Griffith UNIVERSITY

Griffith Asia Institute

Regional Outlook

ASIAN CENTURY FUTURES INITIATIVE

2015 ASIA FUTURE FELLOWS PROGRAM FOR UNDERGRADUATES – ESSAYS

Regional Outlook Paper: No. 48, 2015

Griffith Asia Institute

Regional Outlook

Asian Century Futures Initiative:
2015 Asia Future Fellows program for undergraduates – Essays

About the Griffith Asia Institute

The Griffith Asia Institute produces innovative, interdisciplinary research on key developments in the politics, economics, societies and cultures of Asia and the South Pacific.

By promoting knowledge of Australia's changing region and its importance to our future, the Griffith Asia Institute seeks to inform and foster academic scholarship, public awareness and considered and responsive policy making.

The Institute's work builds on a 40 year Griffith University tradition of providing cutting-edge research on issues of contemporary significance in the region.

Griffith was the first University in the country to offer Asian Studies to undergraduate students and remains a pioneer in this field. This strong history means that today's Institute can draw on the expertise of some 50 Asia–Pacific focused academics from many disciplines across the university.

The Griffith Asia Institute's 'Regional Outlook' papers publish the Institute's cutting edge, policy-relevant research on Australia and its regional environment. They are intended as working papers only. The texts of published papers and the titles of upcoming publications can be found on the Institute's website:
www.griffith.edu.au/asiainstitute

Asian Century Futures Initiative:
2015 Asia Future Fellows program for undergraduates – Essays', Regional Outlook Paper No. 48, 2014

Asian Century Futures Initiative

Griffith University was established over 40 years ago with a strong focus on the Asian region as one of its founding principles. We were the first university to develop and offer a degree in Modern Asian Studies and many of our discipline areas are heavily engaged in Asia-relevant research. In our short history we have forged successful partnerships with some of the region's premier institutions. We have established significant research collaboration with key institutions, particularly in China, with partnerships in environment/water sciences, nanotechnology, material science, medical sciences, and social sciences. Given this historical commitment, Griffith is ideally placed geographically and intellectually to capitalise on the dramatic shift of economic power to the Asian region in recent years. Preparing for and adjusting to this change, will make considerable political, economic and social demands on Australians and universities have a key role to play in assisting the process. Griffith University is committed to continue making a substantial contribution to the education and development of an Asia-capable Australia and to be a thought leader in more deeply engaging the countries of Asia. The Griffith Asian Century Futures Initiative is the University's strategic commitment to enhancing our engagement with Asia and the near Pacific and to consolidate our reputation as one of Australia's most Asia-engaged universities. The Griffith Asia Institute has been successfully leading the Asia agenda through our series of high profile Dialogue events in partnerships with government, universities, industry, and leading international think tanks.

Contents

Introduction.....1

1. Economic disparity throughout Australia and China, and the effect on human quality of life.....2
Gao Hecong, Claire Greer, Liu Susu and Kathryn Townsend

2. Mathematics education within Australia and China: A comparison of curriculum, pedagogy and extra-curricular consolidation favoured within both countries.....8
Saskia Gilmour, Liu Dong, Danielle Nash, Alexandria Neumann and Kang Yueming

3. Impacts of the migration of rural minorities in China and Australia.....16
Heath Burton, Liu YangChun, Mariah Ritchie, Sophie Wilson and Zhao Jiayin

4. Gender Equality in China: A comparison study.....21
Jordana Colvin, Lizzie Dowrie, Song Xuan and Zhang Lu

5. Chinese investment in the Australian agricultural industry: An analysis of potential benefits.....26
Chia Wai Kian, Estelle McCabe, Daniel Millis and Wang Runjian

Introduction

Building on the success of the 2009–2013 Australia China Futures Dialogues, The Griffith Asia Institute, Griffith University and the Office of International Relations and the Centre for Australian Studies, Peking University have committed to the development of a new 'Asian Century Futures Initiative' to deepen intellectual cooperation between the two institutions and to contribute to the improvement of the Sino–Australian relationship in the twenty-first century.

As part of the Asian Century Futures Initiative, Griffith University and Peking University have established the Asia Future Fellows Program for Undergraduates. This program follows on from the successful 'Australia–China Future Dialogues Emerging Leaders' Dialogues'. It aims to enhance opportunities for Griffith and Peking University undergraduate students to enrich their studies, experience a different culture, and make personal and future professional connections.

The program comprises 20 Asia Future Fellows, ten undergraduate students from each university. It consists of two one-week sessions, the first held in Brisbane and the second in Beijing. Both sessions involve a range of activities for all Fellows, including seminars, government and industry briefings and cultural activities.

The Asia Future Fellows concluded the Brisbane session by forming groups to write a paper that they worked on and presented at the second session held in Beijing. Each group consisted of two students from Peking University and two from Griffith University. This group work provided cross-cultural work experience that also fostered friendship by ensuring regular contact among group members throughout the year.

The reader should keep in mind that these essays are written by undergraduate students, and some of whom are non-native English speakers. For some essays, each group member has written a part of the essay. The students' essays follow.

1. Economic Disparity Throughout Australia and China, and the Effect on Human Quality of Life

Claire Greer, Gao Hecong, Kathryn Townsend and Liu Susu

Successive governments in both China and Australia have implemented different schemes and policies to remedy the disparities in wealth and quality of life of their populations. Although there are vast differences in the political and social landscapes of these countries, it is clear that in both countries, rural populations are more likely to suffer lower living standards due to poverty and poor ac-cess to healthcare. This paper will discuss the distribution of wealth in Australia and China, the causes and effects of poverty and the attempts by both governments to alleviate this. It will ultimately be concluded that, although vast improvements have been made to equalise wealth distribution through social welfare schemes, there is more which needs to be done to create coherent and efficient policies.

Summary of Wealth Distribution

'Wealth inequality can be described as the unequal distribution of assets within a population'

- Inequality.org

In this passage, distribution is discussed in terms of regions, classes and industries.

Wealth Distribution in China

Chart 1: Wealth distribution in

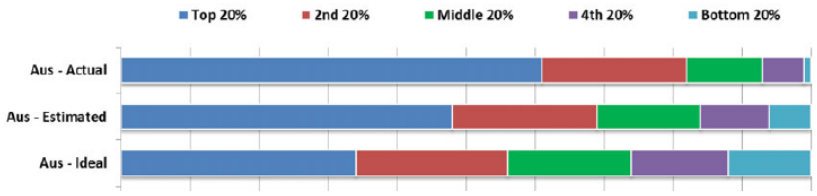
Conducted and completed in 2012, this chart demonstrates the location and number of richest families, on the largest scale.

Since the introduction of capitalist market principles by Deng Xiaoping in 1980, the three wealthiest and most important economic regions have emerged on the east coast: the Pearl River Delta close to Hong Kong, The Yangtze River Delta surrounding Shanghai and the Bohai Bay region near Beijing. It is the rapid development of these areas that is expected to have the most significant effect on the Asian regional economy as a whole, and Chinese government policy is designed to remove the obstacles to accelerated growth in these wealthier regions.

Over the past two decades however, China has embarked on an ambitious program of expressway network expansion. By facilitating market integration, this program aims both to promote efficiency at the national level and to contribute to the catch-up of lagging inland regions with prosperous Eastern ones. The "One Belt One Road" policy provides us with an optimal approach to solve the problem. In order to cooperate with countries along the Silk Road, China will begin distributing its productivity from eastern parts to middle and western ones. In this way, as the start point of the Silk Road in history, Xi'an, the capital city of Shaanxi Province, now becomes a great economic power in the non-eastern parts of China. Ningxia Province and Xinjiang Province are also becoming more economically active compared with previous time.

Wealth Distribution in Australia

While no wealth distribution maps are available for Australia, the richest parts are located on the southeast and along the east coast. Major cities like Melbourne, Canberra, Sydney and Brisbane all appear in this area. Reasons suggested are that cities in the southwest have become prosperous due to their abundant natural resources. Below is a diagram of actual, estimated and ideal distribution of wealth for Australia.



Causes of Wealth Inequality

China has enjoyed remarkable success in the macro economy since the Reform and Opening. However, considerable inequality in income and wealth continues to pervade the country. The Gini Coefficient of national income fluctuates around the margin of 0.469. This means a relatively big gap between the rich and the poor among which the regional differences between the West and East part of China are one of the most significant, due to various factors including geographical characteristics, education, population and policy (Dong, 2015).

Geographical reasons appear to be the primary factors causing inequality. Western china has a higher altitude and other features of inner land. The weather conditions are harsher than the east due to less rainfall which makes it less suitable to grow crops and harder to develop agriculture. This results in a lower population compared to the East. In places with such complicated landscape variations from mountainous areas to plateau with the frozen earth and the Gobi Desert, where the limited population is scattered in the vast area, it is little wonder that the transport system is far less developed in the west, compared to the convenient transportation network in the East. It is far more difficult and expensive to deliver goods. Consequently, higher populations and markets can't be established easily, creating barricade for modernisation and urbanisation (Li, 2002). Moreover, after the Reform and Opening exporting goods abroad plays an important role in China's national economy and most economic activities relating to international trades take place offshore in the East thanks to the convenience and low cost of the shipment on the sea.

People in western regions are less educated due to disparities in the quality and amount of schools, because of less investment in the education system. This is also closely related to the bad economic conditions. China's top universities are mostly located in eastern China (Yang,2004). As universities are more likely to admit local students and students in these areas achieve relatively higher scores in the university

entrance examination due to the superior education quality, students in the west find it harder to get into higher education than their counterparts in the east. Lack of human resources results in the slow development of technology and administration which is important to industrial development and innovation and in turn worsens the economic condition. The lower population also causes the factories in the west to struggle to find enough workforces for the manufacturing and it also takes more effort to build markets in a considerable scale because the limited demand from the people who are low in amount and weak in consuming power thus undermining the commercial activities which plays a crucial role in economic development as consumption is known as one of the three carriages in the national economy.

National policies account for part of this result. At the beginning of the Reform and Opening period, the government gave the east part priority and established several economic special zones in the east like Shenzhen because of its easy access to Hong Kong, which is one of Asia's biggest financial centre at that time, and convenience in international trade with its offshore location. These policies helped little fishing villages like Shenzhen develop into an international metropolis partly thanks to the huge exportation industry ensured by the policy favouritism (Vogel, 2011).

