefore, more of the domestic income is going to be paid towards covering expenses rather than being invested in the economy.

The question is, Is Prevention Better than Cure? The American Nurses Association (2008) proposed a module to reallocate healthcare funding in the United States. See figure 4.

The original pyramid pools the majority of finances into tertiary care, which is a level of care where patients require special, long-term treatment (American Nurses Association 2008). At the second level of the original pyramid comes acute care and at the top of the pyramid comes preventive care. The suggested new pyramid shows the opposite where more spending is dedicated towards preventive care.

This very model can be assigned to the association of physical education as a preventive measure of illness to spending on health care to treat obesity and diseases resulting from it.

Figure 4. Pyramid of Priorities for Reforming Health Care Costs



Source: American Nurses Association, 2008.

## 2.3 Socioeconomic Benefits

As previously mentioned physical education aids students in becoming social and motivated academic achievers (Refer to figure 5). Moreover, the Center of Disease Control and Prevention (CDC) recommends characterizing the connection between physical activity and dangerous weight gain (Al-Hazzaa 2007). The organization states that if young children practice physical activity at a young age, they would develop good health lifestyles as they become adults, further proving the benefit of physical education.

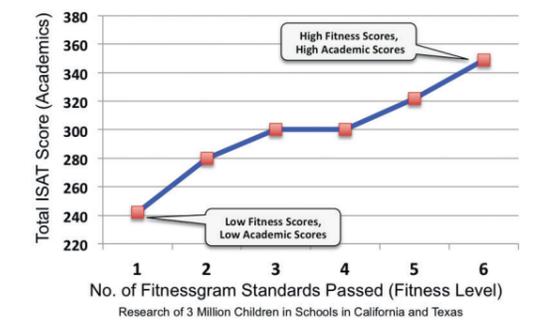
'In addition, higher level of physical activity during periods of early childhood (4-11 years) lead to the acquisition of less body fat by the time of early adolescence. On the other hand, it is believed that reduced physical activity level is contributing to the rise in childhood overweight and obesity seen in the recent years,' (Al-Hazzaa 2007). Consequently, encouraging physical activity through physical education can also act as a factor in reducing spending on obesity treatment. These positive outcomes help the Kingdom in securing a future generation that is dedicated to development and unhindered by diseases caused by lack of activity and in turn growing a prosperous economy.

Another aspect of the economic upside resulting from physical education is that for years now, Saudi Arabia has been working on solving the high national unemployment rates with the current rate standing at 5.7% (Trading Economics 2015). With proper

training, the Kingdom can employ Saudi trainer in schools to teach physical education, specifically female employees.

Figure 5.

Strong Correlation Between Higher Fitness Scores and Higher Academic Scores



Source: PHIT America [http://www.phitamerica.org/Benefits\\_of\\_P\\_E\\_in\\_School.htm](http://www.phitamerica.org/Benefits_of_P_E_in_School.htm).

## 3. CHALLENGES

### 3.1 Physical Education for Females

For male schools, the country is looking to improve its physical education programs and encouraging students to participate in physical activity through holding tournaments and inner state competitions (Ministry of Education 2015). This opportunity should also be given to female students. A study previously mentioned showed that the rate of overweight female student decline after the age of 13, however, a recent study has shown that 75% of Saudi women are overweight and 80% have Type 2 diabetes (Al Arabiya News 2014). This raises the importance of introducing females to physical education at a young age.

Physical education for females had been a taboo in Saudi until recent years (Al Arabiya News 2014). In 2013, the Ministry of Education in the Kingdom began to ease the ban physical education and allow private schools to incorporate it into their curricula. The following year, out of the growing health concern of youth in the Kingdom as well as the possibility of creating job opportunities for Saudi women as professional trainers, the Shura Council recommended implementing sports programs for female schools seeing that the programs conform to Sharia teachings (CNN Arabia 2014). This bold decision comes in the face of a religious resistance that negatively effects the social acceptance of female physical activity in schools (Al Arabiya News 2014). After this news, one Saudi clerk mentioned that physical for women is simply

an blind imitation of Western culture and the topic of ‘Would you marry a girl who practiced sports?’ was avidly discussed in social media. Those elements can act as a barrier especially if the Ministry of Education does not push the process further. Not only that, but the implementation of the Shura recommendation can possibly be hindered by the recent merge of the Ministry of Education and the Ministry of Higher education (Al Arabiya News 2015). However, there is a growing optimism that, like the history of education of women in Saudi Arabia, the sports program for women will go through. It is only a matter of time.

### 3.2 Infrastructure

Another challenge that would face the real application of physical education is school buildings and infrastructure. To have an effective and diverse physical education program, acquiring suitable facilities is important. On Tatweer, the website for the development of physical education program in Saudi Arabia, sports such as football, volleyball, table tennis, karate, swimming and horseback riding are on the list of sports that the Ministry is looking to implement (Ministry of Education 2015). It also shows that there is a lack proper facility such as courts and swimming pools in male school in cities around the Kingdom. Saudi is looking to achieve better representation at the Olympic Games and for that, it joined the International Federation of School Sports in order to improve facilities and harbor talents. This counts as a promising step, yet it requires the inclusion of female schools where infrastructure for school sport is nearly nonexistent. As previously mentioned, education for women in Saudi has progressed over the past years, and optimistically the legitimate implementation of sports programs will be the next chapter in that progress.

### 3.3 Labor Force

Labor force acts a major issue for implementing physical education in female schools. There are almost no colleges in the Kingdom that teaches physical fitness, therefore, there will be a lack of trained female instructors. For that, the kingdom is resulting to call for foreign labor, which can hinder the process of Saudization in the Kingdom.

‘Planning is an essential task, especially for the underdeveloped countries or those in the process of developing, such as Saudi Arabia. Economic planning cannot reach its objectives unless combined with planning for manpower development that can

meet the requirement of economic development,’ (Al-Asmari 2008).

### 4. RECOMMENDATIONS

- Raising awareness of the importance of physical education for children. Through campaigns internally in the school system and through media such as children media channels and phone applications.
- Offer the same opportunities for physical education for both genders.
- Raise awareness of the importance of physical education for women especially to combat the opposing views against it through social media and other media platforms.
- A child spends half of its time at school and the other half at home. For that, parent are key to a child’s adoption of healthy happens. Awareness of physical education should also be spread to parents to support their children and motivate them. Parents should also lead by example.
- As a solution for the lack of proper facilities, implementing an after school sports programs for both males and females.
- Opening the floor for Saudi women to major in physical fitness at the university level.
- In addition to teaching physical education, children should be taught general health education, especially about healthy eating. Healthy diets and exercise go hand in hand.

### 5. CONCLUSION

Physical education is the gateway for many benefits for Saudi Arabia. Physical education can raise awareness of the importance of physical activity, allow children to grow healthy both physically and mentally, and in turn reduce the worry of illnesses like obesity which reduces the money injected into treatment. The well-being of the population shapes the country’s future and its poor health of would counteract the benefits of it being youthful.

The implementation of physically education in Saudi Arabia still carries obstacles from social and religious barriers to employing physical activity programs for females, finding qualified labor force, and providing proper facilities to practice physical activity. However, throughout the years the Kingdom has shown it dedication to improvement and will hopefully continue to do so in the future.

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# Teaching and Learning to Be in an Uncertain World: The Wisdom and New Efforts of Chinese Educators

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In 1972, UNESCO published an important report named *Learning to Be* or Edgar Faure Report with the aim of relating education reform to human destiny. It emphasized that ‘development is the complete fulfillment of man, in all the richness of his personality, the complexity of his forms of expression and his various commitments – as individual, member of a family and a community, citizen and producer, inventor of techniques and creative dreamer’ (UNESCO 1972, vi).

Four decades later, we find that we are still struggling to be a ‘complete person, or in short, learning to be’ (UNESCO 1972, p.86).

## 1. CHALLENGES FOR HUMAN BEING

The world is becoming more complex than ever, and human being is facing series of challenges, such as the growing population, increasing pollution, limited resources, wars, diseases, the gap of rich and poor, etc. We cannot have overly optimistic views of economy and technology but are urged to be committed and to make efforts to confront the challenges, live with them, and try to make the world and human beings better.

### 1.1 Can We Live Together?

V. Ordonez was quoted to point out that ‘the failure of education in the (twentieth) century is not the failure to teach humankind science, language or mathematics, but the failure to teach humankind to live together in peace and to harness the potentials in individuals and societies for full and equitable development’ (UNESCO-APNIEVE 2002, p2).

At a time of social transformation due to the changes brought to humans by technological era, world-wide issues continue being humans’ major concerns. Much attention has been paid to cross-culture conflicts, equal rights, the least favored group, less fortunate people, widening gap and etc.

For centuries mankind has yearned for lasting peace and security, but just as we are writing this essay or making this presentation, violence is occurring in the West and East. Hostages were reported to be executed by terrorists in Jordan, and many children are subjected to the horror of war and hunger in Syria.

On a daily basis, gaps are increasingly widening for the lack of mutual understanding or respect among members of diverse economic conditions, generations, genders, under-privileged and physically impaired groups. We are seeking solutions to assure each individual can share human rights, respect, and have successful future disregarded of races, genders, ages, social classes, or geographical borders. We must reflect on the nature of the issues and make contribution to world peace and development.

We begin to ask, what role can education play to improve the public participation or democracy in modern societies? In Edgar Faure Report, it was pointed out that ‘democracy itself has become a more impressive problem than ever’ and ‘the concept of democracy itself must be developed’ by giving more support to educational requirements to avoid classes divided by educational inequality (UNESCO 1972, pp.24-6). As far as the new features of democracy are concerned, education should lay stress on mutual benefits and common decisions for its aim and content, to provide personality-training matching an individual’s intellectual and emotional needs ‘to solve his own problems, make his own decisions and shoulder his own responsibilities’ (UNESCO 1972, p.24).

Xi Jinping, President of the People’s Republic of China had a speech at UNESCO Headquarters in 2014, mentioning Chinese people have long come to appreciate the wisdom of ‘harmony without uniformity’. He also explained in this sense what was recorded 2500 years ago in the Chronicle of Zuo that harmony is like cooking the thick soup with water, fire, vinegar, meat sauce, salt and plum to go with the fish or meat. ‘*Who can eat soup with nothing but water in it? What ear can tolerate the same tone played repeatedly*

*on one instrument?’ He pointed out that living in a globalizing world we need a mind to appreciate difference and approach one another’s culture. He quoted Victor Hugo about prospect and commented that “we should encourage different civilizations to respect each other and live in harmony, so that exchanges and mutual learning between civilizations will become a bridge promoting friendship between people around the world, an engine driving progress of human society, and a bond cementing world peace. We should draw wisdom and nourishment and seek spiritual support and psychological consolation from various civilizations, and work together to tackle the challenges facing mankind’ (Xi 2014).*

The challenges of the 21<sup>st</sup> century are fundamentally interconnected. As we interact with many different people, education helps us to solve emerged challenges by promoting care and concern for our global family. Global citizenship education needs to be integrated in education systems to teach people of all ages to respect for human rights, social justice, diversity, ethnicity, language, disability, gender equality and environmental sustainability, to have a deep level of awareness about the idea that we live in one world, to understand the differences and to embrace them, to avoid the pitfalls like lack of tolerance or misunderstanding, to work against discrimination and prevent isolation, to foster a harmonious world for all.

Just as Irina Bokova, the Director-General of UNESCO, said at International Conference of National Commissions for UNESCO, ‘It is not enough to be connected to each other. We also share our solutions, our experiences and dreams in one great community supported by human rights and fundamental freedoms’ (Bokova 2012).

### 1.2 Do We Have Future?

The environment we are living in is facing risks and we are challenged by the negative impact of growing economy and overuse of natural resources on global ecosystems. Natural disasters such as cyclones, droughts, floods and air pollution become more commonplace and climate change is world-wide. On top of these issues, fatal diseases attack people from time to time and the world is constantly threatened by new and evolving infectious diseases. While we are still vividly recalling the outbreak of SARS in Asia in 2002, Ebola virus has retrieved its way back to mankind in West Africa in 2014. Three more human cases of H7N9 bird flu have added the tally to 28 in South China’s Guangdong Province since the start of the year 2015.

We begin to reflect on our behaviors and responsibilities. It is strongly suggested in Trends Shaping Education 2013 that policy makers and educators need to make plans that take future into account. For us all to live peacefully in this world of competitive economies and ever decreasing resources, we must work in the context of education and take actions together to save the planet and leave an earth with healthy biodiversity and sustainable resources for our future generations. Education plays a key role in raising the awareness of the issues and influencing the choices of people, especially young people, to make a difference.

### 1.3 Can We Fulfill the Potential of Ourselves?

In today’s modern, heterogeneous and complex world, do we still hold great expectations? Do we still emphasize on rationality and respect the spirit of science? Do we still concern about spiritual cultivation and life values? How do we fulfill the potential as human beings?

Abraham Maslow set up a hierarchy of five levels of basic needs briefly physiological, safety, love, esteem, and self-actualization, and people are motivated to realize their full potentials and reach the highest level of self-actualization if the individual is in harmony with him/herself and his/her surroundings (Maslow 1943). Maslow explained his theory by a pyramid illustration that once individuals’ deficiency needs are met, they are ready to share with others and establish healthy relationships with other people and the larger world, then to achieve the next level until the top of the pyramid.

The question is, how do we establish meaningful relationships with other people and the larger world beyond the essential needs? Is education the solution? Is education simply about learning? Can technology fulfill the goals for us? How do we make theory and practice meet?

It was reported that last May a brain implant chip was being developed by US military researchers to restore a wounded soldier’s memory in one day. The science raised ethical concerns, for manipulating memories in people could open up an ethical minefield, ‘When you fool around with the brain you are fooling around with personal identity’, said Arthur Caplan, a medical ethicist at New York University’s Langone Medical Center (Sheridan 2014).

Anyhow, equipped with this technology, human beings may someday be born with a computer brain

with a whole library pre-stored. Going to school may no longer means to learn reading and writing and memorizing, it will be how human beings behave and how to apply the knowledge that matters.

Education is more a moral core on a deep level. It is about actions to attain self-actualization, to respect human rights, to foster global citizenship, to promote democracy, to understand each other in diverse social settings and to build lasting peace for our global family.

## 2. THE WISDOM FROM CHINESE EDUCATORS

In early 20<sup>th</sup> century, most Chinese educators and researchers experienced profound challenges and witnessed great disasters occurred in China. Enlightened by pioneer perspectives at that time, they connected Chinese education reform with the world trends, and had done creative jobs that initiated modern Chinese education system. Over the century, there have been persistent practices related to Chinese children's well-being and development. With fast growing economy and political development integrating with a long history of Confucius culture in China, Chinese educators are more committed and endeavor to make a difference in the 21<sup>st</sup> century.

### 2.1 Teaching and Learning by Living with Others

Human beings make progress by connecting to each other to build relationship and gain necessary developments academically, socially and emotionally.

With this context, classmates/peers play an important role in Chinese students' daily lives. The fact that Chinese students are always grouped into different classes according to communities and ages has brought endless resources for children, and makes the classroom a center of students' school life from preschool to 12<sup>th</sup> grade (Li 2014). It is similar to Waldorf educators' approaches which emphasizes that typically the children meet and form a group when they are six or seven years old and they remain together for the next eight years, spending nearly all of each school day together, doing the same activities at the same time.

At classroom level, more subsidiary groups can be formed by students and teachers such as the student government, clubs, duty teams, student NGOs, project teams, etc. At grade level, there are self-management commissions, friend-classes between different grades,

project teams, etc. At school level, there are student government, Young Pioneers commission, clubs, etc.

Besides the groups and teams, there is a wide range of choices and vast opportunities for children to collaborate with peers in or out of the classroom to study and learn to live together. More and more outdoor activities/events are available and institutions have been set up by Chinese government and NGOs in recent years. The Dandelion Plan 2014-2014 conducted by the MOE of China is one of them, which aim to involve more Chinese children in communities both in urban or suburban areas. By far the framework of Chinese children living with peers has been developed by Chinese educators.