Australia is one of the wealthiest countries in the world, but there are also many people falling be-hind because of geographical characteristics, history and international trade. The Australian outback is uninhabited desert, dry and with extreme temperature differences over a single day. In the coastal areas, especially in the east, the climate is humid and significant marine owe to the East Australian Stream. The better climate in the east is suitable for commercial agriculture and fisheries, and the central region is more appropriate for animal husbandry, especially for sheep. More people live in the comfortable climate of the eastern region, which provides a large labour force and commodity market (Yan, 2006).

British settlers came to the eastern region first. The settlers helped to build this region while bringing disaster to the indigenous people. So the east had a better basis for development. After 1901, Australia was granted independence. Because of the unique geographical conditions and good economic basis, the whole country developed fast. But due to the population concentration in the east area, Australia put much more in infrastructure in the east than the outback. So in the east, the transportation is more convenient, the education is more developed, the service industry and manufacture are more prosperous.

International trade is one of the most important factors of the economy of Australia. The better natural environment and infrastructure attracted more foreign investment in the east. And the beautiful scenery promote the tourism, which pushes tertiary industry forward. At the same time, Australia is known of "the country sitting on tramcar" because of the rich mineral deposits. The developed traffic net and solid manufacture bases in the east coast make much more profits.

The Impact of Wealth Distribution and Location on Access to Healthcare

With an increasing difference in income distribution in Australia and China, there is a similar, parallel disproportion in access to the healthcare system and the level of care individuals can receive, typically with poorer rural and remote areas suffering (Wang, Xu & Xu, 2007). In 2005 China had a total population of 1.3 billion, with 800 million living in rural area, although 80% of the medical institutions were in the cities, and high-quality medical resources were allocated only to large-capacity urban hospitals (Wang, Xu & Xu, 2007). Reforms first introduced in the 1950s implemented urban-biased policies, including a rationing system which allowed the majority of urban residents to have guaranteed jobs with benefits including free or subsidised healthcare (Lin, Cai & Li, 1996). Rural areas received far lower expenditure for social welfare.

Alternative strategies implemented only basic healthcare, with a preventative, rather than curative, focus (Zhang & Kanbur, 2005). This involved public health campaigns to fight rats, flies, mosquitos and bed bugs, nationwide immunisation and the training of indigenous rural health workers (Yu, 1992). While these measures did improve infectious and parasitic disease-related mortality rates, there was only a small increase in healthcare personnel and hospital beds available and thus still a significantly lower standard of healthcare (Zhang & Kanbur, 2005). However, since the 1970's rural reform, immunisations are no longer free in many parts of China, government-authorised private medical practices are located within rural areas, charging full fees to those requiring healthcare services and higher out-of-pocket expenses than in urban areas (Zhang & Kanbur, 2005) (Economist, 2004). This disparity of care is most clear when analysing infant mortality and other health indicators, showing that Shanghai is similar to many western countries, while in areas in western China, such as Guizhou, they are comparable to African countries (Zhang & Kanbur, 2005).

In Australia, although policies and initiatives are aimed at reducing the inequality in healthcare it is an issue that persists and seriously affects those from lower socioeconomic back-grounds, particularly within a rural setting. Studies have shown that individuals from a higher-earning background receive a level of healthcare disproportionate to lower-income individuals which contributes to the difference in relative health inequalities widening (Korda, Butler, Clements & Kunitz, 2007). A factor contributing to the inequitable healthcare distribution and access is the disparity in socioeconomic status between urban and rural areas, with individuals within a lower socioeconomic range more likely to live in remote areas of Australia (AIHW, 2003). The shortage of health workers within the rural and remote settings is currently one of the greatest issues. Serious implications have resulted from the lack of access to services (AIHW, 2008). Research conducted in 2009 showed that, per 100,000 within a population, outer regional areas had 188 doctors while major cities had 372 (HWA,'2012). As a result, mortality and morbidity rates significantly increase with remoteness due to inability to access preventative care, emergency care, specialist medical care and aged care as well as compromised routine care and monitoring (Turrell & Mathers, 2000) (AIHW, 2003). In 2003 there were an estimated 3,303 'excess' deaths outside of major cities, indicating the difference in deaths expected in major cities and those occurring in rural and remote areas (AIHW, 2003).

Policy Approaches to Achieve Wealth Equality

Although adopting vastly different methods, successive governments of China and Australia have made the alleviation of poverty and the consequences arising from it key priorities. Each nation is plagued by concerns that inefficiency and poorly targeted programs undermine their capacity to achieve these goals. The policies considered in this section are not exhaustive and there is not space here to consider all of their failures and successes. However, a broad overview of some of the major policy alleviation programs is provided.

In three decades of reform, China has lifted millions of its people from poverty. There is a substantial focus in policy to provide aid to the rural poor. Billions of dollars have been invested in a variety of schemes to alleviate poverty in these areas, which have been shown to have the highest numbers of poor in China. One of these policies has been to raise the poverty threshold in 2011 from RMB $1198 to $2300. This has skewed statistics of poverty numbers. However, it has also made access to poverty alleviation programs available for many who could not otherwise access it. In reports by The World Bank and academics Shi Li and Xinping Guan the nature and efficacy of these programs were considered (The World Bank, 2001) (Li and Sicular, 2014) (Guan, 2014). There are many hundreds of programs currently operating. Among the largest of these are PAD programs, the whole village promotion project and pro farmer policies. In the cities, there are cash handouts and access to some of the universal schemes. This is an attempt to alleviate the unemployment which pervades

these areas (Guan, 2014, 279-280). It is suggested in the literature regarding poverty alleviation policies in China is that they are ultimately successful but inefficient and in need of reform (The World Bank, 2001, vi, 136) (Guan, 2014, 285). The World Bank has observed that exploitation of the programs by the rich and poorly targeted efforts are undermining the programs (The World Bank, 2001, 39-40). The report also observed that a lack of institutional arrangements contributed (The World Bank, 2001, xix). It was ultimately argued that the best method to ensure the efficacy of policy was to allow implementation to be done locally but with a clearer plan being made centrally.

Australia has a long established and extensive social welfare system. Key programs initiatives within this arena are Medicare, income support and assistance with finding employment. There has recently been a substantial shift in the focus from long term financial support to re-entrance into the work-force. Although social welfare is critical to maintaining the traditionally egalitarian nature of Australian society, there are substantial issues in its operation. In their report, the Reference Group on Welfare Reform to the Minister for Social Services observed substantial issues with the complexity and number of programs. In February 2015 this group reported that there were 20 income support payments available and 55 supplementary payments and a substantial lack of coherence in the amounts available and the requirements to access resulting from the patchwork nature of implementation (Department of Social Services, 2015, 6). Eminent social researcher Peter Saunders has gone further to observe that perhaps an overall cause of inefficiency in the system is lack of public and expert consultation. Australia has also attempted to address the impact of wealth distribution in Australia on healthcare, by initiating programs such as the Rural Health Professionals Program. In 2014 this had succeeded in redistributing over 100 health professionals to regional and rural Australia (Morell et al. 2015, 5). The system is not entirely broken, but it is in need of repair. This is the same across the social welfare policies of Australia and China.

Conclusion

There are multiple factors which contribute to the disparity of wealth in both Australia and China, particularly policies and schemes introduced by the respective governments. Within both countries rural and regional populations are likely to hold a lower proportion of the wealth, with a higher percentage of the population living in poverty and reduced standard of living. This skew of resources subsequently leaves a higher distribution in urban trade and resource hubs. As a result, healthcare facilities are also located within urban areas, causing rural Australians and Chinese to have reduced health outcomes. Although a range of policies and programs have been introduced to alleviate this disparity of wealth and resource distribution, and have thus far been effective, more still needs to be done to improve the health and quality of life for all Chinese and Australians.

Bibliography

AIHW (Australian Institute of Health and Welfare). (2003). Rural, regional and remote health: a study of mortality (summary of findings). Canberra: AIHW (Rural Health Series no. 3).

AIHW (Australian Institute of Health and Welfare). (2008). Rural, regional and remote health: indica-tors of health system performance. Canberra: AIHW.

Dong Guanyang. (2015). The Gini Coefficient of China. Retrieved from http://www.chinanews.com/gn/2015/01-20/6986564.shtml

Economist. (2004). Special report: China's health care. August 21st.

Guan, Xinping. (2014) Poverty and anti-poverty measures in China. China Journal of Social Work. 7(3), 270.

Health Workforce Australia. (2012). Health Workforce Australia. Adelaide. Retrieved from:

https://www.hwa.gov.au/sites/uploads/australias_health_workforce_series_doctors_in_focus_20120322.pdf

Inequality.org,. (2015). Wealth Inequality. Retrieved 29 October 2015, from http://inequality.org/wealth-inequality/#sthash.aGZ8g3S7.dpuf

Korda, R., Butler, J., Clements, M., & Kunitz, S. (2007). Differential impacts of health care in Australia: trend analysis of socioeconomic inequalities in avoidable mortality. International Journal Of Epidemiology, 36(1), 157-165. http://dx.doi.org/10.1093/ije/dyl282

Li, Shi and Sicular, Terry. (2014) The Distribution of Household Income in China: Inequality, Poverty and Policies. China Quarterly. 217, 1.

Li Siwei. (2002). The Regional Economy of China. Journal of Hebei University of Economics and Trade.23,3

Lin, J.Y., Cai, F., Li, Z. (1996). The China miracle: Development strategy and economic reform. The Chinese University Press, Hong Kong

Morell, Anna L., Kiem, Sandra, Milsteed, Melanie A. and Police, Almerinda. (2014). Attraction, recruitment and distribution of health professionals in rural and remote Australia: early results of the Rural Health Professionals Program Human Resources for Health, 12:15, 2-6.

Reference Group on Welfare Reform to the Minister for Social Services. (2015). A New System of Better Employment and Social Outcomes. Retrieved from https://www.dss.gov.au/our-responsibilities/review-of-australia-s-welfare-system/a-new-system-for-better-employment-and-social-outcomes-full-version-of-the-interim-report.

The World Bank (2001) China: Overcoming Rural Poverty United States of America. Turrell, G., & Mathers, C. (2000). Socioeconomic status and health in Australia. Med J Aust., 172(9), 434-8. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/10870537

Vogel. Ezra. F. (2011).Deng Xiaoping and the Transformation of China.387-389

Wang, H., Xu, T., & Xu, J. (2007). Factors Contributing to High Costs and Inequality in China's Health Care System. JAMA, 298(16), 1928. http://dx.doi.org/10.1001/jama.298.16.1928

Yang Hua.(2004). Comparison of Higher Education of the East and the West in China . Journal of Changchun University. 25,4

Yan Hong. (2006). The comparison of the weather of China and Australia. Journal of Forestry Science. 8

Yu, D. (1992). Changes in health care financing and health status: The case of China in the 1980s, Economic Policy Series, vol. 34, International Child Development Centre, UNICEF

Zhang, X., & Kanbur, R. (2005). Spatial inequality in education and health care in China. China Economic Review, 16(2), 189-204. http://dx.doi.org/10.1016/j.chieco.2005.02.002

2. Mathematics Education within Australia and China: A comparison of curriculum, pedagogy and extra-curricular consolidation favoured within both countries

Danielle Nash, Saskia Gilmour, Kang Yueming, Liu Dong, Alex Neuman

Introduction

This paper sets out to investigate the disparity between Australia and China's results in Mathematics within the 2012 Programme for International Student Assessment (PISA). To do this, we have chosen to focus on comparing the choices of curriculum, pedagogy and extra-curricular consolidation of mathematical knowledge and skills favoured by the two countries. Overall, we argue that these aspects of education are in fact underpinned by cultural values and beliefs, thereby making culture the most influential factor within mathematics education.

I: Background Information of Mathematics Education

The Importance of Mathematics to Australia and China

Mathematics is a subject that has a long history, with its roots officially forming in Ancient Babylon and Ancient Greece. Over time, the development of mathematical ideas has universally cemented Mathematics as an indispensable tool; used within all manner of work, from chemistry to management, to the arts and trades. Australia and China both rely on Mathematics to drive every national interest, from domestic services to international trade. As a result, the success of both countries relies on all citizens being, at very least, competent with basic mathematical skills. Furthermore, within the current fast-moving and increasingly competitive digital age, advanced Mathematics is becoming all the more important. Therefore, in both China and Australia, Mathematics is often described as the most important subject taught within schools (Yasoda, 2009). Considering the importance of Mathematics education to both countries, Australia and China both spare no effort to popularize core Mathematics within schooling, without which, there would be no hope of developing advanced mathematicians.

Achievement in Mathematics: How Australia and China Measure Up

The mathematical literacy of students is measured differently across countries and regions, however there is one standardised test which aims to compare the core learning of students from countries around the world. The Programme for International Student Assessment (PISA, Organisation for Economic Co-operation and Development, OECD, 2014) conducts a triennial international survey, testing the skills of knowledge of students aged fifteen years of age, having so far conducted assessments on students from more than 70 economies.

The most recent PISA survey was conducted in 2012, the results of which will be analysed for the purpose of this investigation (OECD, 2012). Around 510,000 students from 65 economies participated in PISA 2012, which assessed students across areas of Mathematics, reading, and science. Their results are representative of about 28 million 15-year-olds globally.

PISA 2012 surveys four of Greater China's economies: Macao-China, Hong Kong-China, Shanghai (China), and Chinese Taipei. By comparison, Australia has been collectively surveyed as one singular region. It is recognised that these four identified economies of China are neither culturally nor linguistically homogenous. For the purpose of this investigation, the focus will be on the economic region of Shanghai (China) as representing results for China (The People's Republic of China, PRC).

Out of all of the countries that participated in the survey, Shanghai (China) ranked as number one for performance in maths, with a mean score of 613, well above the OECD average mean score of 494 (OECD, n.d.). This indicates that the mathematic literacy of students in Shanghai, exceeds the OECD average by three years. By comparison, the Australian mean score comes in just above the OECD average, at 504. With a difference between the two countries scores being 191, this investigation aims to compare the core components of Mathematics education in both countries, to attempt to gain some insight into the reasons for this disparity.

Influences on Education

There are many factors which influence Mathematics education no matter where in the world. The most obvious of these are the content that is chosen to be taught, the way the chosen content is taught by teachers in schools, and how learning is reinforced outside of the school environment. The technical terminology used in English for these concepts are: curriculum, pedagogy and consolidation. Because these concepts are all structured and performed by individuals who each have sets of values and beliefs based on their culture, Mathematics education can be said to be heavily influenced by culture.

Culture and its Influence on Mathematics Education

It is clear that teaching and learning Mathematics are without doubt influenced by culture. Culture and culturally specific practices have long been discussed as playing an important role in development. This concept has been most greatly expanded by Russian psychologist Lev Vygotsky, whose perspective is called 'sociocultural theory' (Bronfenbrenner, 1979). This theory focuses on the way that culture is transmitted. Vygotsky emphasises social interaction in particular as being necessary for individuals to acquire ways of thinking and behaviour that altogether make up a certain cultural group.

Urie Brofenbrenner's model of 'Ecological Systems Theory' (Bronfenbrenner, 1979), influenced by Vygotsky's teachings, views development as occurring within a complex system, affected by multiple levels of the surrounding environment. His four nested structures – the microsystem, meosystem, exosystem, and macrosystem – address development in and out of the classroom system.

His concept of the macrosystem relates specifically to cultural values, and is the outermost level of Brofenbrenner's model. The macrosystem refers generally to the values, laws and customs of a particular culture. Brofenbrenner highlights the macrosystem as the most important level to instigate change, as it is the largest and furthest reaching of all levels, and therefore having the greatest influence on development. We can therefore identify the macrosystem (or ideas of 'culture') as having the greatest perceived effect on the development of the individual. As it is individuals who are behind the development of educational policy, pedagogical frameworks and extra-curricular learning opportunities, it is logical to assume that

culture has the most substantial impact on Mathematics education no matter where it occurs.

II: Comparison of Australia and China's Approach to Mathematics Education

Overview

Throughout the following section, this paper will directly compare Australia and China's curriculum designs, pedagogies and extra-curricular educational opportunities in relation to Mathematics.

Rationale

Being a planning document, the curriculum designed by a government outlines the country's ideal educational conditions. By comparing mathematic curriculums followed by Australian and Chinese schools, we can get to the true differences between the two country's educational visions on a macroscopic level. Apart from the macroscale, we also concentrate on this topic microcosmically. Time spent on Mathematics by students can be divided into two main parts: the math work children do at school and the math work children do outside of school. In the first part, we can concentrate on the different math pedagogies favoured by Australian and Chinese teachers, since pedagogy has one of the greatest influences on the academic results of students. And in the second part, we will discuss math work children do outside of school, such as homework, activities and cram classes. It is hoped that the comparison of these aspects of Mathematics education within both countries will help to provide some insight into the disparity that is evident within the PISA Mathematics results.

Mathematics Curriculum: Australia

Australia has developed a Mathematics curriculum which contains the foundation of all maths knowledge learnt in Australian classrooms (Australian Curriculum, Assessment and Reporting Authority, ACARA, n.d.). The curriculum aims to ensure that by the end of student's schooling life, Australians can confidently complete mathematical problems in the areas of number and algebra, measurement and geometry, and statistics and probability. Not only this, but the curriculum's intention is that the mathematical skills they gain will then translate into areas of their adult life, so that they can become an active citizen. In the 'Mathematics? Make it Count' Conference, Ernest stressed that "students learn the Mathematics adequate for general employment and functioning in society" (Australian Science, 2013).

The way the different areas of Mathematics is taught to students is divided into four proficiency strands, including: understanding, fluency, problem solving and reasoning. These proficiency strands ultimately scaffold the process students learn Mathematics, and increasingly becomes more sophisticated overtime. Mathematics is taught to all Australian students from prep to year 12, with year seven transitioning into more abstract, problem solving styles of mathematical problems (ACARA, 2015).

It is important to note that each state and territory in Australia garners their own specific curriculums which have adopted the main aspects of the national curriculum, such as the learning areas and what is hoped to be gained from teaching Mathematics across Australians' schooling life (Centre for the Study of Mathematics Curriculum, 2006). However, it is clear that Australia values Mathematics as a core subject that should be taught in schools to benefit each student in their future.

Mathematics Curriculum: China

From Table 1, the curriculum of Grades 1-9, we can find that the learning schedule for students from age 6-15 (Grades 1-9) emphasizes Mathematics, constituting 13-15% of whole studying time, placing just below Chinese. Similarly, from table 2, the curriculum of Grades 10-12, Mathematics also tops the list, having a demanding teaching period of 324-368 hours, keeping abreast of Chinese and English. In light of these two curriculums put forward by Chinese Ministry of Education, we can deduce that Chinese government has attached great importance to the teaching of math and assigned a considerable proportion of credit hours to math study. The significance of mathematics can only be comparable to Chinese and English; however, mathematics clearly outweighs English from grade 1-9.

Table 1 Curriculum from Grade 10-12

<table>
<tr><td></td><td colspan="9">Grade</td><td rowspan="2">Percentage</td></tr>
<tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td rowspan="9">Categories of course</td><td colspan="2" rowspan="3">Moral Development</td><td colspan="4" rowspan="2">Moral Development</td><td>Moral Development</td><td>Moral Development</td><td>Moral Development</td><td>7～9%</td></tr>
<tr><td colspan="3">History and Geography</td><td>3～4%</td></tr>
<tr><td colspan="4">Science</td><td colspan="3">Physics Chemistry Biology</td><td>7～9%</td></tr>
<tr><td colspan="9">Chinese</td><td>20～22%</td></tr>
<tr><td colspan="9">Math</td><td>13～15%</td></tr>
<tr><td></td><td></td><td colspan="7">Foreign Language</td><td>6～8%</td></tr>
<tr><td colspan="9">PE</td><td>10～11%</td></tr>
<tr><td colspan="9">ART (arts or music)</td><td>9～11%</td></tr>
<tr><td></td><td></td><td colspan="7">Social working</td><td>6～8%</td></tr>
<tr><td colspan="9">Special Courses for Different Provinces</td><td>10～12%</td></tr>
<tr><td>Time</td><td>26</td><td>26</td><td>30</td><td>30</td><td>30</td><td>30</td><td>34</td><td>34</td><td>34</td><td>274</td></tr>
<tr><td>time in total</td><td>910</td><td>910</td><td>1050</td><td>1050</td><td>1050</td><td>1050</td><td>1190</td><td>1190</td><td>1122</td><td>9522</td></tr>
</table>