Another important aspect with the context is that adults get themselves more involved into the children's life now.

For one thing, Chinese teachers are community-based at work. In a typical Chinese school, several teachers teach the same group of students, and there is a very important role named *banzhuren* who chairs the teacher group and handle the issues related to classroom life (Li & Chen 2013). The teachers are encouraged to care for all children regardless of their SES or achievement, which is deeply rooted at Confucius education and the current moral education culture.

Another thing is, Chinese parents have high expectations of their children as a tradition and they are willing to provide any resources for children's holistic development. In the process even migrant parents with very low SES are of no exceptions. The theory is confirmed by the survey that 'It's the parents who always care for the kid' (Li, Wang, Chen, Yin & Chen 2015). On site or out of site, parents are encouraged by educators to participate in school lives, and all children have accesses to their peers' parents (Li, Wang & Chen 2013). Parents are welcomed to participate in diverse activities of children, such as instruction and leaning, classroom community development, school based curriculum design and management, and school leadership for children to have more interactions with parents and get better understanding of the society.

Last but not least at this point, with the schooling reform, there is more community involvement into children education. With the support of major local officials, prominent academies, successful enterprises, and even strangers living out of town provide children with various resources. The first

author is now working with one elementary school and one district, aiming at creating a children friendly community for them to learn and to live in.

With these organizations and communities, Chinese educators help children to learn to live with others, including peers, teachers, parents, and people in the community and even faraway.

### 2.2 Teaching and Learning to Be by Action

It is important to understand the world, and more important to change the world or make a difference in the real-life situations. Such belief can be found from John Dewey's educational thinking about experience. As a philosopher, Cassirer regarded the "work" as the character of man which determines the circle of human nature (2004, p.87).

In terms of helping students gain vital media literacy, learn skills of critical thinking, systematical thinking, and have interpersonal and self-directional abilities, some scholars argued that 'students must be given opportunities to develop them in the context of complex, meaningful projects that require sustained engagement, collaboration, research, management of resources, and development of an ambitious performance of product' (Darling-Hammond et al. 2008, p.12).

In Chinese culture, action or practice is greatly valued. Dr. Xingzhi Tao, who is regarded as the role model for Chinese teachers in the last century, said that: 'we confirm that 'practice is the beginning of knowledge' is not to deny the possibilities of 'knowing by listening' and 'knowing by thinking', but to confirm that 'knowing by doing' is essential, and 'knowing by listening' and 'knowing by thinking' can be powerful only been based by 'knowing by doing' (Tao 1996, 140). On the other hand, all the thinking should return to the practice, especially the daily life, such as how to collaborate with others, how to involve into the activities of the nation, and how to make the world better.

In terms of student development, Chinese educators are endeavoring to help students to 'learn to be' by action.

First, to be a planner. Chinese teachers help students to develop the capacity of designing or planning, which is a key capacity to explore the potential of human being and the world. This leads to three directions: organization or community development, activity, and human development.

By classroom meeting, instruction time and after-school time, Chinese teachers encourage children to participate more on classroom level, school level and community level, and the typical projects are festival celebration events, student conferences, field trips and sports meetings that nearly all children have accesses to. The principal, *banzhuren* and teachers always encourage more self-design and leadership of clubs, groups or other communities. At the beginning of a semester, children are encouraged to have a new-semester resolution or to plan out for their self-development as a tradition.

All these educational efforts are made on a daily base, and educators are aware of its importance. In some high schools or some provinces, designing or planning is included in school based or district based curricula to equip students with the capacity.

Second, to be a doer. The capacity of carrying out the plan is crucial to fulfill potentials. It is based on several skills, especially skills of collaboration, problem solving and innovation. Actually, all these capacities are related to the complexity thinking and doing in the authentic situations (Morin 1996, 1999).

Given time, space, resources and teachers' support, Chinese students are encouraged to transform a plan into reality. For example, the first author did a case study on the students of one class who had planned to solve the traffic jam in front of the school gate. There were different stages in the process as Table 1 shows (Li, Chen & Zhao 2014):

Table 1. Process of Problem-Solving in One Case Class

Stage	Jobs
Problem Confirmation (Nov. 8 <sup>th</sup> – Nov. 15 <sup>th</sup> )	1. Notice and confirm the problem 2. Analyze the problem and exchange the findings 3. Assign the tasks to Team A, B, C and D
Problem Analysis (Nov. 18 <sup>th</sup> – Nov. 25 <sup>th</sup> )	1. Make plans by different teams 2. Design questionnaires 3. Conduct the investigation 4. Give the reasons of traffic jam: students and parents, school and community
Solution Planning (Nov. 26 <sup>th</sup> – Dec. 2 <sup>nd</sup> )	1. Work out an action plan 2. Exchange and modify the plan

Solution Execution (Dec. 3 <sup>rd</sup> – Dec. 9 <sup>th</sup> )	1. Team A and B deal with the issues of students and parents 2. Team C deals with the issues of school 3. Team D deals with the issues of community
Solution Evaluation (Dec. 9 <sup>h</sup> – Dec. 12 <sup>th</sup> )	1. Summarize in teams 2. Wrap up and evaluate each team at classroom meeting 3. Team A and B present the reasons of students and parents in a melodrama

Third, to be a thinker. Reflective thinking and self-renewal are greatly valued in recent decades. Teacher development by reflection may have inspired Chinese educators to create more occasions for students to do the same. These include class meeting, group assessment, teacher-parent evaluation and student self-evaluation.

Take the above case as an example, when the project of Solving the Traffic Jam was completed, the *banzhuren* encouraged every student to do reflection on the whole process, including self-assessment of achievement, what you learn from others and suggestions for the next project. This idea of education has been adopted by most Chinese schools already.

Combined with the above analysis, we can say that Chinese educators value “Actions” greatly, which is deeply rooted in Chinese culture, in the Theory of Max, in the Science of Complexity, and in the school reform of China.

### 2.3 Teaching and Learning to Be by Self-Awareness

Chinese culture values the awareness greatly, and there is a special concept: Sphere (境界). What does it mean here? It is the degree of self-awareness, to assess a person on his or her quality and state, whether working or living (FUNC 1948). In Chinese culture, the most valuable sphere is harmony between the heaven and human being.

The idea also applies to teachers and children in China. In Chinese education system, some aspects or qualities are always emphasized and required to be developed or valued.

The first part of the ‘sphere’ is about ‘Head and Heart Together’. Chinese people are encouraged to develop emotions with rationality, and to make life as

part of oneself. He or she should work with enthusiasm and love based on thinking and planning. In Chinese culture, there is a philosophy which states that the meaning of life is in morality, action and rhetorical. This philosophy is also what modern China is based on.

The second part is about ‘Thing and Person Together’. It is related to the belief that a person achieves the development by doing and then he can do the jobs better. Similarly, Collins focused the timeless principles of good to great, among them is ‘first who...then what’ (Collins 2001). Better working, better development. This sphere makes the educators and students more rich and rewarding, and learning is in everyday life.

The third part is about ‘Learning from the Nature and Fulfill the Potential of Human Being’. In the curriculum and everyday school life, Chinese educators teach students to respect nature and to experience the power of nature. The calling for green test core, green school and green life is a common understanding in today’s China with which Chinese educators are devoted to build harmony among children for them to respect, trust, care and love.

The mentioned aspects of ‘sphere’ are not detached from teachers and students, but embedded in their everyday lives. Educators and students are encouraged to have these ideas on mind and by heart to achieve the valuable ‘sphere’ by self-renewal as life-long education.

### 3. NEW EFFORTS OF CHINESE EDUCATORS

Chinese education is just a case in the global village, and the issues related to the fate of human being are emerging every day, which demands more international collaboration. Considering the situation, new efforts are demanded for Chinese education development.

#### 3.1 Development of Out-of-School Education and Life-Long Education System

Chinese education has made remarkable achievements and one recent example is that Shanghai scored No. 1 in PISA 2009 and 2012. But on the other hand, most Chinese children live in an isolated or quarantined world, or we say in an ivory tower, for they are detached from the communities since their parents and schools have very weak relationship with each other and keep the children a long distance away from the real world. In such cases, educators

should work together to change the situation and play a significant, irreplaceable role in contributing to future-oriented education and further reform.

One of the solutions may be that the off-campus-site education should have more support and make quicker development, to make children experience more in real life; the community should engage children into the practice of community leadership and life, to create a children friendly environment; and the family and school partnership should be valued, and more ways of accesses should be developed by teachers and parents. All of these will lead children to a brand new world.

In terms of life-long development, children should be taught how to learn in everyday lives. Adults, especially the youth, should participate more in children’s education issues, including the policy, leadership, resource providing, and pedagogy.

#### 3.2 Educational Experiment as a Way of Learning

With the quick development of the world, experiments of education reforms should be carried out by more educators, and it is a very important way of learning. The experiments include the system change, the educational technology development, and the reform of education culture.

More experiments should focus on children’s development needs, and reforms should be student-centered and student-engaged. As a country with the largest population of under the age 18, the education reform should take more of children’s well-being into consideration.

On the other hand, educators should focus on teaching the students how to learn, as well as the educator’s self-learning. In the complex context, people must face the new situation and deal with many newly emerging problems. The current and future world demands the new awareness and skill of learning (Crick 2014).

#### 3.3 Global Collaboration

After PISA 2009 and 2012, some western politicians and scholars turned their eyes to Chinese education. The fact is, Chinese educators have had greater interest in knowing and learning from the West till today, but with limited resources and accesses, especially lack of face-to-face dialogues and experience. In addition, there are still biases on Chinese education which calls for more mutual understandings and communications

from Western educators. Only collaboration will work in the global context, and more two-way learning will combine the wisdom and double the world.

The conference we are attending today opens doors and provides a great platform for communication. More topics should be discussed in the global context, and more dialogue should be conducted by all of us. Along with the scholars’ meeting, there should be more exchange-visits between principals and teachers. International organizations and local governments should support and promote more visits and collaboration at the school and classroom level, which should be the key of the education policy.

In conclusion, for our children’s development, for a better world, and for the future of the human being, educators should teach to be, and teach the students to ‘learn to be’.

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## *Session III: New Approaches in Education*

# Digital Culturally Responsive Pedagogy – New Challenges in Education

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## INTRODUCTION

According to the student-centered culturally responsive pedagogy, students' culture should be focused in education more seriously because success is determined by how close the forms of communication used at schools are to the forms of communication learnt within the students' family and community.

The ICT has developed digital culture. Students spend their free time on online platforms and some researches show the use of ICT in the classroom has a positive effect on their motivation. Therefore digital culture must necessarily appear in lessons in several ways such as topics of education, teaching approach, learning environment or developing competences.

In this conference paper we combined together the theory of culturally responsive pedagogy and digital culture in order to designate a possible new way of modern education: digital culturally responsive pedagogy. We hope that the extensive article and acceptance of our approach will make teaching more effective in the information society thereby establishing the future of a digital generation.

## 1. ICT IN EDUCATION

After the digital boom ICT have been used on various fields of life. For example nowadays we know e-government, e-business, e-health or e-learning in the world. The IT revolution is a big challenge for education in the 21<sup>st</sup> century. Firstly, online services can change days easier if people possess necessary digital competencies. Secondly, technology have changed the teaching, learning and acquisition of knowledge especially in case of the digital generation. Lifelong learning became dominant in information society independently ages of people (Nyíri 2009). So we can see why this topic is important in education.

iPad, mobilephone, videocamera – in our experience many teachers still do not like to use these devices in schools. What are they afraid of? Are they afraid that the outside world will appear in classrooms? Are they worried that ICT distracts students' concentration on textbooks and boards? The old methods are not sufficient in the age of modern

technology that is why teachers can reflect the new media environment which determine children's everyday experience and recalculate their methods if they want to educate people who can fit in easily in the 21<sup>st</sup> century. Therefore we must talk about the digital culturally responsive pedagogy which can be a new approach and a new method in education from kindergartens to universities.

## 2. THE DIGITAL NATIVES' COMPETENCY

Digital natives have modern mobilephones and tablets for communication or for entertainment but unfortunately there are some schools where the use of these devices are prohibited by rules imposed by the school itself. The other problem is that sometimes teachers cannot integrate ICT into their lessons because of their lack of digital competency so the new challenge of education is cardinal.

Tapscott (2001) and Prensky (2001) said that the digital generation is good at ICT and they know a lot of hardwares and softwares. But more current researches (Fehér-Hornyák 2010; Buda 2013) refuted these beliefs. Students like to use technology for chatting or entertainment but their digital competency is not appropriate for education. For example more students do not know how use the Internet to effective learning, say the new research results.

Web 2.0 is becoming bigger and bigger so we must learn how to use it with criticism. Therefore new methods are necessary in education because ICT-environment can motivate students to learn so teachers have to improve their competency and that of the digital generation. What should be the key to success?

## 3. NEW WAYS IN SCHOOLS: DIGITAL CULTURALLY RESPONSIVE PEDAGOGY

More and more experts are voting for culturally responsive pedagogy because it reduces the amount of problems raised by multicultural challenges at schools (Boreczky 1999). According to the student-centered theory, the development of students' culture should receive more attention in education because success is determined by how close the forms of

communication used at schools are to the forms of communication learnt within the students' family and communities.

The ICT and new media have developed digital culture. Digital elements are created in several ways, mainly using computers but these days mobilephones and digital cameras are widespread. These hardwares can record movies and voice. TV and radio have been transferred to digital platforms too so the media will be hybrid. Virtual worlds have been more and more important such as e-government or e-health. (Rab 2007). What can schools do in this case if students spend their free time willingly on platforms of social media and online games?

The World Wide Web is interactive and capable of giving feedback. It contains multimedia and gives opportunity for communication and playing. Web 2.0 is students' natural environment and some researches show that the use of ICT in the classroom has a positive effect on students' motivation (Namesztovszki et al. 2012; Fegyverneki 2014). Therefore digital culture must necessarily appear in lessons as education, teaching approach, learning environment or developing competences.

We put together the theory of culturally responsive pedagogy and digital culture in order to designate a possible new way of modern education: digital culturally responsive pedagogy. It is a constructivist method that focuses on students' knowledge and digital habits. Students' success is determined by the studied communication and contact with school or a similar proportion of interactions of students' families and communities. Students' culture is mostly digital therefore the concept of culturally responsive pedagogy must be extend to ICT/ new media by our view. It means that teachers use of ICT and new media in pedagogy consciously. All in all, the digital culturally responsive pedagogy is a modern adaptive pedagogy. It focuses on digital natives' needs and habits so that they will be successful on the labour market after school. So teachers should take into account that children come from a digital world and include some modern devices which should appear in lessons. So new methods would be needed but the main question is where and how teachers improve their digital competency to be modern teachers.

## 3.1 Idea of Students to Modern Learning

I was curious as a practicing teacher how digital natives imagine the ICT-based learning in a classroom of 30 students in a secondary grammar school. In this

experimental class we have used online mindmaps, online tagclouds, some presentation softwares such as Prezi, some collaborative webpages, blogs and our own virtual classroom in our literature lessons. Why? Because most students did not know these online applications. At the beginning at the ICT-based lesson I presented them. The students became motivated and shortly they made their presentations or blogs about some poets and they shared them with each other on the Facebook. Then, after half a year I asked the students to fill in an online questionnaire. The students said that they were happy because they could use some new softwares on the Internet.

In the next section I would like to give a short summary of the students' idea about ICT-based lessons:

*'Use more often the Prezi, tagclouds and mindmaps because it makes learning faster and easier.'*

*'There will be more educational films on YouTube in separate categories and there will be more pictures next to texts.'*

*'New designs and colorful letters should be used in books.'*

*'I like Wikipedia, but in my opinion it is dangerous too because of providing incorrect information.'*

*'I want to learn about Facebook in lessons and we can make Facebook profiles about famous people in literature and their sweethearts.'*

*'Social media is good for education because we can exchange information quickly from a big distance too.'*

*'It would be good if we did not have to go school. We would be at home and teachers would teach through computer.'*

## 3.2 Good Practices in Teaching: Mobile Learning Experiments of Institute of Media Informatics Eszterhazy Karoly University College, Eger, Hungary

Globalization, the Internet and media convergence redefined the contents and quality of literacy. So we learn new forms of literacy (Koltay 2010). New media is not only a device. This is a new view, an educational strategy. Sándor Forgó understood the concept of new media complexity. New media contains modern devices, World Wide Web, web 2.0 and individual and

community contents organization based data base. Manovich also said that new media is a narrative technique. Because there are more microcontents on the Internet and students can paste them together to a coherent narrative in learning situations (Forgó 2014).

The Internet is good for individual and cooperative learning. The Blended Learning means that schools and the personal contact, that is the traditional teacher-student relationships are necessary but we must teach the effective use of modern tools to be able to use them in constructivist learning on the Internet, too. Prezi, tag cloud or online mind mapping softwares are not only new to, but also necessary for education because the new media has developed new forms of literacy. We find many free online applications that can open up new ways to education. The quality of teacher training and practicing teachers' creativity depends on how these applications are integrated into their lessons.

Today there are good practices of ICT-based learning. The Media Informatics Institute of Eszterházy Károly College in Hungary have started a new unmatched school experiment in the practicing school of the college in 2014. The team of researchers and innovative teachers successfully introduced tablets into education which means that iPads have been used on some subjects and on lessons as digital bags.

The researchers were interested in whether spatial awareness, visual communication and students' creativity can be improved in a mobile communication environment. During the research the following methods have been used: spatial awareness test, e-Slide online testing system, GeoGebra and Creative Thinking Test.

28 teachers and 112 students got tablets including different operating systems. Teachers and students have spent 5-6 hours per week using the tablet in school and at home. Tablets have helped with the teaching and learning process and teachers started developing new applications for exams. Teachers say that tablets motivated students (Kis-Tóth et al. 2014). It can be a reference to other schools and teacher training institutions.

#### 4. CONCLUSION

Many new methods can be effective in teaching so we do not suggest that technology in education should be the only one. But we should not ignore the ICT and new media in schools because we have a

digital generation rising. IT lessons are not enough for students to learn the effective and fast information search, competency of digital citizenship or what e-safety is. Every teacher must work to provide the (digital) equality to their students. Therefore we hope that the extensive presentation and acceptance of our approach will make teaching more effective in the information societies thereby establishing the future of the digital generation. Digital culturally responsive pedagogy could be a good method to pave the way.

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## The Construction of a Socially Responsible University, through the Regionalization of its Presence in the State of Morelos

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*'The redefinition of university praxis in general is an inescapable and imperative future, but particularly one that determines the forms of relationship between the university and its environment, since this relationship is the foundation of their social legitimacy and autonomy'* (Albarran, Miguel).

#### 1. INTRODUCTION

Dr. Jesús Alejandro Vera Jimenez, Rector of the Universidad Autónoma del Estado de Morelos (UAEM) since its inauguration speech on March 14, 2012 introduced the idea that it was his intention that his rectory, which It concluded in 2018, will be characterized by the effort of building a socially responsible university.

The wires that have guided the process triggered by Dr. Vera Jimenez are four:

- a) Expanded coverage of the educational access.
- b) Regionalization of campuses throughout the territory of the State of Morelos.
- c) Social relevance of the services offered by the university, vocational training, research and the extension of them.
- d) Dialogue of knowledge through the different cultures that are spread in the Morelos state, and our university campuses.

This paper develops a critique approach, of the process detonated three years ago, the process itself, their achievements and their outstanding from the perspective of two students from different areas of the science. In The Universidad Autónoma del Estado de Morelos March 14, 2012 was a historic day, talking about the designation of the Dr. Jesús Alejandro Vera Jimenez as the Rector; he placed at the center of its proposal the idea of changing the paradigms that have ruled our education for decades.

Certainly at that moment it was shocking, but it was limited in the narrow confines of a rhetorical piece: the inauguration speech as Rector of the Universidad

Autónoma del Estado de Morelos. He should start the workflow of the new administration by beginning to understand the new meaning of the future horizon that's coming to us, the students.

Two points are relevant:

- The Dialogues for the University we want done on 7 and 8 May 2012 driven by the Federation of University Students Morelos (FEUM) and strongly supported by the university authority.

The approval by the University Council, the highest collegiate authority in the UAEM, of the Institutional Development Plan 2012- 2018, the December 12, 2012.

In the 'Dialogues for the University we want' participants, mainly university students but not limited to them, stood on various issues, such as: Risks and Challenges of the XXI Century University, The Role of Government in University's Public Education; The UAEM 2012-2018 Project; The New Approaches to Universal Education; The Social Function of the University; The Relevance of Research and Researchers in the social context; the Construction of University-Society Dialogues; Management Services We Want for the University; The New Role of the Federation of University Students of Morelos; Financing and Sustainability at the University; University Legislation; Technology in Education, insecurity and violence.

And what stands out from that experience is that for the first time in the history of the UAEM, student communities and university authorities agreed on an idea that has permeated the management of Dr. Vera, the idea of putting the students as the center of the soul of the university.

Another element that we consider important to underline concerns that months after these talks, in December of that year It was presented and

approved by the University Council Institutional the Development Plan 2012-2018 (PIDE 2012-2018), as students we realize that in that document, indeed, were reflected many of the ideas aired in the talks and that it was a fact that the door to pair to pair work was opened from then on, to lead projects.

In the UAEM we usually refer to PIDE 2012-2018 as our chart, it is a document of 185 pages divided into four part:

- 1) The Autonomous University of Morelos: its institutional profile and its philosophical and conceptual framework.
- 2) Diagnosis of institutional environment.
- 3) Challenges and strategic objectives.
- 4) Institutional policies and programs. Document.

This is an actually very rich in content that unfortunately is not widely known among the university community, we truly believe that a synthesis of the PIDE 2012-2018 should be disclosed to any and all freshmen students, teachers and researchers especially the first two groups where it becomes clear and explicit the social-political position of the UAEM.

For purposes of this paper, we will remark some contents of the 1st parts of PIDE 2012-2018, that surely will transmit a clear idea of their importance and significance:

*'The current crisis of the capitalist world is not just only economic, but also includes the concept of life and man that emerged in the West with the Renaissance, when it was believed that unlimited progress of ideas and science could solve all the problems of humanity. Civilizational crisis, essentially ethical, summarized in a single, tragic paradox. Dehumanization of mankind'* (Alejandro, V.J. 2013).

*'... The educational crisis is more than a problem of management, innovation and political expediency; is a loss of meaning which requires the creation and recreation of public institutions that redefinition and revitalize its social task. For higher education, this situation calls for a renewed public university, able to articulate, design and operate strategies to act in the world with social responsibility and commitment; forming autonomous subjects, dignified, caring, communicative, critical, principled, sociable and ethical senses, ready to become the cornerstone of an inclusive education project of the various dimensions of human life and capable of contributing to the development of public spheres, where lifelong learning*

*is the foundation of a new human development'* (Alejandro, V.J. 2013).

*'It is indispensable to read again the history of modernity and of our university in particular to recognize positive achievements, to guide our educational work towards the finding of a new cultural synthesis: not a new apology for the already existing modernity and that fosters individualism, but the reconciliation of the individual with the community; not to deny the reason and criticize techniques, to find the territories and areas where the university needs to work for the humanization of man and not against it'* (Alejandro, V.J. 2013).

*'We need to move towards a university that makes the educational act in ethical events that promotes life experiences, through which the student is formed as a social subject; a University of praxis that combines scientific knowledge with historical-political knowledge; not only committed to advancing in knowledge but that also that questions the ethical use that is made of them; it is not limited to formulate research projects or develop technically substantiated professional, it needs to produce competitive servers of the society, that are also committed to the values and culture of the society itself; 'human resources' that are able to overcome the risks of a dehumanized future of the economy at any cost, unethical success, progress without meaning and significance'* (Alejandro, V.J. 2014).

*'As a part of this picture of the future, our University will respond in the short term, to the major challenge of expanding their coverage and to do so with quality and social relevance. First by recognizing it and then working in the development in two ways: first, by critically adapting to the demands of the globalized modernization, preserving their own traditions, but reorienting its course offerings, research and ways of relating to the economic sectors and the state; assume openness, academic exchanges, the promotion of research and teaching quality, and contact with other traditions of national and international higher education, but to do so it is critical not to lose the cultural horizon. And on a second aspect, which involves a different view of Mexico, an inclusive vision of national development - as stated in the ANUIES - based on values of justice and solidarity with the most vulnerable and excluded sectors of the actual education and higher social groups; a vision committed to keeping force - in the context of globalization -. a congruent university project more in line with our roots and our problems,*

Total Enrollment per School Year, According to Educational Level (2011-2012, 2012-2013, 2013-2014)

LEVEL OF EDUCATION	STUDENTS ACCORDING THE SCHOLAR CYCLE			GROWTH OF THE STUDENTS NUMBER (2012-2013 / 2013-2014)	
	2011-2012	2012-2013	2013-2014	ABSOLUTE	%
High School	5589	6244	7976	1732	27.7
Bachelor Degree	14,860	16,830	21,734	4904	29.1
Postgraduate	1359	1417	1658	241	17.0
<b>Total</b>	<b>21,808</b>	<b>24,491</b>	<b>31,368</b>	<b>6877</b>	<b>28.1</b>

*to create another possible and better modernity'* (The Economy Magazine of México 2015)

The strokes of the PIDE 2012- 2018 have shown an excellent change in our daily life as students, and so we consider it is a priority to share the lead wires that have guided the process of redefinition of the Universidad Autónoma del Estado de Morelos:

- a) Expanded coverage of the educational access.
- b) Regionalization of campuses throughout the territory of the State of Morelos.
- c) Social relevance of the services offered by the university, vocational training, research and the extension of them.
- d) Dialogue of knowledge through the different cultures that are spread in the Morelos state, and our university campuses.

## 2. EXPANDED COVERAGE

The table and the graph below, taken from the Second Report of Activities 2013-2014 (7) data, are correlated to the expansion in the coverage by educational level.

-For the High School: from 5,589 enrolled in 2011-2012 to 7,976 in the 2013-2014 cycle.

-In the case of college education: increase from 14,860 enrolled in the 2011-2012 school year to 21.734 in the 2013-2014 cycle.

-In the case of postgraduate it went from 1,359 enrolled in 2011-2012 to 1,658 in the 2013-2014 cycle.

-The total for students in the three educational levels attending was that it went from 21.808 enrolled in 2011-2012 to 31, 368 in the 2013-2014 school year. That is the UAEM at this time, the broad coverage UAEM serving in the 2013-2014 cycle has 9, 560 more people than in the 2011- 2012 cycle.

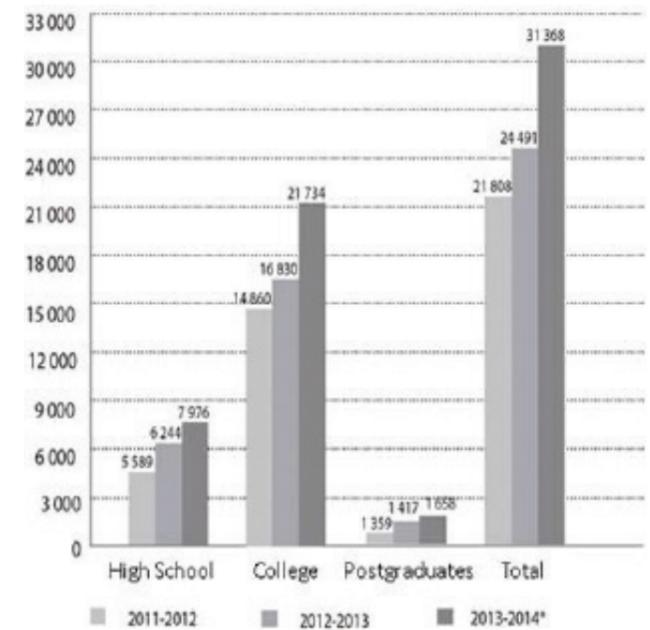


Figure1. 2011-2014 Enrollments of Students  
Source: General Direction of School Services in the UAEM.

The numbers are impressive by themselves; they undoubtedly speak of a determination to walk in the direction of a true inclusive university, however it becomes more relevant if we consider the context in which the youth in Mexico operates.

The 2013 Education Panoram Report of the OCDE reveals that 24.7% of young people from 15 to 29 years old in 2011 were ranked as none workers neither students, a phenomenon that has virtually maintained that level in a decade, it indicates that there is a 'structural failure' (Alejandro, V.J. 2014).

What it means it's that in Mexico 24.7% of 15- to 29 years old people are at high risk, which have unfortunately seen to be true by them becoming many of the young recruits for the drug traffickers, working as the minions of their violence. We are convinced that the efforts made by our university to expand its quota, expand its coverage is a major contribution to

the youth of my state, it is a great contribution to the youth of my country.

We believe that the authorities, both of my state and my country, should understand that supporting higher education by a real and effective way to expand their coverage is to give an opportunity for many young people to leave the risk area in which today they are unfortunately found.

### 3. REGIONALIZATION OF THE CAMPUSES THROUGH THE TERRITORY OF THE STATE OF MORELOS

The Universidad Autónoma del Estado de Morelos understood that it is highly relevant that we must tear down the walls that separate us from the rest of the society.

The University, often said by Dr. Jesús Alejandro Vera Jimenez, should mimic the society that is their *raison d'être*.

In this logic we are working as our Rector says: 'in building cloisters scattered through the geography of Morelos University we seek to reunite us with the community work. These spaces allow us to build a more horizontal, close and committed relationship of UAEM with their social environment, communication and mutual learning, to provide a constant dialogue and exchange of knowledge between equally important stakeholders: researchers, teachers, students, farmers, housewives, NGOs and, in general, with other historically absent from university life actors. It is, in short, spaces and communities, where the university actors and social actors interact in a process of collective construction of new social realities that must be boosted essentially from a work of university extension resignified and renewed, taking into account the heterogeneity of logic, interests and development processes of social and institutional groups involved and, in general, the complexity of social reality. Thus, the actions of extension will, on the one hand, transcend linear schemes of work that have historically favored the fragmentation of knowledge and isolation of the substantive functions, educational programs and institutional units and, secondly, foster the articulation of these functions, programs and units with environmental issues in a dialectical process of communication and interpretation of knowledge, where society benefits of academic products and, in turn, contributes to the recreation of these.'

We would add that this idea of regionalization UAEM campuses throughout the territory of Morelos

contributes, from our point of view, to strengthen the social tissue, to give strength to the family nucleus and recreate the community life of the people of Morelos.

Many young people today are forced to leave their people to have access to higher education and this undoubtedly has economic costs but also lead to family and community disintegration.

The challenge on the regionalization is to maintain and strengthen the sense of identity and belonging to the UAEM, the 'We are all UAEM' we chanted in various public demonstrations has to be a true, true pun and must incorporate this truth to the habitants of the regions where the UAEM is made.

In the past the Autonomous University of the State of Morelos had its own facilities in 12 municipalities and in the course of the last year it has increased to 22, it is important to mention that the state of Morelos has 33 municipalities.