Table 1 Curriculum from Grade 10-12

Subject	Compulsory/Elective	Hour/week	Total	Total (compulsory+ elective)
Politics	Compulsory	6	184	184
Chinese and literature	Compulsory	12	368	368
English	Compulsory	12	368	368
Math	Compulsory	8	280	324-368
	Elective	2-4	44-88	
IT	Compulsory	2	70	70-140
	Elective	2	70	
Physics	Compulsory	4.5	158	158-294
	Elective	5	136	
Chemistry	Compulsory	4	140	140-259
	Elective	4.5	119	
Biography	Compulsory	3	105	105-171
	Elective	3	66	
History	Compulsory	3	105	105-228
	Elective	4.5	123	
Geography	Compulsory	3	105	105-193
	Elective	4	88	
P.E.	Compulsory	6	184	184
Art(Music/fine arts)	Compulsory	3	92	92
Research study	Compulsory	9	276	276
Technical education	1 week/year			
Community Service	Extra curriculum			
Social Practice	1 week/year			
Regional/School elective		11-19		340-566

Mathematics Pedagogy: Australia

Australian teachers quite often possess their own teaching 'style' which is often flexible as it is generally responsive to the needs of the students in their classroom. This is a result of the socio-cultural teaching and learning frameworks which are taught in Australian universities. Because of this, many teachers are very hands on and utilise practical ways in which to get students to learn (Australian Institute for Teaching and School Leadership, AITSL, n.d.). For example, mathematic problems are taught through hypothetical scenarios, whereby there can be more than one answer to the question (ACARA, 2015). Thus, students are encouraged through learning to develop their own value system of ideas, thought processes and decision making, with the end goal being that they will be able to participate effectively in Australian society. The method of individual and group work with limited teacher interference too assists in not only developing their own ideas, but also becoming more aware of the ideas of equality, freedom and justice which are an essential aspect of Australia's democratic society (Stephenson, Ling, Burman, and Cooper, 1998).

Mathematics Pedagogy: China

Chinese teachers use a variety of methods to teach Mathematics. Four are discussed below.

A Focus on Concept Introduction

Chinese math teachers are good at introducing new knowledge by building on their students' old knowledge. Chinese teachers draw from an array of teaching strategies when introducing new lessons such as situation-setting, hypothetical simulation, class

review, suspense set, exercise comment, and so on. Chinese educators are encouraged to use a range of these strategies, as it is common knowledge that diversified methods make it much easier for students to understand new content.

Pattern-modification problems teaching and learning

The Chinese Pattern-modification Exercise is widely accepted by teachers to train students to solve one problem using many strategies and to go beyond just getting the correct answer, they encourage analysing the problem with sense of depth. This is done in a variety of ways, however the end-goal is always the same, to encourage students to look deeper into mathematical problems and explore all possible answers.

Extract Mathematics thinking method

In the 1980s, Xu Lizhi put forward the theory of Mathematics thinking method to guide Chinese basic math teaching. This theory, still in use today, was warmly welcomed by the Chinese educational world and was directly applied to practice. Apart from induction and deduction, many creative and colourful methods used in China, such as symbolic-graphic combination, cross multiplication, undetermined coefficient method and so on. Chinese teachers have a good awareness of these abstract methods and actively introduce them to students.

Practice makes perfect

"Practice makes perfect", this proverb constitutes an essential part of Chinese education ideology. Chen Shengshen, a famous Chinese master of Mathematics once said that the secret of science can be found by repetitive and consecutive exercise, and the inspiration relies on hard practice. To better understand this ideology, Chinese educator explain it by dividing it into 4 parts: Memorizing leads to understanding, speed leads to efficiency, rigorous thinking leads to rationality, repetition relies on pattern-modification.

Extra-curricular Mathematics Opportunities: Australia

While there is a strong focus on children nurturing their Mathematics skills within the classroom environment, there is little encouragement for students to actively practice maths outside school. The only example of initiating this external learning is through the homework teachers ask students to complete. Homework has been found to be beneficial in developing their skills, especially in Mathematics. The repetition of mathematical equations and concepts completed independently outside of class can assist in cementing these ideas which can improve their knowledge and understanding (Nowicki, 2010). Assessing individual answers in class also allow opportunities to gain feedback on their answers (Nowicki, 2010).The Program for International Student Assessment discovered that 15 year old Australian students spend around six hours a week on homework, which has decreased from the amount of time from over a decade ago (OECD, 2014). Possibly as a result, the Queensland Government has implemented a policy to enforce the completion of homework outside of class (Queensland Government, 2000).

There have also been studies that suggest that students indirectly utilise their mathematic skills in everyday life. For example, in the 60% amount of students that play games on their touchscreen tablets play games that involve the use of literacy and mathematic skills. Such activities as common as playing on their iPads can ultimately improve their mathematic skills (Neumann, 2014). Ultimately, however, these types of games and activities that indirectly use Mathematics should be more actively encouraged by teachers and parents.

Extra-curricular Mathematics Opportunities: China

Homework is generally a compulsory part of the math work Chinese children do outside of school, although the situation will be different in different areas. Homework can be shown in different ways and papers and exercise books are often chosen as the main part. Teachers make papers themselves and choose exercise books that have been published for students as a supplement. In addition to having an exercise book chosen by teachers, it's common for a Chinese student to have one or two other textbooks. According to a survey Liu Ruiling did in her master's thesis, five- sixths of interviewed students bought at least one extra exercise book. (Liu Ruiling, 2013) The sales volumes for well-known exercises like LongMenZhuanTi have already reached 2,000,000,000 in less than 10 years (Ma Jianli, 2011)

Extracurricular cram classes are also an essential part in Chinese students' math study. Since different classes have different purposes, we can classify them into four types. The first one is called 'Mathematical Olympiad'. With the aim of practicing logical thinking skills and developing the skills for mental mathematics, most Chinese students will be asked to learn it more or less when they are young. The second one is called 'Synchronous Class', whose schedule is a little bit faster to ensure that students can more easily learn topics when they attend school, since they have learned once. 'Review Class' is another type of extracurricular cram classes, whose function is just the opposite of the synchronous class. The last type is aimed at exams, during which the micro-skills needed for answering exam questions will be taught, helping students to improve their scores within a short period.

Conclusion

Australia and China both see the importance of Mathematics to ensuring the success of their countries. Curriculum documents support this, by showing that along with language, they invest the majority of their teaching time in Mathematics. Both countries use a variety of pedagogies in order to ensure that students have a well-rounded understanding of the subject. However, Australia's pedagogical focus tends to be more on eliciting and maintaining student engagement, whereas China's pedagogical focus seems to focus on the most effective learning techniques. While the curriculum and pedagogy are largely similar, the extra-curricular consolidation of knowledge is where the largest differences can be noted. While Australian children do spend time outside of school doing homework, Chinese students complete homework as well as attend extra classes. On top of this, Chinese students invest in extra learning materials in order to practice even more. Based on these comparisons, it seems clear that the outside-school schooling culture, in this case, practicing and learning mathematical skills and knowledge outside of school, is very different between the countries. Therefore, the findings of this paper are that outside-school schooling culture could very well be one of the contributing factors to the disparity between the PISA results of Australia and China.

Bibliography

Australian Curriculum, Assessment and Reporting Authority (ACARA). (2015). *Australian Curriculum: Mathematics: Rationale*. Retrieved from http://www.australiancurriculum.edu.au/Mathematics/rationale

Australian Curriculum, Assessment and Reporting Authority (ACARA). (n.d.) *Review of the Australian Curriculum: A statement by the Australian Curriculum, Assessment and Reporting Authority.* Retrieved from http://www.acara.edu.au/verve/_resources/STATEMENT_Review_of_the_Australian_Curriculum_20140324.pdf

Australian Government, Department of Education, Science and Training. (2005). *National framework for values education in Australian schools.* Retrieved from http://www.curriculum.edu.au/verve/_resources/framework_pdf_version_for_the_web.pdf

Australian Institute for Teaching and School Leadership. (n.d.) *The essential guide to professional learning: Collaboration.* Retrieved from http://www.aitsl.edu.au/docs/default-source/professional-growth-resources/professional-learning-resources/the-essential-guide-to-professional-learning---collaboration.pdf?sfvrsn=2

Australian Science. (2013). *The importance of mathematics teaching in Australian education.* Retrieved from http://www.australianscience.com.au/education/the-importance-of-Mathematics-teaching-in-australian-education/

Bronfenbrenner, U. (1979). *Ecology of Human Development: Experiments by Nature and Design.* Cambridge, MA, USA: Harvard University Press.

Center for the Study of Mathematics Curriculum. (2006). *The intended mathematics curriculum as represented in state-level curriculum standards: Consensus or confusion?* Retrieved from http://mathcurriculumcenter.org/st_std_exec_sum.pdf

Liu Ruiling. (2013). *Study of Mathematics Schoolwork Burden of High School Students under the New Curriculum Reform, A Thesis Submitted in Partial Fulfilment of the Requirement For the Master's Degree.* Normal University: Central China.

Ma Jianli (2011). LongMenZhuanTi, *A special in exercise books.* Retrieved from http://blog.sina.cn/dpool/bolg/s/blog_8422a9dd0100smpp.html?vt=4

Neumann, M. (2014). *An examination of touch screen tablets and emergent literacy in pre-school children.* Retrieved from http://research-hub.griffith.edu.au/display/n1aa3b1b07fe9c968b2efe1606b989f1c

Nowicki, R.A. (2010). *The Benefits of Graded Homework in Math, Science, and Engineering Education.* Retrieved from http://www.westpoint.edu/cfe/Literature/RNowicki_10.pdf

Organisation for Economic Co-operation and Development (OECD). (2014). *About PISA.* Retrieved from http://www.oecd.org/pisa/aboutpisa/

Organisation for Economic Co-operation and Development (OECD). (2012). *How Australia Measures Up.* Retrieved from https://www.acer.edu.au/documents/PISA-2012-Report.pdf

Organisation for Economic Co-operation and Development (OECD). (n.d.). *Shanghai and Hong Kong: Two Distinct Examples of Education Reform in China.* Retrieved from http://www.oecd.org/countries/hongkongchina/46581016.pdf

Organisation for Economic Co-operation and Development (OECD). (2014) *Does Homework perpetuate inequities in education?* Retrieved from http://www.oecd-ilibrary.org/does-homework-perpetuate-inequities-in-education_5jxrhqhtx2xt.pdf

Queensland Government, Department of Education, Training and the Arts. (2000). *Homework – in State Schools.* Retrieved from http://education.qld.gov.au/parents/pdf/homeworkpolicy.pdf

Stephenson, J., Ling, L., Burman, E., & Cooper, M. (Eds.) (1998). *Values in education.* Routledge: London, United Kingdom.