### 4. SOCIAL RELEVANCE OF THE SERVICES OFFERED BY THE UNIVERSITY, VOCATIONAL TRAINING, RESEARCH AND EXTENSION

In the 2013-2014 school years, seven new educational degree programs were opened:

- Applied
1. Sport Sciences
  2. Political Sciences
  3. Intercultural Communication and Management
  4. Design
  5. Tourism
  6. Theatre
  7. Social Work

Of these new educational programs, Dr. Vera says in its 2<sup>nd</sup> Report of Activities 2013- 2014, that:

*'The relevance of these educational programs recently created it is to provide tangible answers to social needs that demand the attention of the knowledge society to support the actions implemented in the state and in the country. With them, we aim to reduce some of the problems that we live with great intensity, such as malnutrition, overweight and obesity through nutrition programs, sports training, comprehensive health promotion and scientific research in this area. Furthermore, aspects of systematic understanding of the government in its broadest sense are addressed, as are the origins and types of political regimes, their structures, functions and institutions, promoting actions and interventions*

*that consider mediation Cultural conflicts, cultural heritage management and biodiversity, and the rescue of local knowledge, assessment and use for the benefit of diverse cultural communities, in an intercultural context. We also aim to promote work with diverse communities, marginalized and vulnerable groups of the entity, in addition to addressing issues related to the transformation of physical and historical space, space planning, the promotion of culture and arts in the state and, Finally, harmonization and functioning of the tourism sector.'*

In addition to what was said by our Mr. Rector we would add that, indeed, there are evidences that are relevant in the sense that he gives and they all had a significant number of applications in our social tissue.

Another area which is extremely relevant is in the reorientation of the research on the most important problems of society in general but particularly of Morelos.

As students at UAEM we feel very proud when we see that our teachers and researchers are quoted in the media as experts' voices against pollution problems, agricultural development, violence, security, administration of justice as this makes us feel we are part of a very well positioned institution that is serving since its specificity to society.

### 5. KNOWLEDGE DIALOGUE

Among the more radical approaches that today are made at our university we can remark a very important effort for the knowledge dialogue position in the development of the state.

And we say that is the most radical because it rips away the hegemonic thinking that gives scientific rationality the monopoly of knowledge, the pseudoscience that destroy and marginalize the traditional knowledge, the ancestral knowledge, and the knowledge that is coming to perpetuate the traditions that built our society.

This is definitely a line of work that will surely enrich the immersion of the University in communities and towns of Morelos.

In this context there were created 3 forums, 3 meeting called 'Political Dialogues for Public Safety' on those there were involved various stakeholders of our social environment.

In October last year the International Forum, Community, Culture and Peace was made and so far this 2015 there have already been two regional assemblies of towns and communities of Morelos accompanied by the UAEM, preparatory of a State Congress Communities and Peoples of Morelos to be held in April.

### 6. AS A FINAL REFLECTION

Building a socially responsible university it's not an easy task, it is indeed a huge challenge which requires within the university community strong leadership, based on coherence and consistency.

We understand consistency as the lead for the entire institutional act in the direction that our roadmap poses.

We understand consistency as to match these with the facts, we are saying we do.

Today at the UAEM we think we have a leadership that inspires the authorities in every university level, to us we are challenged to that apply these changes at the level of the Federation of University of Morelos Students, what we say here it is that's our challenge and is our commitment, understanding as Octavio Paz says in his poem 'Carte de Creencias': maybe to love is to learn how to walk in this world.

We were learning to walk through this world, we loved life and that is why we are not alone we are many in Morelos, we are many in Mexico and we are many the world, we are talking about young people that want to put in the center of the table the love of life and from there rebuild ourselves as a society, as an integral humanity.

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## Education for Sustainable Development through Short Term Study Tours

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### ABSTRACT

Sustainable development is on the agenda in 2015 as the mixed achievements of the MDGs (2000-2015) are assessed and the new SDGs are negotiated for 2015-2030. There is much work to be done especially in South Asia, Sub-saharan Africa (SSA) and Oceania, and a focus on gender and equality is needed. Education for Sustainable Development (ESD) focuses on the contribution of higher education to engaging students of the rich industrialized North in the challenges of the South. However, finding affordable time and occasion in crowded fee-based courses to do this requires some thought. Among the many options available, short term study tours allow many students to engage practically with ESD. In this paper I review the global agenda of sustainable development and the need for universities to engage with ESD. I then illustrate the challenges and opportunities of ESD through study abroad with reference to recent social impact tours to from Australia to India.

### 1. EDUCATING FOR NEW GLOBAL SUSTAINABLE DEVELOPMENT AGENDA

This year marks the final milestone for the MDGs (2000-2015) and the promulgation of the Sustainable Development Goals (SDGs), which will provide global targets for the next fifteen years (2015-2030). According to most reports progress has been made with the MDGs but major challenges remain (United Nations 2014) especially where South Asia and Africa are concerned. Equity and the achievements for women, e.g. maternal health, employment participation and reward, also remain concerns. Meanwhile future population growth, predicted to peak mid-century around 9 Billion, will be mainly distributed in developing countries – both low and middle income, e.g. China, India, Brazil. In economic as well as social terms the ageing demographic dominating OECD countries will leave the rich North dominated by the rising middle income countries. Growing energy demands, middle class consumption, and other drivers will bring greater pressure on the environment and while technology innovation may offer some respite more dramatic changes in lifestyles to achieve sustainable development (SD) will be warranted.

How should we educate the current and future generations for this new world? There is some evidence that universities globally are taking a more systematic approach to teaching about sustainable development (Wals 2014) but much remains to be done. The complexity of the SD issues alluded to above suggest an interdisciplinary education focused on understanding not only the future trends but especially the environments in the South, e.g. India, where the future is being written and where still much remains to be achieved. This would include new funding modalities, e.g. micro-finance, complementing donor investments, and social enterprise and affordable innovation (Melles et al. 2014). Notice in the rich industrialized nations is being taken already of such trends. For example, the NESTA Foundation study of future relations with India is entitled ‘Our Frugal Future’, in an allusion to the low cost ‘frugal’ innovation that has become a trademark of that country (Bound & Thornton 2012). Considering the trends and issues, the agenda for Education for Sustainable Development (ESD) must engage not only with generic sustainability issues of climate change, energy demand and renewables but must address the social, economic and ecological side of the equation.

### 2. EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

The UNESCO 2012 report (UNESCO 2012) calls ESD a ‘unifying theme for many types of education’ and a ‘catalyst for education’. In the context of the recently concluded ESD decade (2005-2014) UNESCO defines the broad agenda of ESD as follows.

Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way.

This a broad mandate for all levels of education that aims to develop SD literacy with a view to informing action. It is an agenda which has already been addressed in a variety of more or less successful ways. Certain OECD nations, including Germany, have shown leadership in developing and funding ESD. Thus, here in Germany the BLK 21 programme for ESD in schools engaging 65000 pupils (between 1999 and 2004) in a holistic and participatory way with SD appears to have achieved impressive results. In comparison with their peers, 'The pupils in the BLK programme '21' can make better use of opportunities for taking action: three out of four pupils are better able to assess whether products and services are 'sustainable'. More than two-thirds believe they can convince others of the necessity of sustainable development, and more than 75% have learned what they themselves can do to promote sustainable development' (de Haan 2006, p.28).

In Denmark success in generating attitude change through ESD programs at different education levels is linked to an action learning approach that aligns with the Humboldtian notion of Bildung in which education is holistic (multidisciplinary) lifelong learning; this contrasts with a skills and competence approach alluded to above. In Denmark 'a central element of the approach is to be critical of moralistic tendencies, preconceived ideas and hidden agendas when working with environmental education, health education, ESD or other teaching ... Rather, the action competence approach points to democratic, participatory and action-oriented teaching-learning that can help students develop their ability, motivation and desire to play an active role in finding democratic solutions to problems and issues connected to sustainable development' (Mogensen & Schnack 2010, p.62). Thus, holistic, inter-disciplinary, informed, participatory engagement with the personal and social conflicts of SD (e.g. Lundegård & Wickman 2007) seems essential to a quality ESD agenda.

In the light of this, it is worth asking how higher education is tracking with the ESD agenda and whether the UNESCO claims above are more aspirational than real. One obstacle is that educational institutions tend to be conservative agents of change and increasingly driven by overcrowded and skills-oriented curricula. Thus, Bonnet (1999) notes that the promotion of a mindset will entail education going deeper than surface critique of symptoms into questions of lifestyle, 'Pollution and depletion are symptoms not causes. It is prevailing values and social/economic/political arrangements that give rise to them. If we are to enable pupils to address the causes

of environmental problems rather than the symptoms, we must engage them in those kinds of enquiry which reveal the dominant underlying motives that are in play in society' (Bonnett 1999, p.323); Vare and Scott (2007) refer to this current 'surface' skills based approach and call for more focus on building capacity to think critically about what experts say and to test ideas, and exploring the dilemmas and contradictions inherent in sustainable living. Implicitly they argue for a balance of practical engagement and theoretical reflection.

What is true for schooling in general is also true for the challenges and rigidities in higher education (Down & Lorna 2006). One issue is the need for a common language across the university and commitment to the ESD agenda from faculty (Cotton et al. 2007). Another is the education system itself. Thus Venkataram (2009) doubts that the piecemeal competency oriented (e.g. Barth et al. 2007) approach to ESD in higher education is adequate. Rather he argues for a focus on sustainable development as a way to modify individual and societal lifestyles toward protecting the environment and achieving social equity; thus, a more radical transformation of (higher) education is required, he claims. Another reason for the slow pace of change, the slow pace of ESD change is attributed to disciplinary silos do not easily allow for inter-disciplinary courses and learning (Cotton et al. 2009). In the light of such challenges, especially those calling for systemic institutional and curriculum change, there may be more immediate 'bottom-up' ways of engaging students with aspects of sustainable development, especially the social impact dimension.

While the economic and environmental messages of sustainable development have a robust history, the social dimension and the more recent focus on inequality and distributional issues has been the most recent to develop (Narayan et al. 2013). This is perhaps because addressing inequity and poverty entails challenges to neo-liberal economics and a conventional eco-centric conservation focus. The social dimension of SD has come to attention recently due to rising inequality and failure to achieve progress on the global social indicators – the MDGs - as evidenced by the latest (2014) report card. This shows insufficient progress especially with respect to gender equity and equality as well as regional failures. This mixed report card has also been the subject of a recent book by Sen and Dreze entitled *An Uncertain Glory: India and Its Contradictions* (Drèze & Sen 2013); an apt title for the relatively poor social outcomes in India by comparison with many of its Asian neighbours.

How should higher education respond to these challenges? How should we sensitize the present and future generation of students to this changing world? In a mass higher education environment with a crowded curriculum we must find pragmatic solutions to expose students of the rich industrialized North with development realities in the South. This includes developing a better understanding of socially responsible design (Melles et al. 2011). Many opportunities already exist for direct action by students through volunteer work on specific projects. Another worthwhile goal is educating students to understand the multiple socio-economic and cultural constraints on North-South collaboration. While conventional education in the relevant disciplines will remain important, we must ask whether there are other more direct ways of exposing students to the complex challenges of balancing the human, economic and ecological demands of SD. Student mobility and study tours focused on social impact offer one way of achieving this.

### 3. STUDY TOURS WITH DEVELOPMENT AND SOCIAL IMPACT FOCUS

The drive towards internationalization in universities is influenced by a number of factors that are more or less associated with or sympathetic to ESD (Stier 2004). Globalization has been a powerful force also in driving mobility as a measure of success for students and institutions (Rizvi 2011). Promoting student (and staff) mobility, which can have a positive effect also on institutional reputation (Sison & Brennan 2012). Given geographic proximity exchange especially since the Bologna process in Europe is widespread. In Australia travel to Europe and America is popular but costly by comparison with Asia.

Despite the fact that long term study tours (at least a year) are seen as essential for durable change and development among students, there is evidence that shorter term mobility can have significant if not equal effects (Dwyer 2002). The effect of the in-country experience goes beyond just consolidating theoretical knowledge of a specific topic and can have a more profound effect on cultural attitudes (Lumkes et al. 2012) and for the development of global citizenship or awareness (Tarrant & Lyons 2012). This seems true generally but also specifically for tours with an SD or related focus. Thus, for example, Cusick (2009) describes a program integrating a focus on climate change, biodiversity, indigenous culture and rural sustainable development in New Zealand. Another recent study shows a significant effect on the

development of a sense of global citizenry from study tours in the region with a sustainable development focus (Tarrant et al. 2014)

#### 3.1 Study Tours for Social Impact: Swinburne University

While Europe and the Americas dominate as destinations for student mobility nationally, there is growing interest in Asia as a destination, and this is where there is particular potential for ESD. This change has also been driven by the New Colombo Plan and promotion of mobility to Asia in general, including mobility funding, by the Australian Government. Most recent statistics show more than one third of all overseas exchange is now short-term mobility. These tours have taken a variety of forms and focus but in most cases combine practical engagement with academic work on the premise that activism itself is insufficient to develop the intellectual critique and reflection necessary to understand SD in context. In light of a general commitment to community engagement and social impact, Swinburne University, has developed short term study tours with focus on social impact. In the two cases that follow, two tours with a more theoretical and practical focus respectively are described to illustrate.

##### 3.1.1 social impact in Southern India

Having worked on teaching and research projects together with IIT Madras Centre for Social Innovation (CSIE) and keen to develop this relationship, I developed a tour for an interdisciplinary undergraduate group with several partners to Tamil Nadu, which ran in January 2015. A previous report on social impact tours had signalled potential for tours with a design focus and this was an additional impetus for our credit bearing project (Kellerman 2014).

The tour was funded largely by a Government mobility grant, which subsidised student costs for travel \$2000 per person. Students received credit for one subject to their degree and spent three weeks in Southern India and three weeks on assessment and learning in Melbourne (one week pre-departure and two weeks post-return). For assessment they had to write an essay using given sources on social impact, social innovation and social enterprise in Southern India; the concept of sustainable social business was a particular focus of the tour. This was complemented by a photo journal (at least 100 images) and narrative during their in country field stay – typically delivered with Instagram or Facebook - and a group presentation (five members in each group) and written report

(5000 words) on their experience with a focus on evaluating the different enterprises and organizations they encountered.

Thus, the focus was reflection and critical evaluation of key concepts through experience-based learning for a group that had little or no experience neither of the environment nor of the theoretical and practical questions. In my view, it was important as a first step to expose students to a range of enterprises and organisations engaged in various ways with promoting social impact so that they would return with their own evaluation of the challenges and opportunities, and an informed basis for their future decision making.

During their stay in Tamil Nadu we worked with an environmental organization CERES for the first week in a Forest area – Pitchandikulam – where community, social business and environmental projects are being conducted under the leadership of local and foreign experts (<http://www.auroville.org/contents/794>). Two groups of students were charged with redesigning a space where women's groups sold products and services sourced from the Bioregion. These two ideas were presented to relevant community leaders from SEDAB (see <https://www.youtube.com/watch?v=CKIeiOkIGbY>) and provided input into future development plans.

Included in this visit was a tour to Nadukuppam Education Resource Centre (<http://www.pitchandikulamforest.org/cms/content/view/35/45/>) where ESD with a conservation focus is taught. The following two weeks were spent in Chennai and surrounds visiting a range of institutions and individuals, engaged broadly in social enterprise. Through lectures and seminars from relevant representatives, students were further exposed to social startup investors, e.g. Chilasa (<http://chilasa.org/>) and on-going community enterprises, e.g. the Tribal Health Initiative (<http://www.tribalhealth.org/>), with a broad mandate (see Prabhakar & Manoharan 2005). Two organisations linked directly to IIT Madras were also visited – the Rural Technology Action Group (RuTag see <https://sites.google.com/site/rutagtn/>) and Ivil (<http://www.ivil.iitm.ac.in/>), the latter a student lead enterprise employing different methods to make a difference. These organisations were kind enough to explain their aims and difficulties and listen to the ideas of undergraduates with limited experience on what they thought might be possible. These briefings, including from Villgro Foundation (<http://villgro.org/>) a rural-focused social startup incubator (see World Bank 2014), were complemented by attending

lectures and talks based at IITM campus within the Centre for Social Innovation and Enterprise (CSIE) minor course. During the last week in-country we spent two days at an NGO called the Rural Institute for Development Education (RIDE see <http://www.rideindia.org/>) in Kanchipuram focused on supporting enterprise through women self-help groups and promoting children's nutrition and primary education.

The intention overall was to expose students to a range of organizations engaged in projects and processes with social impact ends whether or not they classed themselves as social enterprises; students also had some opportunity on weekends to travel to local beaches and towns. The quote below from one of the students captures in my view a general sentiment among the group of engagement through difficulties.

Travelling in India was a phenomenal experience. I had always been curious to explore the country, as I have a desire to volunteer on community projects ... I'm so grateful to have been able to engage in discussions with entrepreneurs, work on projects that may assist with development in the future, and merely chatting with children who gained so much excitement and joy from the experience. Through the madness, crazy driving, dirty & dusty streets, and difficulties with communication I still say go and return with an altered outlook on life. (LH)

While I was in general pleased with the outcomes of the tour and the effect on students, judging by their comments, I drew two conclusions for further work. First, a group with background in the relevant areas, e.g. social enterprise, social innovation, human-centred design, and so forth, would have benefited in more ways from the tour. The second conclusion was that a link to a single project during the tour, interspersed with other visits, would have helped achieve some depth that was not possible with a portfolio approach. Such a tour at the postgraduate level is currently being planned.

### 3.1.2 IT for social impact

The second example of a social impact tour in the IT area follows. The tour has a more practical focus than the previous tour, providing an interesting contrast, and there was less of a focus on social enterprise.

In early December 2014, a group of 7 Swinburne University of Technology IT students and a staff member undertook the IT for Social Impact Study Tour through India. The aim of the program is to apply IT knowledge to sustain existing IT

Implementations and identify opportunities for new IT solutions, in collaboration with the community, in order to sustainably promote and facilitate equality, empowerment and education.

The IT for social impact tour was the second in 2014 for Swinburne University of Technology IT students and staff. An earlier tour journeyed to the village of Pal in the remote tribal region of Maharashtra State where technology audits of village schools were conducted, fixed and installed computers and weather stations and began the process of outreach and engagement between Swinburne, CERES Global, Satpuda Vikas Mandal (SVM – our host NGO) and the communities of Pal and surrounding villages. The follow-up tour continued with the audit, repair/install process and additional activities such as trialling proof-of-concepts of two particular technologies (Kano and LibraryBox (see below), the conducting of hands-on workshops with children of the Mumbai Red Light District and from schools in Pal, Khiroda, Mohamandli, Jamnya and Lohara and conducting a social/IT audit of Pal and surrounding village schools. Along the way other experiences were included such as meeting an Internet Kiosk 'entrepreneur' in Pal, an invitation to meet the Guru from the village Hindu temple and participate and observe one of the village's religious festivals.

The LibraryBox is a walking digital library. Designed for use 'Off the grid' it is a portable digital file distribution tool It has a Wi-Fi signal which any Wi-Fi capable device can connect to. From there, devices can access a variety of content stored on the platform. This device has great potential in remote village schools which may not have access to the Internet but which have students who have mobile phones. The team had one LibraryBox as it was intended to be explored as a proof-of-concept. Based on the student's and village school staff feedback, the device was a hit and others will be gifted on the next study tour. The device was purchased through the Kickstarter program (the world's largest funding platform for creative projects <https://www.kickstarter.com>). The Swinburne students believe they can replicate the devices and quite possibly teach the high school students in the village schools around Pal how to build their own devices through future workshops. For many of the students the experience was memorable. One student in particular focused on the value of the social audit they did:

*'...the biggest positive social impact we had while we were there was really laying the groundwork for future groups with the Social Audit. Our 2 week trip*

*was really only the start of hopefully a long ongoing process of catching Pal up with the rest of the world. I think the social audit was the required framework for that ongoing process and I think the audits + the work we'll do analysing it over the coming weeks will have more social impact than we can count for at the moment.'*

### 3.2. Discussion

Short term mobility study tours offer students a taste of the challenges of SD in low and middle income countries. A mix of theoretical and practical work in groups can be a valuable prompt to rethink one's own assumptions and thinking. Feedback from tours to date have shown such tours with a social impact focus having a mid-term impact on student thinking. The current restrictions of mass higher education make it difficult to engage with such issues but we believe that the ESD agenda may be addressed also even if partly in this way.

### 4. CONCLUSION

This year is a significant milestone as the global SDGs are put in place to determine global goals for the next fifteen years (2015-2030). Much work remains to be done to achieve an equitable and sustainable future. Education for Sustainable Development (ESD) has the broad mandate to educate future generations to global needs and aims. To do this successfully requires not only theoretical but also practical engagement with low and middle income economies in transition. In the context of the crowded higher education curriculum short-term study tours with a focus on social impact and enterprise offer a perspective on a trend to economically sustainable models of enterprise for the South, which are gaining ground. While more practical engagement with specific projects is possible, as illustrated above with the IT for Social Impact study tour, more reflective and 'theoretical' programs also help students to understand the challenges and opportunities for developing world engagement.

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## Culture and Technology: The New Alliance. Teaching Humanities at Technical Universities

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### 1. INTRODUCTION

Multi-disciplinary approach has become a reference point and a major challenge of today's education. But this challenge may also be regarded as a solution in teaching humanities at a technical university, because it explores the points of intersection between diverse fields and ways to integrate various modes of discourse and analysis.

A number of humanistic subjects are offered to engineering students at present-day Russian higher educational institutions. The discipline of Culturology is among them. It is a quite specific discipline for Russia, it was institutionalized after the dissolution of the USSR and was to neutralize the Marxist load of the humanities. The unbiased idea of culture was chosen and put in the forefront. While in Soviet paradigm society was divided into classes and parties, each fighting for power and supremacy, culture had the potential to unite people and transcend social, national, and historical divisions. So, the mission of Culturology was to offer integrative knowledge of the various aspects of social life. It was called upon to realize the idea of wholeness. In this discipline the idea of culture is broadly construed, and is represented as all forms of human being. Thus, the discipline of Culturology is concerned with building universal philosophical models of society and culture; with investigation of specific characteristics of historical types of societies; with investigation of national cultural specificities.

A strategy that may improve students' involvement and interest in cultural and social matters, as well as their global awareness, is a course of cultural history of technology. This approach extends beyond registration and listing of inventions and major turning points in technology and science, and offers an integrative holistic vision of societal changes brought about by technology, aesthetic and cultural response of the public. Major questions addressed in the course are: What are the effects of technology on society and vice versa? What are the political implications of knowledge distribution and science development? What are the strategies of cultural and symbolical appropriation of technology? The content of the

course focuses on the topics relevant for engineering students, and at the same time engages in broader cultural, social and historical problems. The topics of the course will link technology to the problems of modernity, national identity, gender and aesthetics. In the following paragraphs basic thematic fields of the course will be introduced.

### 2. HISTORY OF THE CONCEPT OF TECHNOLOGY

The history of usage of the concept highlights the transformation of the intellectual milieu, the history of the concept reflects social history, helps trace the paradigmatic shifts and observe cultural transfers and exchanges. There are a number of researches that examine the history of the concept with the use of conceptual history (or Begriffsgeschichte), whose proponent was Reinhart Koselleck. The idea of this approach is to identify relevant layers of meaning within the concept and through tracing the shift of the layers identify periods of semantic transformation, and thus, correlate them with the specificities of national history. This approach is attentive to the establishment of modernity, when the scientific and scholarly lexicon was shaped, and when concepts of enduring importance emerged or transformed and acquired new meanings. In Koselleck's interpretation, the 'new time' began when instead of describing the 'domain of experience,' the newly emerging concepts became oriented toward a 'horizon of expectations' (Koselleck 2004). According to Koselleck, this period (saddle period or Sattelzeit) took place from the middle of the 18<sup>th</sup> century to the beginning of the 19<sup>th</sup> century. Before the 18<sup>th</sup> century the concept of technology was associated with the Ancient 'techne'. In Antiquity oral art was united with other kinds of art and craft, they were linked through designations that originally referred to the craft of carpenter and weaver. In Plato's 'Teetet' thought was metaphorically compared to interweaving of threads. 'Techne' functioned both as art of word (which was fixed in Quintilian's rhetoric), and as craft. Up to the 18<sup>th</sup> century the concept of technology in the majority of European languages as well as in the Russian language had a meaning linked to grammar, language and rhetoric.

A whole cluster of words that would later compose a thematic field around the idea of technology underwent similar transformation in the same period. The word 'industry' used to mean guile and cunning. 'Art' correlated with ancient Greek 'techné' and defined rhetorical skills. The words 'creator' and 'creation' in the 18<sup>th</sup> dictionary of the Russian language referred only to God and the poet – those who could make something 'ex nihilo'. Only in the 19<sup>th</sup> century did these terms become abstracted and specialized, such that they could be reoriented to the designation of industrial society and material production.

In the 18<sup>th</sup> century 'technology' started to be associated with mass production, machines, and engineering. At first, it meant a study or a science of production, but later it became associated with machines themselves. In his essay, Eric Schatzberg researched the history of the concept in the US; he shows that the German discourse of Technik helped to transform the American concept of technology, shifting its meaning from a field of study to the object of study. Torstein Veblen turned technology into a sophisticated concept central to his critique of capitalism. Through this, the term turned into an extremely powerful category that embraced the ideas of control, domination, system and power (Schatzberg 2006). In the English language, especially in 20<sup>th</sup> century America the concept was perceived as symbolical sign of national dignity and pride. In Russian philosophical tradition 'technology' was used to denote human activity and human practical attitudes toward nature. In Soviet period the term obtained axiological and ideological load, it was linked to American power and experience. The usage, connotations and meanings of the concept changed together with the transformations of Soviet attitude to America. From a symbol of new revolutionary culture and a force capable of making a 'New Soviet Man' (as conceptualized by Alexei Gastev), it transformed into a dangerous bourgeois term tainted by capitalist ideology (Nikiforova 2015).

### **3. THE ROLE OF THE USER. DOMESTICATION AND SYMBOLICAL APPROPRIATION OF TECHNOLOGY**

Recently the paradigm in history of technology shifted from studying technology as a 'black box' dominating the society and affecting individual lives, to looking at the transformative capacity of users and non-users to influence on and construct technologies. Before any new invention becomes a standard part of everyday life it passes through a complex transition period that refines and shapes the understanding

of technology. There is a methodological frame to analyze this complex process which is domestication theory. It was developed from the 'social shaping of technology' perspective, where the user is perceived as having a dominant role in defining the nature, scope and functions of the technology (MacKenzie 1999). The idea of domestication appeals to the metaphor of taming wild animals, the domestication of technology refers to the process where users bring an artifact from the public realm to the private and gain control over it. New technologies have to be transformed from 'unfamiliar, exciting, and possible threatening things' into familiar objects embedded in the culture of society and the practices and routines of everyday life (Silverstone & Hirsch 1992).

According to the constructivist approach, technology may be understood as a set of meanings constructed and ascribed to it by different social groups. This came to be known as a technology's 'interpretive flexibility'. In a study of the development of the bicycle, it was argued that elderly men and women gave a new meaning to the high-wheeled bicycle as the 'unsafe' bicycle, and that this helped pave the way for the development of the safety bike. Eventually, a technology stabilizes, interpretative flexibility vanishes, and a predominant meaning and a predominant use emerge (Bijker 1995).

The most interesting thing for the researchers is that what users actually do with technical objects does not necessarily coincide with the ideas that producers have ascribed to it. Madeleine Akrich and Bruno Latour developed the concept of 'script' theorizing relationships between users and technology and showing the obduracy of things. The concept of script tries to capture how technological objects enable or constrain human relations as well as relationships between people and things (Akrich & Latour 1992). Akrich suggested that in the design phase technologists anticipate the interests, skills, motives, and behavior of future users. Subsequently, these representations of users become materialized into the design of the new product. As a result, technologies contain a script (or scenario): they attribute and delegate specific competencies, actions, and responsibilities to users and technological artifacts. The script approach makes users more visible as active participants in technological development and emphasizes the reciprocal relationships between objects and subjects. Thus, users may apply creative scenarios (like American farmers who used to adjust Ford Model T as stationary power sources; or the tradition to listen to operas by the telephone in the early days of this technology), and practices of resistance (like the

prevention to put power poles in rural areas for their uncertainty and strange looks).

There has been a number of researches on the history of electricity that focus on cultural context of usage of this technology and symbolic work, in which people create symbolic meanings of artifacts and adopt the meanings inscribed in the technology. David Nye in his book on electrification of the USA at the turn of the 20th century, mentioned that 'electrification is not an implacable force moving through history, but a social process' (Nye 1990, p. ix). Electrification should not be called an abstract transformation, but rather as a series of choices – technological cultural and social. Electric lighting transformed the urban landscape, its texture and visual organization, it let humanity control the rhythms of nature and turn night into day at a flick of a switch. Lightning engineers could create an illusory landscape that erased the distinction between the natural and the man-made. Electrical illusion has become an important part of American culture as may be seen in amusement parks and nature reserves, where technology can provide an experience that is even more real than the one provided by nature (Nye 1990, p.391). Nye developed the concept of electrical sublime - an interpretation of the classical aesthetic concept of 'the exalted' - of beauty that is grand and dangerous. The category of the sublime is linked with the perception of natural phenomena and feelings of astonishment and horror. He examines the aspects of technological sublimity applied at various industrial and technological expositions in America. Illuminating engineers developed stunning performances at the major national events and expositions. Electric lighting helped double technology and highlight engineering constructions and architecture, it also helped heighten the sublimity of natural sites (like the Niagara Falls that was illuminated with powerful searchlights at night in 1920s) (Nye 1996, p.172). Nye speaks about another type of sublimity, which is 'unintended sublime'. Electric cityscape that at some point started to fascinate the viewer was not the result of planned engineering actions. It was rather a product of chaos and competing interests (public and private, gas and electricity, competing advertisements). This 'glittering sea of images' was a symbolic substitution for the real city. Electricity in a way turned into a powerful symbol of national identity. The unintended new landscape turned into a symbol of modernity and of the new order, it could be literally called the image of corporate America, since it embodied dominant values of individualism, commerce, advertising, commodification (Nye 1996, p.198).

Graeme Gooday's research addresses cultural problems in appropriation of electrical technology in 19<sup>th</sup> century Britain. Gooday's claims are assonant with David Nye's, he mentions that electrification was not historically inevitable. It would be anachronistic to argue that electricity was at once perceived as natural or progressive by the users. A full-blown cultural work on appropriation of this technology within a home was needed. Uncertain nature of electricity (it had no smell, color or weight) produced fear and mistrust. Electricity needed aestheticizing, promise of safety and a well-grounded public image of modern utopia. Gooday's book also involves gender issues. He argues that women's expertise was needed to promulgate the technology as much as of the male technicians and engineers. Women showed how well electricity could be domesticated. Ballet dancers used electric jewelry – by doing so they showed that there was no threat for the body, even the feminine fragile one. Women were responsible for decoration and aesthetic adornment of lighting in the interior. Female personifications of the new technology (angelic muses, 'electric fairies') helped sell appliances and created a positive public image (Gooday 2008).

### **4. MUSEUMIFICATION OF TECHNOLOGY. INDUSTRIAL HERITAGE IN POSTINDUSTRIAL SOCIETY**

In the last decades the issues of industrial heritage preservation acquired high importance. Dramatic changes in the essence of manufacturing processes, when societies pass from industrial to postindustrial models of production, lead to closure of big industrial sites. Consequently, the problem arises of what to do with the remaining industrial heritage - buildings and equipment.

Industrial heritage is usually understood as the monuments of mass production from 18<sup>th</sup> to the 20<sup>th</sup> century. This may include factories, railway stations, machines and mechanisms. These artifacts are valuable as evidence of the historical period preservation and study of these objects let evaluate and understand industrialization as social and cultural phenomenon.