Yasoda, R. (2009). *Problems in teaching and learning mathematics.* Discovery Publishing House: New Delhi, India.

3. Impacts of the migration of rural minorities in China and Australia

Heath Burton, Liu YangChun, Mariah Ritchie, Sophie Wilson and Zhao Jiayin

Australia and China are two vastly different countries with opposing political structures. However both countries have encountered rapid growth in urban migration of people moving from rural areas. Whilst government, economic and social causes can be contributed to the reason for this growth, these countries differentiate on the specifics behind these reasons. However despite the cause of rapid urban migration, it is clear that minority groups are suffering in the process. Through comparing the issue of urban migration of Indigenous people in Australia and of rural workers in China it will demonstrate the contrast between Australian and Chinese government policies, the social and economic resistance against these policies and how these minorities are consequently affected.

As Australia is a settler country, the Aboriginal people have felt the effect of government intervention and control over residency since the 18th century. While early settlers isolated Aboriginal people into settlements and restricted their movements, recent government policies have forced a reversal of the migration flow to urban areas.

Of recent concern was the proposed closure of 180 remote communities in Western Australia. Bill Marmion, the Western Australia Minister for Housing first raised this issue in parliament on September 24, 2014 when he informed the body that the Federal Government planned to cut all future funding to remote Western Australian communities, (Western Australia, Legislative Assembly 2014a:6820). In November the Premier for Western Australia, Colin Barnett announced the proposed closure of these communities. If the closures were to proceed, then residents would not voluntarily leave these rural areas but would have little choice but to leave. With no government funding to maintain infrastructure and support daily life, the result would be a migration flow of Indigenous Australians to urban outskirts and centres.

The overbearing government role in residency was emphasised when Barnett responded to a question posed to him in parliament that he had not consulted with any of these communities about their potential closure (Western Australia, Legislative Assembly 2014b:8128b). He insisted that these communities are no longer 'viable' but this dismissive view does not take into account the social and emotional impacts these people will face if they are made to leave their homes unwillingly.

These affects have been seen previously in 2011, when the community of Oombulgurri in East Kimberly was forcibly closed and bulldozed. A coronial report was requested by the Government after four suicides in the community in 2005 and 2006. This report highlighted the problems facing Oombulgurri and made recommendations to declare the community to be a restricted area, restricting the sales and consumption of alcohol, however it made no recommendations to shut the community down (Office of the State Coroner, 2009:41). Disregarding this recommendation, the Government instead chose to close it down, forcing people to move to more urban areas.

While the government has stated that "no residents were evicted from their homes, people left on their own accord," Amnesty International has disagreed with these claims (Western Australia, Legislative Council 2014:8483b). Tammy Solonac (2014), for Amnesty International, has consulted with former Oombulgurri residents who feel they were forcibly removed from their home. They claim that there was a lack of

consultation and understanding of the process. Furthermore, 150 people requested with the assistance of the Balanggarra Aboriginal Corporation to return to Oombulgurri but were denied access by Premier Barnett and told they would be charged with trespassing if they attempted to return. Any further remote Aboriginal community closures would likely show similar results of unwilling participants forced to urbanely migrate due to Government pressures and policies.

Government intervention is just one reason for urban migration of Indigenous Australians however it is one that is done with little input or motivation from the people themselves. As long as the Government has control over these communities, policies will be implemented that have direct or indirect effects on where it is 'viable' for Indigenous Australians to live.

Since the implementation of government polices involving the urban migration of Indigenous Australians, there has been a backlash by these people against the government to remain in remote communities. This backlash can be contributed to a combination of social factors such as the location of kinfolk, traditional associations to land, conflict avoidance and deaths in a community (Taylor, 1998). In support of the cultural connections to the land, members of the Orange Indigenous community are worried that the closure of Aboriginal communities and the forced urban migration would threaten the passing on of Indigenous culture to children in their communities (King, 2015). Additionally, evidence suggests that through Indigenous Australians living in rural communities where there is a connection to the land, it allows for improvements to be made in the areas of social, cultural and physical health as well as the health of the landscape (Altman, 2010, p. 140). This clearly suggests that for social and cultural reasons related to Indigenous communities, it is preferable for them to remain in rural areas.

The economic position of a majority of Indigenous Australians living in these communities has also impacted on the reason for their resistance to urban migration. Evidence from the journal *Indigenous Perspectives* suggests that through the forced urban migration of Indigenous communities through government policies, it has resulted in Indigenous Australians suffering from lower wages, lack of employment, lack of skills and education, poor health, housing and criminal convictions (Carino, 2005). Similarly, a United Nations Indigenous forum highlights that Indigenous people living in cities often have issues with unemployment, limited access to services and inadequate housing (Indigenous Peoples Indigenous Voices, 2007, p. 1). This would suggest that economic issues are a major cause of resistance to urban migration of Indigenous Australians.

Through the causes previously mentioned it is evident that migration of Indigenous communities in Australia is a problematic issue, this has allowed a variety of consequences to arise. The Indigenous community of Australia has faced challenges when migrating into cities. The Australian Bureau of Statistics states that in 2011, the unemployment rate for Indigenous people was as high as 13% in major cities (Australian Bureau of Statistics, 2012). Further evidence indicates that migrant aboriginals suffer significant challenges when moving to the cities. This is justified by the concept formed by Michael Dodson, Aboriginal and Torres Strait Social Justice Commissioner for Australia, who suggests that if we, the Indigenous Australians, are removed "from the land, we are literally removed from ourselves" (Stephens, 2015, p. 55). This develops the cultural significance the Indigenous people have to their land and suggests that removal from this significance, to a way of life that is foreign to them would be detrimental to sustaining life. The consequences of moving into cities therefore suggest a possible risk of unemployment, isolation from spiritual community, and other social issues that would affect the migrants.

The reasons for this are clearly established; Indigenous Australians have consistently suffered under European colonisation, despite methods of integration. Even modern Australia does not recognise Indigenous people in the constitution. Indigenous

Australians experience greater drug and alcohol dependencies as well as increased medical risks compared to non-Indigenous Australians and this has been in part due to the forced displacement to urban settlements (Stephens, 2015, p. 57). Through these examples, it is evident that Indigenous Australians are negatively affected by forced urban migration and have suffered serious consequences because of government policies.

Similarly, in China there is mass momentum towards urban migration. In the two decades since 1978, around 174 million people have moved from rural areas to cities (Zhang & Song, 2003, p391). This rapid migration can be attributed to the economic reforms of the 1980s and 1990s where the strict hukou regulations of both migration and the job market were relaxed to a large extent allowing people freedom of movement (Zhang, 2010, p.52). Rural residents were the first to take advantage of this through their urban migration to the cities in search of work. Most of these migrants believed that through migrating to larger cities it will increase their opportunities for education, living standards and employment (Zhang & Song, 2003, p396). Therefore it is clear that economic reasons are the predominate cause for urban migration in China.

Whilst this influx of urban migration has occurred in China there are still issues surrounding the movement of Chinese people restricting their ability to migrate to cities. According to Zhang, despite centralised migration planning being abolished, permanent residency and urban rights are still denied to a majority of rural people through the current hukou system (Zhang, 2010, p. 54). Similarly it is suggested that rural migrant workers do not receive the same benefits and services that urban residents are provided, such as affordable housing, employment, education and a minimum living allowance (Wang et al, 2002). Due to these issues, rural workers who wish to migrate to improve their standard of living are effectively still restricted by government policy, much like the polices imposed by the government on Indigenous Australians.

China's mass migration of workers from rural to urban communities is a serious issue that is a major cause for concern for existing residents of the urban centres, and carries a significant cost to the individuals migrating into these cities and the balance of the economy. It can be asserted that much of the conflict between rural migrants and those already present in the cities is associated with the hukou system. The hukou, for the convenience of this paper be divided into rural and urban classifications. The latter is commonly known to have greater benefits and so the rural population struggles to access resources outside of their allocated zones, while populations in the cities oppose any possible loss of their own resources (Chan and Zhang, 1999, p. 822). This is of course coupled with the consequences that arise when any population centre receives a boost, causing increase stresses on urban systems while simultaneously refusing to allocate equal opportunities to those in rural areas.

This inequality of opportunities, services and employment between the urban and rural classifications of hukou has created a push by rural communities of China to migrate to urban centres and attempt to gain urban hukou. Studies by Zhiqiang Liu in 2004 revealed that those who have access to an urban hukou before the age of fifteen compared to those who receive it later in life, have higher levels of employment (Liu, 2004, p. 140). It was also noted that employment prospects in the state sector, which has higher wages, were more prevalent among those who received an urban hukou earlier in life (Liu, 2004, p. 140). This suggests that even if they receive urban hukou, rural migrants experience difficulties when transitioning into urban work environments. This could be contributed to their lower levels of formalised education.

Existing residents of urban centres also raise concerns of their social services being overly taxed by workers migrating into the cities. China enforces, in urban areas a minimum of nine years compulsory education of children between the ages of six and

fifteen. This is accompanied with a restriction that to attend school, a child must firstly reside in the local school district, and secondly be registered in that school district with a hukou. When temporary migrant workers are allowed to enter the cities, the financial burden on schooling is increased. To decrease this burden, parents of temporary migrant children are charged exuberant rates of up to 2000 yuan per year for elementary school aged children and up to 50, 000 yuan per year for high schools (Liang & Chen, 2007, p.31). This is unaffordable for many migrant workers who have no choice but to work low-paying jobs.

Another concern that has been raised from the urban population by allowing urban migration is issues caused by over population. The city administration of Zhengzou, capital of the Henan province, stated that their reasons for returning to a stricter application procedure in acquiring a Zhengzou hukou was due to the rapid increase of urban population. This is believed to have caused traffic jams, have a severe drain on educational resources, further pressure on medical facilities, and increase the amount of criminal cases (Wang, 2010, p. 347). These issues arose when the city took in 250,000 migrants over three years, a 10% increase of the former population (Wang, 2010, p.346). Additionally, most of the existing population reportedly decried that transport and schooling systems could not support it (Wang, 2010, p. 348). Through this example it is clear that overpopulation is an additional consequence that the urban population believes to be attributed to urban migration.

It can be concluded that the current issues that plague migrants are far more taxing than any possible risk to existing urban hukou owners. Additionally, merely possessing an urban hukou does not lead to better opportunities if it is acquired later in life, as the social benefits are felt by children between the ages of nine and fifteen. Therefore, a major issue facing migrants, and consequently the Chinese government, is that the educational system favours those with urban hukou. Positive steps, by offering an urban hukou to rural students on graduation, have been taken, but still do not address the issues of competitiveness and the cost of living that is suffered by the temporary migrant population.

Through the comparison of the issue of urban migration of Indigenous people in Australia and of rural workers in China, it is clear that there is a drastic contrast between Australian and Chinese government policies, and social and economic causes of urban migration. The difference is associated to the Chinese government pushing against urban migration through the hukou system and the rural Chinese community resistance. In comparison, the Australian government policies are forcing Indigenous Australians to migrate into cities causing a backlash against this from Indigenous communities. However despite these differences it is clear that both the discussed minorities have been affected by government policies and dramatic changes need to occur to ensure the welfare of these people.

Bibliography

Altman, J 2010, 'What future for remote Indigenous Australia? Economic hybridity and the neoliberal turn', in Jon Altman and Melinda Hinkson (eds), *Culture Crisis: Anthropology and Politics in Aboriginal Australia*, UNSW Press, Sydney, pp. 259-280.

Australian Bureau of Statistics, 2012. Labour Force Characteristics of Aboriginal and Torres Strait Islander Australians, Estimates from the Labour Force Survey, 2011, ABS, Canberra, viewed 2 October 2015

Australian Bureau of Statistics, 2015. *Australia's unemployment rate increased to 6.0 per cent in June 2015*, ABS, Canberra, viewed 2 October 2015.

Cariño, J 2005, 'Indigenous Peoples, Human Rights And Poverty', *Indigenous Perspectives*, vol. 7, no. 1.

Chan K W & Zhang, L 1999, 'The Hukou System and Rural-Urban Migration in China: Processes and Changes', *The China Quarterly*, no. 160, pp. 818-855.

Indigenous People Indigenous Voices, 2007, Urban Indigenous Peoples and Migration: Challenges and Opportunities, United Nations, New York.

King, A 2015, 'Orange joins peaceful protest over forced closures of Aboriginal communities', *Central Western Daily*, 13 April 2015.

Liang, Z & Chen, Y P 2007, 'The educational consequence of migration for children in China', *Social Science Research*, no. 36, pp. 28-47.

Liu, Z 2004, 'Institution and inequality: the hukou system in China' *Journal of Comarative Economics*, no. 33, pp. 133-157.

Office of the State Coroner 2009, State Coroner Annual Report 2008-2009. Viewed 2 October, 2015 http://www.coronerscourt.wa.gov.au/_files/ar2008-09.pdf.

Solonec, T 2014. 'The trauma of Oombulgurri's demolition will be repeated across Western Australia,' The Guardian, 27 November, viewed 2 October 2 2015, http://www.theguardian.com/commentisfree/2014/nov/27/the-trauma-of-oombulgurris-demolition-will-be-repeated-across-western-australia.

Stephens, C 2015, 'The Indigenous experience of urbanization', in P Grant (eds), *State of the World's Minorities*, Minority Rights Watch International, pp. 55-61.

Taylor, J 1998, 'Measuring short-term population mobility among Indigenous Australians: options and implications', *Australian Geographer*, vol. 29, no. 1, pp. 125-137.

Wang, F-L 2010, 'Renovating the Great Floodgate: The Reform of China's Hukou system' in M Whyte (eds*), One Country, Two Societies: Rural-Urban Inequality in Contemporary China*. Harvard University Press, p. 339.

Wang, F, Zuo, X & Ruan, D, 2002, 'Rural migrants in Shanghai: living under the shadow of socialism', *International Migration Review*, vol. 36, no. 2.

Western Australia, Legislative Assembly 2014a, Parliamentary Debates, 24 September, pp. 6820-6821. Viewed 2 October 2015, http://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/32ab437cfda582b648257d5f002a0eec/$FILE/A39+S1+20140924+p6820e-6821a.pdf

Western Australia, Legislative Assembly 2014b, Parliamentary Debates, 13 September, pp. 8126b-8128b. Viewed 2 October 2015, http://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/9e74936192fd463d48257d9600076bbd/$FILE/A39+S1+20141113+p8126b-8128a.pdf

Western Australia, Legislative Council 2014, Parliamentary Debates, 20 November, pp. 8483b-8484a. Viewed 2 October 2015, http://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/37e36cba1ec1ff5a48257d9a0018501d/$FILE/C39+S1+20141120+p8483b-8484a.pdf.

Zhang, H 2010, 'The Hukou system's constraints on migrant workers' job mobility in Chinese cities', *China Economic Review*, vol. 21, no. 1, pp. 51-64.

Zhang, K & Song, S 2003, 'Rural–urban migration and urbanization in China: Evidence from time-series and cross-section analyses', *China Economic Review*, vol. 14, no. 4, pp. 386-400.

4. Gender Equality in China: A Comparison Study

Jordana Colvin, Lizzie Dowrie, Song Xuan and Zhang Lu

In a political climate characterised by rapid globalisation and concerns of economic and military security, it has never been more important than to connect with ones' neighbours. Policies of regional engagement in the Asia-Pacific are increasingly ever-present, and one particular relationship often stands out. From Gough Whitlam's historical visit in 1973 to their newly signed free trade agreement (ChAFTA), Australia and China's healthy diplomatic relationship is necessary for the security of the Asia-Pacific region. This relationship is able to be strengthened by our people gaining an understanding of one another's society and culture. Gender equality, a global issue with staggered progress around the world, permeates both nation's political affairs, and both nations share similarities and differences in the challenges they face. This essay presents a comparative study between China and Australia's progress, or lack thereof, in the field of gender equality.

Gender Equality in China

At the United Nations' 4th World Conference on Women held at Beijing in 1995, President Jiang Zemin of China promised to the world, "Gender equality is the basic policy of China." This indicates the great importance Chinese government and people attaches to this issue. This basic policy arouses controversy, but it helps to change the custom of preference for sons in China. Now, twenty years later, China has made progress on gender equality in most aspects, however, as a country which was a highly developed patriarchy and pursued the patriarchal supremacy for thousands of years, China still has a lot to improve.

Women's participation in politics is an important indication of gender equality. The equal political rights of women are affirmed by China's constitution. The Chinese government indeed pays attention to the promotion of female cadres, which leads to the increment of the proportion of women in government. Progress is being made; at the 12th National People's Congress (NPC) in 2013, the proportion of women is up to a record 23.4%, (2.07% higher than that on the 11th NPC, and also above the international average). However, there is still room for improvement in several areas of female participation in the political process. The proportion of women's participation in elections and vote is far less than that of men. Only one in four Chinese unit leaders is female. A survey prepared to reflect the views and opinions of Chinese people on gender equality shows that 46.53% think the female participation in the political process still needs improvement.

In a world where female participation in the workforce directly correlates with economic success, it is critical that employment rights for women are equal to their male counterparts and that barriers for women entering and re-entering the workforce are addressed. In China, the encroachment of women's employment rights reflects in many aspects, one of which is employment discrimination in job markets. 22.77% of questionnaire respondents say that they have experienced sexual discrimination in employment. Employment discrimination is forbidden by the international community and many foreign countries make strict rules against employment discrimination. Women who suffer employment discrimination are legally protected and can receive compensation. However, in China the rules of protecting women are not that specific and the punishment for these kinds of companies are weak. 57.43% of the people choose to accept sexual discrimination in employment reluctantly, while 24.75% choose to argue their rights to the company and only

17.82% choose to complain to relevant departments. Conclusively, sexual discrimination within the Chinese workforce cannot be ignored. Apart from this, gender plays a role in people's plan for career, which also reflects from one aspect of the difference between men and women in work. 20.79% think gender play an important role in the future plan, 45.54% think gender plays a role more or less and 15.84% think that gender has no relevance to their future plan.

In more recent times, the role that women play in families has been more and more dictated by China's society. In China, influenced by traditional culture, most men and women treat women's historically greater responsibilities in housework and child-rearing for granted. Considering about both physiological and psychological factor, 83.17% of people believe that the role that men and women play in family should be different. 49.5% of people believe women should take most household chores. 51.49% of people who fill out the questionnaire say that they think the main family income should come from men instead of women. However, 50.5% people who participated in the survey say that the equality in family lives should be improved. However, as education for women improves and female participation in tertiary education increases, the tradition notions have been changing. In our questionnaire, 39.6% people prefer sharing housework with their partner, and 46.53% people think women's income should be as high as men's in an ideal and stable family.

The roots of gender discrimination must be considered in order to understand how to improve women's rights in China. As a country with a long history, China has been ruled by feudal dynasties for thousands of years. The Confucian school of thought advocated all kinds of manners and treated women with the prosperity of men. Women were asked to stay at inner chamber at home, and forbidden to undertake social activities and pursue careers like the men. Over the past century, with the revolution of 1911 and the establishment of the People's Republic of China, people are likely to influenced by the Enlightenment thoughts, especially women, and pay more attention to their equal status. s, Mao Zedong's motto, `Women can hold up half the sky' has influenced Chinese people for about half of the century.

Finally, policy also influences gender equality. Since the 1980s, with the implementation of the one-child policy in China, more and more girls can avoid the fate of their parents' abortion, and enjoy the same living environment and good education as men. At the same time, the policy of late marriage and childbearing do good to women's physical and mental health, make women have more possibility to enjoy their life. Gender equality in China has improved in the last thirty years, but still has a long way to go.

Gender Equality in Australia

Gender equality is an important indicator of how developed a country is. Like most liberal democracies, Australia is patriarchal and there is much room for improvement in the arenas of politics, business and the family.

Women's participation in Australian politics is an important indicator of gender equality. Women are vastly underrepresented in Australian politics, which has a negative impact on women in broader civil society. Women have only had the democratic right to vote in Australia since 1902, when women Australia-wide were granted suffrage in Commonwealth elections. Men have had the same right since the 1850s. Although women are now formally politically equal, this has not translated to equal political representation. Women comprise 29% of all Australian parliamentarians. There is a substantial difference in the percentage of women in the Senate (38.2%) and House of Representatives (26.7%). The Queensland Legislative Assembly has the lowest proportion of women members (21.3%). Quotas, however, remain a sensitive and controversial subject.