Aesthetics is an important issue of industrial architecture. It is interesting to see how big architectural styles were interpreted in the decoration of these buildings. In the beginning of the 18<sup>th</sup> century the architecture of factories and power stations cited the elements of palaces and temples such as colonnade, portico or decorative ornament. Industrial objects are always notable in the urban landscape – many

researchers mentioned specific aesthetic significance of chimneys that assign rhythm and compositional pattern to the city skyline. Interestingly, for understanding of the industrial society, the buildings that represent mass designs may be more valuable than unique sites, since they represent distinctive features of the epoch such as maximization, concentration, standardization, synchronization (Toffler 1981).

One of the strategies of industrial heritage preservation is museumification of sites with preservation of equipment functionality and its performance. Many countries now have such examples. Probably, British experience would be the most relevant in this regard. Ironbridge Gorge Museum is one of the first examples of museumification of industrial heritage, and this place is widely considered as the birthplace of the Industrial Revolution. The central object is the oldest in the world Iron Bridge. It was constructed in the beginning of the 18th century, but already in the beginning of the 19th century cracks were found in the construction, so it had to be repaired regularly. In the very beginning of the 20th century the bridge was closed as a heritage site. The museum contains examples of various production methods of and recreates the atmosphere of Victorian period.

Russia is considered Mecca of industrial culture with a lot of monuments of industrial period. The majority of them still need to be studied, codified, preserved or prepared for reuse. It is too early to speak about a full blown movement for the preservation of industrial heritage, although some steps have been made (Russia has been an active member of The International Committee for the Conservation of the Industrial Heritage (TICCIH) since 1994). There are individual initiatives of reuse and preservation. There also have been a number of complex theoretical researches on the issue. Yury Grigoryan developed a project 'Architecture of Periphery'. With a team of students, architects and sociologists he studied the outskirts of Moscow. They concluded that during the 1960s and 1970s when these districts were constructed all peripheral districts had their centers – industrial estates. The designs of the districts are very similar and symmetrical – they all had basic cultural venues (library of cinema) and necessary infrastructure. After the industrial sites were closed, these districts acquired deserted industrial areas and became faceless and dull. About 90% of the population of the city live in these districts, and they turn out to be very important, even more than the center, for the future of the megapolis. The majority of the inhabitants of the periphery prefer to spend time in their home districts, but when it comes to culture, they have to go to the center. The

research offers a study of deserted industrial sites and suggestions regarding their transformation into points of attraction (green zones, cultural clusters or museums). Dull deserted place may be converted into city pearls and contribute to the so much needed decentralization of the city and expansion of tourist routs (Tolstosheeva 2013).

The biggest and probably the only consistent project of industrial heritage museumification in Russia in Museum Reserve of History of Technology and Ferrous Metallurgy is in Nizhny Tagil. The complex consists of nine museums including a factory, applied arts museum, museum of everyday life of the 19th century, environmental museum. The exposition includes the objects that belonged to Demidov Dynasty (the family that started the industry in the 18th century) and samples produced at the factory in different historical periods. Visitors may observe how the blast-furnace plant, open-hearth plant and rolling plant work.

Museumification is not the only strategy that may be applied to industrial sites that are no longer needed. There is successful experience of adaptive reuse of industrial heritage. In Ireland, Austria and Denmark 18th and 19th century gasometers were redeveloped as residential buildings or night clubs. Factories, warehouses or power stations were turned into commercial buildings, art galleries. There are interesting projects of turning industrial sites into green zones (Paddington Reservoir in Sydney, landscape park Duisburg-Nord in Germany). These landscape parks contain red-brick buildings and iron constructions that seem to be consumed by nature. It looks like the plants are conquering the surfaces and taming technology. It seems to be a natural process, but the truth is that this effect is gained through subtle landscape engineering.

It would be expedient to dwell on American experience of museumification and display of technology. The idea of technology is considered to be the milestone of American national identity in American academic milieu. This conception has been consistently elaborated by the intellectual elite since the 18th century. David Nye shows that the idea of the new nation state was based on the link between settlers and land, but most importantly it shaped around the idea that land and wilderness were to be tamed with human ingenuity and technology. Nye identifies three major narratives that formed the national idea – struggle with the native inhabitants and military technology; cultivation of land and agricultural technology; steam engine as a symbol

of transformation, but also a means to enhance Republicanism (Nye 2003).

The finding of compromise between nature and culture (harmony pastoral life and technological progress) is considered to be 'American discovery'. Leo Marx in his book 'Machine in the Garden: Technology and the Pastoral Ideal in America' showed that literature and scholarly thought produced a trope or even a cliché representing the interruption of pastoral scenery by technology. This helped to show the contradiction and to find the compromise between nature and technology – the so called 'middle landscape'. It combined the naturalness of the wilderness with civilization artefacts (a good example may be the Niara Falls natural reserve, where visitors may be thrilled by the power of wilderness, but nature is observed from comfortable, carefully engineered vista points). This idea helped to create 'a new, distinctly American, post-romantic, industrial version of the pastoral design' (Marx 1964, p.32).

Museums of technology in the US are built into this larger national narrative. Through the exposition they tell a story about the state, but also show constant reflection on the essence of the idea of technology and its interconnection with society. The idea is not to take technology for granted, but try to shift the focus on the user, to see how technology interacts with people, power, art and nature and what shared meanings are created. The structure of display in technological museums also reflects recent findings and methodological approaches developed in STS (science and technology studies), history of technology, cultural history. The Henry Ford Museum, that possesses a grandiose collection of artefacts that represent the history of America technology focusing on major innovations and American power and expertise, in the recent years shifted from object-based exposition to the idea-centered approach. A perfect example would be an exhibition 'Driving America' that focuses on the enormous influence the automobile has had on American culture – from the automotive innovations that have changed peoples' lives to the everyday choices they make. The major point is that Driving America was developed through the lens of the user and explores how people coexist with cars so everyone, from the avid automobile lover and tech-savvy engineer to the new teenage driver, can relate to the tales being told. Driving America gives a look at how cars have helped shape national culture and influenced the way Americans all live, work and play (Driving America). As the curator of the exhibition explained, the idea was to capture the car's impact on society – to look at the automobile

history from the point of view other than the driver's (reflecting the jobs that sprang up in support of the car, the experiences people could gain at drive-through cafes and roadside motels, the images and aesthetic values that were inspired by the cars) (Carney 2012).

## 5. CONCLUSION

The present article introduces basic cultural problems that need to be conveyed within the course of Culturology, and make them relevant to engineering students. In such a manner, technology becomes the perspective through which to construe the concept of modernity, social impact of industrialization, interaction of power and technology, problems of national identity gender and aesthetics. The themes may be extended to include the issues of environmental history, technology and literary imagination, interaction of technology and art.

This account of the course shows how humanistic problems may be made relevant for engineering students. It is important to understand that however technological our civilization is, the challenges we face (be it ecology, social inequality or diseases) are irrevocably human in nature and scale. Technological and engineering issues are embedded into broad human realities and are linked to cultural traditions, political tensions, and social codes. Humanities turn out to be essential to shape critical thinking, creativity and inspiration. It is crucial to gain historical perspectives, to be able to interpret how individuals, nations and organizations act and fulfill their desires. Thus, humanities and the so called STEM disciplines (science, technology, engineering and math) are mutually supplementing modes of knowledge.

As Deborah K. Fitzgerald, Dean of the School of Humanities, Arts, and Social Sciences (SHASS), of the Massachusetts Institute of Technology, commented in an article on the role of humanities, future engineers need inspiration, ideas, communication skills, cultural awareness and new pathways for thoughts, cause 'life itself is rarely, if ever, as precise as a math problem, as clear as an elegant equation' (Fitzgerald 2014).

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## Humanities: History, Philosophy, Linguistics, Arts, and Journalism

*Session I:  
Historical, Philosophical,  
and Literary Lessons  
for the Modern World*

# The Function of the First Lady in the US and ROC – Queen vs. Empress

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This paper examines the function of the First Lady of the United States - Eleanor Roosevelt, and its relationship to the First Lady of the Republic of China (Taiwan) – Soong, Mayling. The traditional role of the First Lady as a national hostess was played by all the First Lady in the United States and Republic of China. However, both of First Ladies assumed a more active role within their husband's administration. I seek what is the function of First Lady extended by Eleanor Roosevelt, and compare with Soong, Mayling. In the end, I will look to what makes different effect of their efforts and what future First Lady change might need to be made in order to match this modern era.

## INTRODUCTION

Social scientist Barbara Burell writes, 'The woman who serves as First Lady is there because of her relationship to a man...She is to represent the expressive, supportive traditional role of women as wife, mother, and homemaker.'<sup>1</sup> Actually, there has no official job description about First Lady in any country in any law. Unlike the presidency, which parameters of the office are discussed in Article 2 of the US Constitution, the First Ladyship lacks constitutional guidelines. However, some First Ladies still know how to use their power to influence the administration by wedding ring. Therefore, there is much disagreement as to what the First Lady should do and should not do. Because First Ladies are unelected and unappointed, even the existence of the institution as an office, much less the scope and duties of that office, remains a point of debate.

Now a day, the role of First Lady in the State is different from before by Eleanor Roosevelt transformed the function of national hostess into activist successfully. Compare with the role of First Lady in Taiwan, our First Lady still act like national hostess. Even though every country has different culture and history, especially in democratic system, power is based solely through the wedding band and not the electorate, her influence has often been wielded in private. In the US, some have suggested that the First Lady's marital relationship with the president gives her undue influence; this informal power leads some commentators to conclude that the president's wife should not engage in presidential politics.

<sup>1</sup> B. Burrell, *Public Opinion, the First Ladyship, and Hillary Rodham Clinton*, New York: Routledge, 2001, p. 14.

Those seeking to study first ladies' views and political influence are presented with a daunting challenge. Nevertheless, a field of study has emerged. A truly interdisciplinary and multidisciplinary undertaking, first-lady studies promise to inform other disciplines such as presidential studies, US history, social history, and women's studies. The only certainties are that the office of the first spouse will continue to evolve, will continue to face criticism and an array of difficult public and political pressures, and will continue to make important contributions to the presidency and the nation.<sup>2</sup>

This article studies during the 1930s to 1940s, there has one first lady is called 'First Lady to the World – Eleanor Roosevelt' in the US<sup>3</sup>, and 'Eternal First Lady – Soong, Mayling' in Republic of China.<sup>4</sup> Both of them have very similar background. They were born in the late of 19<sup>th</sup>, and they also grow up in the upper class in society, even they almost take the position of First Lady in the same era, they assumed a more active role than traditional first lady within their husband's administration. And one more important thing is, they are friends. However, they have different effect upon the future of First ladyship. For this reason, people should know what cause most of First Lady extend the active spirit of Eleanor Roosevelt in the US today, by contract the First Lady of Taiwan still only do the role of conservative and traditional national hostess.

## FROM UGLY DUCKLING TO FIRST LADY

Eleanor Roosevelt was born in New York in 1884. She said that her mother was 'the most beautiful woman I have ever seen,' and there were few in 1880s New York City who wouldn't have agreed. Many would also add that her father was one of the handsomest men about town as well. But their daughter didn't seem to have inherited any of their good looks. She was plain, she was gawky, and because of it she was painfully shy. She had beautiful golden blonde hair, but it rarely brought her any compliments. Her mother called her Granny, because she seemed so old-fashioned. 'My mother was troubled by my lack of beauty,' Eleanor

<sup>2</sup> R. P. Watson and A. J. Eksterowicz, *The Presidential Companion: Reading on the First Ladies, USA*, University of South Carolina, 2003, p. 13.

<sup>3</sup> E. Roosevelt, *The Autobiography of Eleanor Roosevelt*, New York, Harper & Brother, 1961, p. 279.

<sup>4</sup> L. T. Li, *Madame Chiang Kai-shek: China's Eternal First Lady*, New York: Grove Press, 2007, p. 481.

recalled. 'She tried to bring me up well so that my manners would compensate for my looks.'

As we have already known Eleanor did not have confident of herself because her appearance, especially her parents felt disappointed about it. However, her grandmother decided to send her to Allenswood School in England. The headmistress Marie Souvestre inspired students to think and challenge themselves. Eleanor stayed at Allenswood for three years, which she described as the 'happiest of my life'. She learned to take care of herself there, to choose her own clothes, to travel independently, and most important of all, to make close friends.<sup>5</sup>

Eleanor also admired 'Mill. Souvestre shocked me into thinking.' She was so proud of Eleanor's transformation from an ugly duckling into a promising young woman.<sup>6</sup> As a result, she became a more confident young woman determined to help other minority group in society.

Franklin Delano Roosevelt and Eleanor Roosevelt married in 1905. Then Franklin won the election as a state senator in New York City. When World War I began, some Washington women volunteered their time to the war effort, and Eleanor was the most active among them. She joined the Red Cross, the Navy League, and the Navy Relief Society, giving two or three days a week to each of them, and she said, 'I loved it!...I simply ate it up.' When the war ended, Franklin and Eleanor sailed to Europe so he could supervise the closing of American naval facilities, and they got a firsthand look at the war's destruction, and Eleanor's compassion grew. She spent several days a week at military hospitals as a time when wartime volunteerism had ended.

From these activities what Eleanor did, is not surprised that she played the role in first lady position, she took more aggressive attitudes to improve the society. When evaluating her role as FDR's wife and first lady, she wrote: 'When I went to Washington I felt sure that I would be able to use the opportunities which came to me to help Franklin gain the objectives he cared about...He might have been happier with a wife who was completely uncritical. That I was never able to be, and he had to find it in other people. Nevertheless, I think I sometimes acted as a spur,

<sup>5</sup> J. P. Lash, *Eleanor and Franklin: The Story of Their Relationship Based on Eleanor Roosevelt's Personal Papers*, New York: W. W. Norton, 1971, pp. 74-7.

<sup>6</sup> B. Harris, *The First Ladies Fact Book*, New York: Black dog & Leventhal, 2009, p. 481.

even though the spurring was not always wanted or welcome.'<sup>7</sup>

Most historians credit Eleanor Roosevelt with changing the role of first ladies. She, more than any other occupant to her time, defined the role of a modern, activist first lady. Under Eleanor Roosevelt the East Wing of the White House became the focal point for first ladies. She became the first presidential spouse to speak at a national convention, author a column (it was titled 'My Day'), serve as a radio commentator, and hold regular press conferences. In addition, her press conference provided her with a de facto press to promote her issues.<sup>8</sup>

Mrs. Roosevelt's activities did not end upon leaving the White House. She continued to be an activist for social causes and serve as a delegate to the United Nations. Her contributions to the first ladyship helped move the position toward greater professionalism and eventual integration with the White House Office.<sup>9</sup>

As the Eleanor Roosevelt wrote on the eve of the 1960s election, only two years before her death, 'The job of the President's wife is in many ways quite an onerous one...turning her slightest act, her most trivial word, into a public action.' She concluded, 'It is also tremendously interesting.'<sup>10</sup>

## FROM MAYLING, SOONG TO MADAM CHIANGKAI-SHEK

Maylong, Soong was born in Hainan in 1898. Mayling spent ten years in the United States, attending Wesleyan College in Macon, Georgia for her secondary education. Upon her 1913 arrival at Wellesley College, located in Yankee New England, people were surprised by the southern accent she acquired from her five years down in Georgia. She studied English literature and philosophy at Wellesley and graduated in 1917 as a Durant Scholar, the highest academic honor awarded by the College. Mayling Soong returned to China much Americanized.<sup>11</sup>

After she back to stay with her family in Shanghai, she did charity work, some of which involved soliciting donations from very prominent Shanghai residents

<sup>7</sup> D. K. Goodwin, *No Ordinary Time: Franklin and Eleanor Roosevelt: The Home Front World War II*, New York, Simon & Schuster, 1995, pp. 611-4.

<sup>8</sup> D. K. Goodwin, *Eleanor Roosevelt, Time*, 151, 1998, 122.

<sup>9</sup> R. P. Watson and Anthony J. Eksterowicz, *The Presidential Companion: Reading on the First Ladies, USA: University of South Carolina*, 2003, 147.

<sup>10</sup> E. Roosevelt, *My Advice to the Next First Lady*, Redbook, 116, November, 1960, pp. 95-6.