Australia has had one female Prime Minister, Julia Gillard. She served as Prime Minister from 2010 to 2013, succeeding Kevin Rudd mid-term. In October 2012 Gillard raised sexism and misogyny in a speech opposing a motion to remove her choice as Speaker for the House of Representatives. Although condemned for it by other politicians, she received compliments and congratulations from leaders of France, Denmark and the US.

The glass-cliff phenomenon describes how in times of crisis, female leaders are turned to because they are perceived to have the required traits to deal with crisis situations. However, these women become scapegoats if their company or government does not successfully manage the crisis, or they are replaced by a man once the crisis has been resolved (Hall & Donoghue, 2013:635). Therefore there is not only a problem of numbers of leadership positions available for women in Australia, but the nature of leadership positions available. They are given a higher than usual chance of failure. Readings of Gillard's ambition following her rise to PM are firmly framed in terms of gender. Some were upset that she was not feminine and communal – she was aggressively ambitious. Some reconciled her approach as a 'blokey one' and decide that her appeal is based on her lack of femininity. Others downplayed her ambition or softened it by combining it with communal qualities. Gillard arguably came into power in line with the glass cliff phenomenon – to clean up a mess in difficult electoral circumstances (Hall & Donoghue, 2013: 642).

Prevailing social conceptions of traditional gender roles still actively discourage women from standing as political candidates. Women are also less likely than men to seek leadership positions or be motivated by political ambition (JL Lawless cited in ABH, 2014: 20). It is important that women participate in politics more fully in Australia because women in public office enhance female identification with the system and their ability to have influence within it (Ibid). It impacts on how women perceive their social inclusion in society.

In terms of women in the workforce, discrimination on the basis of sex is formally illegal in Australia under the Commonwealth Sex Discrimination Act. Complaining about sexual discrimination and harassment is also uncommon, because women face pressure not to or will be viewed as a complainer if they do.

Despite formal equality and legislation against discrimination, women are not equal to men in the workforce. On average, women working full-time earn 17.5% less than men working full-time. Women constitute 69.6% of all part-time employees, a significant over-representation. The 2012 Australian Census of Women in Leadership identified that women held only 3.0% of chair positions in the ASX 200. Furthermore women represented only 3.5% of CEOs in the ASX 200. There are also issues of maternal leave. Women are often treated differently in the workforce because of an expectation that they will leave to have children, and be the primary caretaker.

Corporate image, economic performance and good governance suffer when women are not equal in leadership in the corporate sector. According to the Committee for Economic Development of Australia, "the gender gap isn't just an image problem: it has real implications for the performance of every aspect of our society" (CEDA, 2013:71).

Women's position in politics and the workforce may seed from their perceived role in the family. Traditionally, women have been viewed in Australia as child-rearers. Women were expected to complete the housework, raise children and serve their husbands. Although this is now a somewhat antiquated expectation, it has evolved into a more demanding expectation. The idea of 'having it all' has plagued women in recent times. Women are now expected to balance a career and still fulfill all of the family obligations as before. It is important to note that men are not asked how they balance their work life as much as women in interviews. This correlates with the ever-present expectation that the main family income will come from the father.

Australian culture and political norms are an important reason behind gender inequality. Democracy is the ideology underpinning western thought – but for a very long time women were excluded from democracy in Australia. Furthermore, the rational individual under liberalism has been critiqued as being of a male perspective, excluding women. According to a report published by the Australian government, the Westminster system of representative democracy in Australia has tended to promote a confrontational style of politics in the chambers (APH, 2014: 20). This is reinforced by the 'majoritarian' model of government versus opposition as well as the tradition of strong party discipline. According to Sawer, Tremblay and Trimble, women find it difficult to cooperate on areas of interest on the floor of the chamber in this model of democracy. They suggest that women parliamentarians find more scope for cross-party cooperation on committees (APH, 2014: 20). A lack of femininity reduces the popularity of powerful women. The double bind of female leadership describes how women are damned if they are too feminine, but damned also if they act like men (Hall & Donoghue, 2013:632).

Women represent just over 50% of the Australian population, yet are barely represented in key political and business positions. If political positions are not representative of broader civil society, Australia will continue to have a democratic deficit, and if businesswomen are not promoted to the same positions as businessmen, corporate performance will suffer. Women should have equal rights to decision-making.

Civil society is more effective if parliament is widely representative of the population – therefore women's equal participation in parliament is crucial in a democratic society (ABS, 2010: 69). As Rachel Nolan, former Minister in the Queensland Bligh Labour Government, puts it, "... the exclusion of women is the exclusion of diverse thinking" (Nolan, 2014: 70). Gendered life experiences and priorities must be included.

Conclusion

Issues of gender equality must be addressed in both China and Australia. Both nations share issues of female political representation, economic inequality and the challenging of traditional gender stereotypes at both the home and in the workforce. Although their issues may be addressed differently, there is no doubt that greater cooperation and collaboration can lead to a bilateral conversation between China and Australia – both diplomatically and culturally – in order to strengthen regional engagement and improve upon gender equality in their respective countries.

Bibliography

APH, 'Representation of women in Australian parliaments 2014', 2014 Research Paper Series.
http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1415/WomanAustParl [7th August 2015]

Australian Census of Women in Leadership 2012

Committee for Economic Development of Australia 2013
Women in leadership: understand the gender gap, Committee for Economic Development of Australia (CEDA), June 2013, accessed August 2015.

Hall, L.J. and Donaghue, N. (2013). "Nice Girls Don't Carry Knives': Constructions of Ambition in Media Coverage of Australia's First Female Prime Minister.' British Journal of Social Psychology, vol. 52, no. 4, pp. 631–647.

JL Lawless, Becoming a candidate: Political ambition and the decision to run for office, Cambridge University Press, New York, 2012.

R Nolan, 'Men of a certain age: what is the cost of propping up Tony Abbott's favourite minority?'. The Monthly, May 2014, p. 21, accessed August 2015.

Sex Discrimination Act 1984 (Cth)

'Women in parliament', Democracy, governance & citizenship, 1370.0 – Measures of Australia's progress 2010, Australian Bureau of Statistics, 15 September 2010, accessed August 2015.

5. Chinese investment in the Australian agricultural industry: An analysis of potential benefits

Chia Wai Kian, Estelle McCabe, Daniel Millis and Wang Runjian

In 1973, despite a delicate international environment, Gough Whitlam's Labor Party took the bold step in recognising the Peoples' Republic of China. Since then the Sino-Australian economic and diplomatic relationship has undergone significant growth and Australia has reaped invaluable rewards from this relationship. This paper will provide an analysis of the Australian agriculture industry. It will be shown that the sector is underperforming due to inadequate investment. This paper will argue that Chinese investment can provide the lifeline the Australian agriculture sector needs. Chinese investment will provide the economic stimulus needed to improve the sectors competitive advantage in international markets. It will allow the industry to improve infrastructure, technology and the management of resources. It will be argued that these improvements will ensure the future of the industry, thus cementing Australian food security.

First, the paper will provide a brief introduction to foreign investment within Australia. The historic benefits of foreign investment on the Australian economy will be discussed. Second, Australian food security will be analysed. It will be shown that Australia is a food secure nation. However, a slowdown in agriculture productivity and growth could be a major impediment to Australia's efforts to ensure high quality and ample food production. Third, the underperformance and vulnerability of the Australian agriculture sector will be explored. Under investment in the agriculture sector will be shown to be a primary reason behind the outdated infrastructure and technology that threatens the sectors ability to compete on international markets and secure the future viability of the sector. Fourth, the benefits of Chinese foreign investment will be presented. It will be shown that Chinese investment can provide much needed capital and enhance Australia's ability to export to China through the improvement of channels of market access. Finally, public misconceptions on foreign investment will be presented. It will be shown that Australian public concern regarding job losses and domestic food security are misguided and that political leadership is needed to educate the Australian public on the benefits that foreign investment can provide.

In the 1970's due to a rise in unemployment, record inflation, slow growth and a series of failures in living up to the non-economic social objectives of free western states, it became obvious that Australia's protectionist and inward looking economic policies were no longer working (Kasper, 2000, p. 2-3). Australia's business and trade sector was tied down by centrally regulated work and wage conditions, high external tariffs and foreign investment and exchange controls. The protectionist ideology of the government at the time meant Australia was unable to exploit its advantage in mining, agriculture and certain manufacturing industries (ibid). From the 1980's onwards Australia's policy makers undertook a series of successful macro and micro economic reforms. These reforms enabled Australia to best exploit its geographic location and its advantages in the resource and agricultural sectors (Dowrick, 2001, pp. 19-21).

In recent years, Australia has benefited from being located in the Asia Pacific region, which is only second to Africa as the fastest growing region in the world (Conley, 2002). The Asian region is where Australia conducts the majority of its trade.

Australia's balance of trade in goods and services with East Asia recorded a surplus of $55 billion in 2014 and since 2007 total trade with East Asia has grown at an annual average rate of 8.0 per cent (Department of Foreign Affairs and Trade, 2015). China is now the biggest importer of Australian goods and services. Australia's exports to China alone amounted to $77.1 billion in 2011 (Department of Foreign Affairs and Trade, 2013). The flow of Chinese capital to Australia has traditionally been concentrated in the mining sector, driven by China's hunger for resources to fuel its three decades of double-digit economic expansion (Ibid.). In recent years, China's economic growth has slowed down. This slowdown has resulted in a change to the Chinese investment profile in Australia. A recent KPMG report in collaboration with the University of Sydney's China Studies Centre identified agriculture as a key new sector to encourage Chinese investment (2015, p.7). In the report, analysts noted that only through continued trade liberalisation of the agriculture sector will Australia obtain the investment funds needed to develop the competitive advantage of the industry, thus cementing the future of the industry and Australian food security (Ibid.).

The United Nation's Food and Agriculture Organization (FAO) has offered what is considered to be one of the most authoritative definitions on food security: "when all people at all times have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Teng, 2014). This broad catch-all definition suggests that food security is not just about the country producing abundant amounts of food, but also about ensuring that people are able to physically access food, afford food, and eat nutritious and safe food.