<sup>11</sup> L. T. Li, *Madame Chiang Kai-shek: China's Eternal First Lady*, New York: Grove Press, 2007, p. 10.

and businesses. She became the first Chinese and the first woman to hold a post on the Shanghai Municipal Council Child Labor Commission. In 1926, Mayling married the young Kuomintang (KMT) general Chiang Kai-shek, a year after he had taken control of the party and the year before the onset of a bloody civil conflict between the KMT and Mao's communists.<sup>12</sup>

The marriage benefited Generalissimo Chiang Kai-shek and Mayling, the new Madame Chiang Kai-shek. Because Chiang did not possess the art of conversation, Madame Chiang acted as the conversationalist, especially with English-speaking foreigners. Although Madame did participate in charity work and women's rights issues as did Eleanor Roosevelt, Mayling had more official responsibilities than her counterpart in the United States. From 1929 to 1932, she served as an appointed member of Nanking's government parliament. From 1936 to 1938, her husband had her run the air force of government. Madame Chiang also led the New Life Movement in the 1930s, an attempt to sway people away from Communism and promoted both Christianity and education. She became known as the one to see should something need to get done within the Nationalist government. Madame also became known for her finesse regarding public relations, especially in creating within the United States sympathy for the Nationalist government.<sup>13</sup>

## THE RELATIONSHIP BETWEEN TWO FIRST LADIES

Before Mayling Chiang Kai-shek's 1942-1943 visit to the U.S., Eleanor Roosevelt held her in high regard. She admired and envied the dependence Chiang Kai-shek had on Madame Chiang, which gave her great power. ER made her out to be a great symbol to other women to show that they also can achieve great accomplishments. Yet Roosevelt expected Madame to mirror her beliefs regarding equality, democracy, and humanity. Her realization that Madame Chiang Kai-shek's views didn't mirror her own greatly disappointed Eleanor Roosevelt.

However FDR also had ever said the Madame Chiang: She could be a cool-headed statesman when she was fighting for something she deemed necessary to China and to her husband's regime; the little velvet hand and the low, gentle voice disguised a determination that could be as hard as steel. Another example of Madame's intimidation occurred when

<sup>12</sup> <http://content.time.com/time/world/article/0,8599,526008,00.html>, Taipei Times, October 24, 2003.

<sup>13</sup> L. T. Li, *Madame Chiang Kai-shek: China's Eternal First Lady*, New York: Grove Press, 2007, pp. 87-144.

FDR asked her what she would do with John Lewis, a labor leader threatening a coal-miners' strike. Eleanor Roosevelt remembered that Madame 'never said a word, but the beautiful, small hand came up very quietly and slid across her throat - a most expressive gesture.' Such a gesture surely began Eleanor Roosevelt's questioning of her initial beliefs about Madame Chiang Kai-shek.<sup>14</sup>

## CONCLUSION

According to my case study Eleanor Roosevelt had no confidence of herself from her childhood time until she graduated from senior high school. After she married to FDR, she realized that even though both of them belong to the upper class, she still had no equal right as men in the society. It's not about how good her background is, it's about gender inequity. Therefore, she started to work on women's right, and she also thought women shouldn't be ignored in the society, for sure every citizen, either. That's one of reasons why she supported the African American civil right because only segregation was abolished then the United State could be called 'Democracy country' truly.

I think it makes sense why ER was the delegate of the US in the UN, and she also announced the 'Universal Declaration of Human Right' in the United Nation General Assembly. In her life, she thought about herself → race → human being gradually. I also think all her achievement and contribution for the world because she was in the position of First Lady. If she was not First Lady, I don't think she could bring such big influence. The position gave her the power, and she knew how to use it make the world better. That is also why makes she is the 'First Lady to the World'.

However, the story has different ending in the Eastern. Even though the relationship between China and Taiwan is still complicated, but we don't deny that we have similar thinking, culture and history. Therefore, I have to say from our history until this generation. We have never thought about the function of First Lady. Although Mayling, Soong is also called 'China's Eternal First Lady', the truth is she influence the history by her name, not the position of First Lady. That is also why Taiwanese live in a democracy country, we never thought about the function of First Lady. In our point of view, she was not the extra benefit with presidency; she wanted to be the Empress.

<sup>14</sup> E. Roosevelt, *This I Remember*, New York: Harper & Brothers, 1949, pp. 283-4.

Time is changed, people should catch the step of the world, and especially we live in democracy country. The first lady is a part of the administration. First lady is always on the run, and they cannot hide. First lady should know how to share the power to improve the country better. First Lady completes the President.

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# Freedom As the Supreme Principle of Morality and Justice in Kantian Philosophy

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## ABSTRACT

In Kantian ethics freedom plays a main role, since only through it we can build a just society and, furthermore, make happiness possible. Some critics have raised against the formalism that this theory of morality has, arguing that the categorical imperative is just a formal procedure of tasting laws, instead of having a moral content which tells us how to live, as, for example, in classical moral philosophy. However, as far as I am concerned, this is not utterly right. In this essay I will defend the idea that this imperative does have a moral content, which is not, in all cases, the expected one. In order to do so I reconstruct the Kantian argument of the categorical imperative. Furthermore, the essay briefly outlines some consequences that this concept of freedom has in ethics and politics.

## 1. INTRODUCTION

Despite the fact that the topic has been discussed among philosophers for more than 2 hundred years, I consider it important to discuss this concept of freedom and its consequences in youth's morality and politics from all over the world and from different disciplines, given the fact that these ideas of freedom and autonomy have not yet been reached by some of our governments and citizens.

It is well known that, in Kant's ethics, freedom is put forward as the idea that seems to allow and constitute the indispensable condition of worthiness to be happy. Since happiness is something hard to obtain, sometimes, it is important to think about the necessary conditions for a just and happier society.

The arguments are presented in this order: first, I reconstruct the argument of the categorical imperative in its first formulation, going through what motivates our actions, inclinations and reason; then, formulating the hypothetical imperative which does not have moral worth (for at last presenting the first formulation). Then I briefly present two criticisms against the categorical imperative raised by two philosophers, and then I try to defend the opposite, which is that this imperative does have a moral content. After showing this content I aim at some of the consequences this

concept of freedom has, what radical wickedness is, and finally I present the second formulation of the categorical imperative.

## 2. HAPPINESS OR JUSTICE AS A BASIS

Moral philosophy has two great topics that have been discussed through all the history of this subject, namely, happiness and justice. The first one refers to each single person's conception of what is a 'good life', and the second one to the principles and laws that everyone should follow in order to establish a social order. I'd say that the central problem in ethics is how to combine or mix happiness and justice, so we create a society in which these two themes are allowed to coexist. However when it comes to coming out with a coherent answer, we soon realise that such problem is not as easy to solve as it may seem. Some philosophers have given an answer in which happiness has a main role above justice; and vice versa. Each point of view has a different implication in moral philosophy when we try to define the rules that should be followed; as, for example, if we mainly want the pursuit of happiness, we must think about guiding principles through which we will obtain our own satisfaction so that at the end of our lives we may say: I am happy. On the other hand, whether our conviction relies on justice, then the guiding principles won't be like the others.

At this point we can formulate the next question: What are the rules that must be attended by human beings? In other words: Which of the two topics of ethics can provide universal laws of morality to human beings, specifically, laws that are valid for everyone regardless the space, time, and society in where they might live? Or which one of them can state moral distinctions, scilicet, a distinction between the wicked action and the good one? (It is well known that)(about this) empiricist philosophers have claimed that this distinction lies in the passions<sup>1</sup> of pleasure and pain, and not in reason; in other words everybody wants to get pleasure and avoid pain, so, goodness resides in pleasure and wickedness in pain. Nevertheless, according to Kant's moral philosophy, moral distinctions cannot be found in passions, but in a pure factor, free from any empirical thing.

<sup>1</sup> Hobbes and Hume support this idea.

Kant called *Practical principles* to propositions that contain a general determination of the will, and they can be subjective or objective. These practical principles are *maxims* if the condition regarded by the subject is only valid for his will, but not for everyone else's will, meaning that they're subjective. In other words, a *maxim* is a rule or principle on which you act; for example, if I want to be an honourable and respectable man (which gives me some kind of pleasure), then I must be as honest as possible; If I want to become a very talented pianist, a skillful athlete, or a great philosopher, then I must discipline myself in order to succeed. As we can see, these maxims are just valid for the person who wants to achieve a particular thing; this also means that subjective practical principles aim at, mainly, the subject's appetences and desired objects. We can sum up almost all maxims in the following one: 'I'm going to try to access to all objects through which I get a sentiment of pleasure and reject the other ones that cause a sentiment of displeasure in me' (Serrano 2004, p.42). In short, I am in the pursuit of happiness.

In classical philosophy, justice and happiness are supposed to be connected in such a way that the one guarantees the other and vice versa, there is something (sometimes God, sometimes a natural order) that guarantees a just man to be happy, and a happy man to be just. However, in modern philosophy this connection is broken, since we're not utterly sure about the organization of the universe itself<sup>2</sup>. What are the consequences of this? Firstly, it's now clear that happiness is not directly related to justice, and, therefore, secondly, subjective practical principles, or maxims, are not just-guiding laws, and are not universal, because they lack objectivity. We can also argue that maxims are in pursuit of the matter of will, this is to say that 'the sensation of agreeableness that the subject expects from the object's actuality [which can be an empirical one or an object of the understanding that gives pleasure] determines his power of desire' (Kant 2002, p.22). But matter of will defers from person to person, since each one has his own conception of 'good life' or happiness. 'All material principles are, one and all, of one and the same kind and belong under the general principle of self-love or one's own happiness' (Kant 2002, p.22). We may conclude that principles that belong under one's own happiness cannot provide practical laws that can be held objectively and universally.

<sup>2</sup> Thus, it's completely logic to think of a happy person who is not just, and to think of a just person who is not happy.

It is important to mention that Kant does not claim we are not determined by our appetences, inclinations, and desired objects; instead, he's very conscious of this fact, but he argues that moral distinctions, i.e., goodness and wickedness, do not lie in the passions of pleasure or pain. He thinks, on the other hand, that moral distinctions must be searched *in the form of will*, that is to say, the form of practical reason, since he presupposes that humans are capable of the faculty of reason. The form of will, on the opposite of the matter of will, doesn't pursue a specific object or matter, but a universal valid law which can determine the power of desire. This is to say that *pure reason* must be able to determine the will without any representation of an empirical object or the representation of the agreeable or disagreeable, but only by the mere form of a practical law, not being motivated by an inclination but by a duty. This is an imperative, for we are imperfect beings, only through it, as we will see, freedom is possible. According to Kant, we can act being motivated by passions or we can act out of duty, through which moral actions are only possible, and hence morality<sup>3</sup> becomes possible.

## 3. THE IMPERATIVES OF REASON

### 3.1 The Imperatives of Happiness

Kant distinguishes two kinds of imperatives, namely, they command either hypothetically or categorically.

*'Since every practical law represents a possible action as good and thus as necessary for a subject practically determinable by reason, all imperatives are formulae for the determination of action that is necessary in accordance with the principle of a will which is good in some way. Now, if the action would be good merely as a means to something else the imperative is hypothetical; if the action is represented as in itself good, hence as necessary in a will in itself conforming to reason, as its principle, then it is categorical'* (Kant 1998, p.4:414, 25).

Hypothetical imperatives command conditionally, and their form is like this: *if you want X, then you must do Y*. For example: if you want to go to medical school, then study biology in college, but if you don't want to go to medical school, this must be noticed, this command doesn't apply for you. Which means that this imperative cannot provide a practical universal law that holds objectively and for everyone, besides

<sup>3</sup> This does not mean that we cannot have any other motive, as an inclination, which supports doing the right thing (as Schiller understood); but that an inclination cannot be a determining basis if we want to act morally.

it also says that the action is good for some possible or actual purpose, and not that it's good in itself. Hypothetical imperatives only command according to the conception that a person has about a good life and happiness, although, as we have seen, each single person has his own point of view about what kind of good life he or she should follow. That's why we can sum up all hypothetical imperatives in this conditional form: 'According to the sense you have created in order to organise your appetences (your particular points of view about a good life), you should do A or B or C' (Serano 2004, p.44).

Nevertheless, this use of reason is in the serve of the inclinations, since reason is being determined by the passion of pleasure or the pursuit of happiness. In a way, we can say that by hypothetical imperatives we are not acting freely, but such in a way in which our actions as well as practical principles are being determined by an empirical object, sensation, or feeling. We can call *heteronomy* to this way of acting, which refers to a non-independent will that acts according to the laws of nature, since it is determined by a desire or a desired object. On the other side, in opposition to heteronomy, there is *autonomy*, which refers to a self-determined will. Acting heteronomously could be in accordance with law, but cannot be an act motivated by law, and therefore heteronomy cannot produce moral actions.

### 3.2 The Imperative of Justice

Reason stops being at the service of inclinations, and becomes a governor, when it gives itself a practical law and commands agency to submit desire to the form of a universal law. If a rational being is to think his maxims as practical universal laws, then he must separate all the matter from those laws; i.e., every object of the will (as a determining basis), and think of them merely by their form, which is unconditional: 'act only in accordance with that maxim through which you can at the same time will that it become a universal law' (Kant 1998, p.4:421, 31).<sup>4</sup>

Let's suppose that a person finds his or herself in difficulties, and in order to get out of them he or she needs to make a false promise. 'May I – Kant wanders –, when hard pressed, make a promise with the intention not to keep it?' This may be prudent for satisfying our own necessities and inclinations, but can this be in conformity with duty? To know it, we need to apply the categorical imperative and ask ourselves: 'Would I be satisfied that my maxim (to get myself out of difficulties by a false promise)

<sup>4</sup> First formulation of the categorical imperative.

should be hold as a universal law (for myself as well as for others)?' (Kant 1998, p.4:403, 15). Then we soon become aware that we could not will a universal law to lie, though we could sometimes will the lie. For, in accordance with such a law, there would be no promises at all; such a law would be a contradiction<sup>5</sup>, therefore we cannot accept it as a universal law of morality, since, in that case, we would be acting heteronomously.

On the other hand, we could universalize, e.g., *every one ought to speak the truth* because this practical principle does not contradicts itself when we ask ourselves and answer affirmatively whether that maxim should hold for everyone. By this procedure we separate all the matter, i.e., the empirical objects of the will (as determining basis of the will) that satisfy us, remaining the mere form of a universal legislation. 'A practical law that I recognise as such must qualify for universal legislation' (Kant 2002, p.27, 41).

#### 3.2.1 critics against the categorical imperative

Now, the categorical imperative, formulated as above, might seem to be only a rational procedure through which we determine whether a maxim should hold universally or not, this is to say that the categorical imperative does not exactly indicate how the subject should act in different and concrete circumstances, since it's a *metanorm* (a norm to the norms) which only determines whether a norm can be universalised or not. Actually, some of the criticism raised against Kantian moral philosophy point at this characteristic. Sartre claims that Kantian morality is about a formality, but does not tell us how we should live or what choice should be taken in a concrete case; it doesn't even offer guidance<sup>6</sup>.

Hegel argues that if we analyse and also pretend to universalise the maxim *every one ought to speak the truth*, there is a problem with the content of the categorical imperative, for, in his analysis, what is strictly demanded is something independent of every specific content, which is something universal and necessary, then content, disappears. Thus this law, the categorical imperative, lacks a universal content and such a law cannot get further than the 'ought to be', thus has no actual reality and it's not a law, but merely a prescript. So, if the content is renounced, then formal universality is the only suitable assignment

<sup>5</sup> As J. B. Schneewind holds: *Kant tries in many times to formulate the laws of freedom using the idea of avoiding contradiction*, Schneewind, 2009, p.575.

<sup>6</sup> Sartre's critic is bases on an example about a student who is in a dilemma, for he doesn't know what duty must be followed, and neither Christian nor Kantian morality answer the question; none would offer a guidance, Sartre, 2007, pp. 31, 46.

to a prescript. In other words, Hegel asserts that the categorical imperative is no more than a prescript which is not a moral content (lacks it), but only a standard, a metanorm, for deciding whether a norm is capable of being a law or not (Hegel 1966, pp.246-250).<sup>7</sup>

However, as far as I am concerned, regardless of this formal procedure, the categorical imperative actually has, there is a central point which needs to be clarify, for being of a great importance in kantian moral philosophy, scilicet, the categorical imperative do has a moral content, though it is not the moral content expected by some people to state the kind of good life, happiness, that ought to be chosen. Let's see the argument.

### 4. THE MORAL CONTENT OF THE CATEGORICAL IMPERATIVE

'So act that the maxim of your will could always hold at the same time as a principle of a universal legislation' (Kant 2002, p.30, 45). Pure reason, the form of the will, provide us practical universal laws, but here at the same time pure practical reason is itself directly legislative. Besides, it's necessary to take into account that we can only legislate upon things that are up to us, upon acts that we can do or stop doing, in opposition to acts that belong to the necessity of nature<sup>8</sup>. This is to say that we cannot create such a law as *everybody ought to breath constantly*, for it's our nature's necessity, but we can command to the people *pay your taxes*, because such an act is up to us without any contradiction to the law of nature.

Now, if we are to think a maxim as part of a universal legislation, as we mentioned, we must separate the object of the will (which is empirical and not capable of being universal) from the form of the will; whether our motivation to act is the object of the will (if it's a determining basis), then our maxim is not universal and has no moral worth, since I act being motivated by the principle of self-love and happiness; on the other hand, whether I act being motivated by the pure form of law (without, at this point, considering the benefits or drawbacks, the pleasure or displeasure, it might cause me), then my action has not only moral worth, but also I stop being an object of my passions and inclinations to become a subject who legislates upon his will, to become an autonomous subject who gives himself a law, and this imperative demands the motivation (as determining basis) of pure reason.

<sup>7</sup> Reason as law-giver is reduced to being reason as criterion; instead of laying down laws now only tests what is laid down.

<sup>8</sup> Idea in Serrano, 2004, p. 45.

This imperative is not only a formal procedure though which reason tastes what is laid down, but it makes a demand to the subject for autonomy and for freedom. This is the moral content of the categorical imperative: *Constitute yourself in a free subject*. Actually it is the supreme principle of morality: '*Autonomy of the will is the sole principle of all moral laws and of the duties conforming to them*' (Kant 2002, p.33, 48). Thus we can understand autonomy as the determination of a universal law that is given itself by the will. Consequently, Kantian moral philosophy states that, if we want to be moral and free, we ought to act as we want, but always in accordance with the principle of autonomy. Such a law also reveals the possibility of freedom. '*Therefore, the moral law expresses nothing other than the autonomy of pure practical reason, i.e., freedom*' (Kant 2002, p.33, 49)<sup>9</sup>. This is to say the supreme principle of morality is freedom. Now, keeping in mind this concept of freedom, what the consequences are in moral life or even in political?

#### 4.1 Consequences of Freedom

The first consequence is that freedom is not something that everyone has, we might say not all the people is free neither all of them want to be free. Sometimes freedom is thought in natural terms, so it might be said that every single person is born free, or even the concept of freedom that some thinkers have is that we are not determined by anything. For example, Hobbes understood this concept as '*the absence of opposition, i.e., absence of external impediments to motion*' (Hobbes 1984, pág. XXI; 215). However, freedom, thus understood, does not really have actuality. Kant's answer is, firstly, freedom is something that must be conquered by each single person, but not a natural attribution or a gift; secondly, the independence of matter (as Sartre and Hobbes thought) is freedom in its negative sense, for it's a metaphysical concept and because we are always determined. On the other hand, freedom in its positive sense is thinking ourselves as determined beings (we cannot violate the law of causality), whom are capable of giving themselves universal laws by practical reason; whom *are capable* of being autonomous and free, and, nevertheless, not always are autonomous and free.

Now, what is radical wickedness? Most of the people all over the world are not the kind of beings that want to see the world burnt, miserable, and destroyed.

<sup>9</sup> It is also said in the *Groundwork*: For, by this analysis we find by its principle must be a categorical imperative, while this commands neither more nor less than just this autonomy, Kant, 1998, p. 4:440; 47.

Actually, almost all desire a just and happier place. But the problem is not what they desire, but what they do or don't do. Let's remember that freedom, in Kant's ethics, appear as a moral demand (and not as something natural), which means that subjects do not tend to behave freely, for having a free will requires to make an extra effort by them. Freedom, i.e., to accept the priority of the moral law, implies higher costs, that begin in the effort of constituting oneself in an autonomous subject. Hence, despite of the fact that most of the people would prefer a just world, not all of them, neither the majority, would want to face and assume the high cost of freedom, the high cost of being responsible of our own acts and decisions, of respecting the dignity of the other, which is also to say not to be paternalist and let people constitute themselves in their own in free subjects.

Now, we can formulate the categorical imperative as: 'So act that you use humanity, whether in your own person or in the person of any other, always at the same time as an end, never merely as a means' (Kant 1992, p. 4:439, 38). Treating other as an end means treating them as rational beings that can stipulate by themselves their own ends in an autonomous way. In a moral or political community, this formulation takes us to a rational discussion about the laws that should be followed by the community, as long as the discussion and laws are stipulated in conditions of freedom of the participants. Wickedness is also not to treat the other as a rational being, but merely as a means for my own ends. To sum up, Radical wickedness consists in this: the tendency to choose the easiest course of action, to choose the less expensive way with minor costs.

When Adolf Eichmann, who was in charge of logistics of sending thousands of Jews to concentrations camps in World War II, and, therefore, was responsible of the death of millions of people, was judged by a Jewish court he claimed in his defence that he hadn't been a fanatic anti-Semitic, but that he had only done what he had been ordered to do. 'I was merely following orders', he said, so if you really want to blame someone, blame Hitler or someone else, but not me, since I was just doing my job and trying to feed my family. In Eichmann's case, he chose to walk the easier path; he was determined by others, instead of being critic with the orders given; he decided not to be free and autonomous, but just to be irresponsible without respecting the other's dignity.

## 5. CONCLUSION

In sum, Kant's theory distinguishes between the action motivated by the principle of self-love,

happiness, and the action motivated by the form of reason. The first one provides hypothetical imperatives which realisation doesn't contain moral worth; the second one gives us categorical imperatives that are the ones in accordance with morality. Besides, the supreme principle of morality contained in the categorical imperative is freedom and autonomy.

We may conclude that just societies can be built only according to the supreme principle of morality. The more subjects constitute themselves in autonomous persons, the more justice is guaranteed by them. Not only this fact, but also the more justice is guaranteed, the more opportunities subjects have in the pursuit of happiness, because if everyone would just follow the principle of self-love, then happiness would be something unrealizable; since the mere pursuit of happiness would put everybody in a state of nature, described by Hobbes, where justice and happiness are nothing at all. On the other hand, self-determination of universal laws by the form of reason provides at least a basis of justice which is centred in freedom and liberty, hence in respect of other's liberty and of his notion about what kind of good life he wants to pursue. This is to say that morality is a necessary condition, is transcendental for happiness.

In my opinion, Kantian moral philosophy has some basis that should be discussed in order to reach a consensus about what laws are just, so they can play a main role in our governments and States. And that discussion demands freedom and rationality.

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## The Different Visions of Life of Two Main Characters under the Application of the Image of Time in Mrs. Dalloway

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### INTRODUCTION

*Mrs. Dalloway* written by Virginia Woolf is one of the distinguished works of stream of consciousness. It describes the process that Mrs. Dalloway prepares her party and the 17-hour psychological activities of Mrs. Dalloway, her lover – Peter Walsh, the 'doubleganger'<sup>1</sup> – Septimus Warren Smith and other characters. Superficially, this story is a mixture of transitory images of outside world, the consciousness wandering through reality and memory and the shadow of subconsciousness. It seems messy and disordered, but we can find out the originality of structure after carefully reading and studying. Especially, the author uses skillful spatial and time connections to manifest the life of distinct social classes. Just like some critics saying, Virginia Woolf takes advantage of 17-hour time duration to describe 34-year life of dozens of people.

### 1. THE SYMBOL OF TIME

The function of the theme – time is very significant because whatever the outside form or the inside meaning of a novel is attached to the basic elements: time and space. 'As a result, every author hides the philosophy of time and space beyond the structure of the novel.'<sup>2</sup> Virginia Woolf scrapes the matters in different times and spaces together to get rid of the limitation of time and space. Some critics believe that

'This special treatment of time and space in juxtaposition, the overwhelming depiction of human psychic activity as the marked stream of consciousness, Woolf composed one of the most successful novels in the post- World War I era.'<sup>3</sup>

In Mrs. Dalloway, there are common uses of the image of Big Ben which has its unique inspiration to

<sup>1</sup> According to the definition of Webster's New Dictionary, the doubleganger is the soul of a living person. However in the field of literature, doubleganger has become a common writing technique. It not only means another person with similar appearance, but also represents the inner soul which is opposite to the outer shape.

<sup>2</sup> Shen FY, 《达洛卫夫人》的叙事联接方式和时间序列 (The spatial and time cave connection in Mrs. Dalloway), *Foreign Literature Review*, 2005(3) (by Chinese) [http://d.g.wanfangdata.com.cn/Periodical\\_wgwpxl200503007.aspx](http://d.g.wanfangdata.com.cn/Periodical_wgwpxl200503007.aspx).

<sup>3</sup> Lei Rong, *An Yang, Moments of Being in Mrs. Dalloway*, *Language and Literature Learning*, 2011(6) [http://d.g.wanfangdata.com.cn/Periodical\\_ywxx-wy201106016.aspx](http://d.g.wanfangdata.com.cn/Periodical_ywxx-wy201106016.aspx)

every role. It is like a time machine shuttling between the story line and the interior monologue, the reality and the memory. The clock time is finite, but the time in the heart is infinite. The application of this image brings outstanding effects on different characters, especially on Mrs. Dalloway and Septimus Warren Smith.

As a landmark of London, the Big Ben should be so familiar to everyone that they would ignore its sound. On the contrary, the Big Ben has become an alarm to remind Mrs. Dalloway all the time: the time is passing by and you are not young any more. The loud and clear sound of clock striking quivers not only the air, but also Mrs. Dalloway's heart.

A suspense (but that might be her heart, affected, they said, by influenza) before Big Ben strikes. There! Out it boomed. First a warning, musical; then the hour, irrevocable. The leaden circles dissolved in the air. Such fools we are, she thought, crossing Victoria Street.<sup>4</sup>

When the incessant stream of horses and carriages, the roaring of plane, the striking of Big Ben and the smell of various flowers meet together, all the images penetrate into readers' mind so as to have a better understanding for the lively life of Mrs. Dalloway. Meanwhile, the passing time sets off the streams of life and consciousness, prominent Mrs. Dalloway's inside loneliness and anxiety and reveals her fear and worry to old age and death beyond the vanity and prosperity. With the striking of Big Ben, Mrs. Dalloway is disturbed by the anxious feeling all the time. Standing in her mind, she watches the time flying by, which reminds her of the past. It seems that all the wonderful and dazzling moments vanish with the clock, which leads to a multitude of feelings surging up in her heart. Therefore, when Mrs. Dalloway went into Mulberry's the florists, she 'thought her kind, for kind she (Miss Pym) had been years ago; very kind, but she looked older'.<sup>5</sup> The dull atmosphere of time is merged by this short sentence.

<sup>4</sup> Virginia Woolf, *Mrs. Dalloway*, <http://www.RosettaBooks.com/MrsDalloway/PDF>, p. 8.

<sup>5</sup> Virginia Woolf, *Mrs. Dalloway*, PDF, p. 14.

## 2. THE CHARACTER ANALYSIS

When hearing that Mrs. Burgess did not invite her to have lunch with them, Mrs. Dalloway feels disconsolate and melancholic and is aware that she is getting older and older.

But she feared time itself, and read on Lady Bruton's face, as if it had been a dial cut in impassive stone, the dwindling of life; how year by year her share was sliced; how little the margin that remained was capable any longer of stretching, of absorbing, as in the youthful years, the colours, salts, tones of existence.<sup>6</sup>

Mrs. Dalloway's fear finally comes to release because of a verse: 'Fear no more the heat o' the sun, nor the furious winter's rages.'<sup>7</sup> It is a cruel metaphor to time, but she does not scare of it, because she realizes that death is the inevitable outcome of herself and the nature of living. In the whole novel, Mrs. Dalloway is reminded by the Big Ben and holds her experience and memory so tight, but she adjusts herself leisurely at the same time. She deals with trivial matters one by one and learns how to face the death. In other words, during the process of learning to face the death, Mrs. Dalloway fully describes her life and past. What is it that Mrs. Dalloway gets to fight for time and death? It is embracing the reality. It is the reason to organize the party, the reason to seize her daughter and the reason to commemorate the memory.

Simultaneously, Septimus Warren Smith is also influenced by the sound wave of Big Ben which brings back the terrible memory of the war and the death of his battle companion, Evans.

The word 'time' split its husk; poured its riches over him; and from his lips fell like shells, like shavings from a plane, without his making them, hard, white, imperishable words, and flew to attach themselves to their places in an ode to Time; an immortal ode to Time. He sang.<sup>8</sup>

The time in Septimus consciousness is provided with mysterious meaning which includes the horrible experience in the War and his muddled thought. He is afraid of loneliness and meanwhile is threaten by it. He desires to obtain the meaning of life and the value of living. Just like Mrs. Dalloway, Septimus is suffering from the time and death. However, Septimus does not regret for the elapse of time. On the contrary, it is the time that strengthens his will of suicide and

<sup>6</sup> Virginia Woolf, *Mrs. Dalloway*, PDF, p. 28.

<sup>7</sup> Virginia Woolf, *Mrs. Dalloway*, PDF, p. 12.

<sup>8</sup> Virginia Woolf, *Mrs. Dalloway*, PDF, p.61.

encourages him to hug the death. So far as he is concerned, the time is a boring and senseless travel.

'Septimus' death is not escaping from reality, but pursuing completeness of life.'<sup>9</sup> With a mad thought, Septimus expresses his goal of life: communication which he cannot gain in his life. Bearing the torture of conflict between the material and spirit, Septimus chooses to kill himself to manifest his passion to the complete life. He gives up his body, but gets the spiritual freedom forever.

In this novel, Mrs. Dalloway and Septimus are disturbed by the same question: what's the meaning of life? Mrs. Dalloway moves towards the material fulfillment, while Septimus runs for the spiritual satisfaction. These two characters with subtle connection meet in the end of the novel, which is the delicate arrangement to reveal the theme.

## 3. CONCLUSION

Virginia Woolf makes use of Big Ben, a symbolic image, creates the sense of alienation and desperation. She breaks the normal procedure and construction of chronological order, but chooses to multi-angle and multi-level narrative methods to pour the characters' consciousness completely. In addition, she uses outstanding angle of view to express the subjective impression of different roles in different moment, which creates a kind of objective feeling in readers' mind. Just like Maurois Andre, the famous French author, states:

'These characters are changing in the time, which is like the shadow of stars in the sea fluctuating with the flow. The work is like tired sea wave beating, flowing and vanishing on the beach, which brings the shells to decorate the sandy beach where resound the roar from the sea'.<sup>10</sup>

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<sup>9</sup> Wan YF, *Reality and Fantasy: the Mirror Images in Mrs. Dalloway*, *Journal of China University of Geosciences(Social Sciences Edition)*, 2006,6(3) (by Chinese).

<sup>10</sup> ZhaiShijing, 安德烈 莫洛亚. 伍尔夫评传(节选) (*A Critical Biography of Maurois Andre and Virginia Woolf*), Shanghai: Shanghai Literature and Art Publishing House, 1988 (by Chinese).

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