Australia is widely considered to be a food-secure nation. Australia's Department of Agriculture states that the country enjoys "a high level of food security" (Australian Department of Agriculture, 2015). According to the Global Food Security Index, which takes into account the four factors of affordability, availability, quality and safety, Australia is considered the 9th most food-secure nation out of a total of 109 indexed countries (Global Food Security Index, 2015). As an agricultural nation with over half of its entire land mass used for agricultural production, Australia produces 3% of the world's food supply (World Bank, 2015). Australia is a net food exporter, able to easily satisfy domestic intake while still meeting export demands (Zhao, 2015, p. 52). From a national standpoint, a slowdown in agricultural productivity and growth is a major impediment in Australia's efforts to ensure high-quality and ample food production (Department of Agriculture and Water Resources, 2015).

Agriculture is a major contributor to the Australian economy. In 2013-2014 farm production added $51 billion to Australian economy (The Australian Bureau of Agricultural and Resource Economics and Sciences, 2014). The Australian government has recognised that as the mining boom begins to moderate, the agriculture sector can provide a new way to foster economic growth (The Australian Government, 2015, p. 4). For the last 200 years the Australian agriculture sector has had to adapt and continuously respond to economic, climate, social and technological challenges. However, the Australian agriculture sector is underperforming (Ibid. p. 78). High costs and under-investment has presented land and business owners in the sector with their biggest challenge yet. R.A Claxton from the New South Wales Department of Agriculture argues that Australia has been unable to grow and develop the competitive advantage of its agriculture industry due to substandard infrastructure and deteriorating resource conditions (Hunt, Birch, Vanclay, & Coutts, 2014, pp. 129-141). Australian agriculture needs access to productive land and water resources. However, climate circumstances including prolonged dry conditions in large parts of the country have led to the continued deterioration of farming lands and agri-business (Ibid.). This deterioration has highlighted the need for farmers to adapt and embrace technological infrastructure that can provide water security and improves their long-term drought resilience. The 2015 Agricultural Competitiveness White Paper urged agriculture land and business owners to increase water capture

and drought proofing initiatives. However, with limited government financial support or private investment, many businesses have been unable to fully implement these high-cost initiatives (KPMG; The University of Sydney: China Studies Centre, 2015, p. 23).

There is a growing awareness of the importance of the Australian agricultural sector being coordinated within the supply chain to ensure productivity efficiency and competitiveness (McCord & Payne, 2004). However, Australian farmers have been restricted due to supply chain infrastructure that does not meet the high standard set by international competitors. This deficiency has been recognised by the Australian Government. The Agricultural Competitiveness White Paper advocates for the embracement of transformative technologies that will allow production to be "faster, bigger and better integrated along the supply chain" (The Australian Government, 2015, p. 5). The paper also recognised the need for wholesale changes to the current communication infrastructure. Improved communication channels will be pivotal to connecting famers to markets and providing the information needed to drive productivity growth. However, the agriculture sector has been unable to adapt at the rate needed to ensure its competitive advantage (Ibid., p. 6).

Several reasons can be provided to explain why the Australian agriculture industry has been unable to grow and develop the competitive advantage of the sector. First, there has been a lack of involvement of Australian capital funds in the agricultural sector. Agricultural investments do not fit the short-term benchmark return requirements of fund managers which has seen capital investment directed towards other industries (BDO, 2015, p. 6). Australia's investment culture is geared towards short investment cycles and quick returns. Australian superfund managers, who control Australia's $1.84 trillion dollar super pool, continue to look for benchmark annual returns of investment to cover the costs of equity (BDO, 2015). Agriculture investment does not meet these demands. Second, the Australian government's support has waned since the 1980s; Australian farmers are now experiencing a disparity in capital support compared to their global competitors (Sanyal, 2014, p.1). Third, drought conditions and stricter financing requirements following the 2008 Global Financial Crisis have created a massive debt pool within the sector. Restrictive loan conditions have meant it has become even harder for the sector to receive domestic capital assistance (Ibid.). These three factors along with rural labour shortages are threatening the survival of the Australian agriculture industry. For many economic analysts, it is only foreign investment that can provide the lifeline the Australian agriculture sector so desperately needs (KPMG; The University of Sydney: China Studies Centre, 2015). Foreign investment funds could be used to improve the Australian agricultural sector and enhance its global competitiveness. The Agricultural Competitiveness White Paper has called on the sector to embrace foreign investment (2015). The Australian government has recognised that foreign investment will provide the sector with the capital needed to meet growth challenges. Foreign investment will also expose Australian farmers and business to alternative business models, new technologies and expertise and provide much needed links to international markets (KPMG; The University of Sydney: China Studies Centre, 2015).

Foreign investment funds, in conjunction with specialist asset managers, can improve management systems and inject vital capital through the purchase of Australian agricultural land. National Farmers' Federation (NFF) chief executive officer Simon Talbot, argues that this kind of investment is "crucial for development" if Australia wants to secure the future of the industry. Mr Talbot explains, "Australians aren't falling over themselves to invest in agriculture" (Talbot cited in Wells, 2015). Capital injection from foreign investors will allow the agribusiness sector to secure good quality agricultural land and build the infrastructure needed to pave the way for Australia's agricultural growth. The ANZ Bank estimates that $600 billion of investment will be needed for the Australian agricultural industry to remain globally competitive and productive from now until 2050 and that China will be a very important source of this investment (ANZ, 2012, p.1).

Foreign investors will not only fund Australia's food production and processing, but also increase its access to overseas markets, promoting bilateral agribusiness (KPMG; The University of Sydney: China Studies Centre, 2015, p. 8). Due to low domestic demand, overseas markets will become increasingly important. In 2012-13, China was the second largest importer of Australian food, accounting for 9.9% of exports (Department of Agriculture and Water Resources, 2013, p. 24). Trade is growing strongly, but there are opportunities for greater and more profitable trade. With the rise of the Chinese middle class, the demand for high quality food will rise. With strong demand for Australian food and over $US3 trillion in currency reserves, China represents an important potential source of investment for the Australian agriculture sector (Bilardi, Luckock, & Latimer, 2014). The Australian Bureau of Resource Economics and Sciences predicts China will account for 43 per cent of all growth world-wide in agricultural demand to 2050 (Department of Agriculture and Water Resources, 2014, p. 81). Chinese investment will enhance Australia's ability to export to China. Chinese investors are more familiar with Chinese markets and can help Australian food companies penetrate the enormous Chinese market and improve market access to one of the world's fastest growing economies (Child & Tse, 2001, p.5). The difficulty for foreign companies to navigate around China's powerful institutions without the use of 'Guanxi' is well documented. In China, Guanxi is the system of social networks and influential relationships which facilitate business and other dealings. Guanxi is known to "dominate business activities throughout China" (Lovett, Simmons, & Kali, 1999, p. 231). Chinese involvement and investment in Australian agriculture will not only provide a much needed financial injection but can also provide the sector the knowledge and contacts needed to navigate institutional and regulatory barriers. However, growth of Chinese investment in Australian agriculture has been severely hampered by the Australian public's misconceptions over the issue. Despite ongoing community interest, there was only limited small to medium sized agribusiness investments during 2014 (KPMG; The University of Sydney: China Studies Centre, 2015, p. 23). The two overarching misconceptions concern Australian job losses and Australian food security.

Sections of Australia's rural and urban communities have displayed a deep distrust of foreign agricultural land ownership because of the potential loss of job availability. China and Australia's Free Trade Agreement (ChAFTA) has further ballooned this concern with sections of the Australian political landscape bringing media attention to potential job insecurity issues. The Department of Foreign Affairs and Trade (DFAT) has attempted to ease these fears assuring the Australian public that ChAFTA will "not allow unrestricted access to the Australian labour market by Chinese workers" (Department of Foreign Affairs and Trade, 2015, p.1). The DFAT report concluded that "ChAFTA will not allow Australian employment laws or conditions to be undermined, nor allow companies to avoid paying Australian wages by paying foreign workers"(Ibid.). Similar sentiments are reiterated by the Foreign Investment Review Board (FIRB) which examines proposals of foreign investment into Australia; "Chinese investment supports existing jobs and creates new jobs, it encourages innovation, it introduces new technologies and skills, it brings access to overseas markets and it promotes competition amongst our industries" (Foreign Investment Review Board, 2015, p. 1). It is hoped that the labour shortage in the Australian agriculture sector, which is estimated at over 100,000 workers by the National Farmers' Association will encourage more Australians to work in this booming sector. Dr Anne Garnett adds that the jobs created through foreign investment would not just be "working the farm", but it includes a wide array of jobs – agricultural supplies, transport, shipping, logistics and administration (Garnett, 2013). It can be concluded that foreign investment in the agricultural sector will boost jobs for Australians.

There is a growing misconception among the Australian public that increased Chinese investment in Australian farmland will lead to Australian food insecurity. China's food security situation currently stands at having "access to only 9 per cent of the world's arable land to feed 21 per cent of the world's population" (Smith & Ning, 2013).

Sections of the Australian community have voiced concerns regarding the potential of Chinese investors shipping all produce to China, leaving Australia unable to meet domestic demands. Media sensationalism continues to fuel this public anxiety. In July 2015, Australian television show Sunday Night aired a segment detailing a Chinese businessmen proposing to raise cattle on a Chinese-owned farm; process the cattle at a Chinese-owned plant; transport it to a Chinese-owned wharf; and ship it all back home on Chinese-owned ships (Sunday Night, 2015). Charlie Huang, Senior lecturer at School of Management at RMIT University, argues that growing the agricultural industry through Chinese investment represents a once-in-a-lifetime opportunity for Australia. Huang believes that if managed properly, agriculture can be the next boom for the Australian economy and asserts that stronger political guidance is imperative to correct existing public misconceptions (2015).

A report from the Australian Department of Foreign Affairs in conjunction with the Minister for Trade and Competitiveness, Feeding the Future, aims to provide greater political guidance on this matter. According to the report, foreign investment can provide the Australian agriculture sector with the investment needed to not only establish Australia as a net food exporter, but also provide the sector with the financial resources and infrastructure needed to secure Australia's own domestic food security. The report concludes that foreign investment would enhance Australia's food security by "increasing efficiency and productive capacity" (Department of Foreign Affairs and Trade, 2012, p. 23). The report points to the Australian wine sector that has reaped the benefits foreign investment can provide. Foreign investment has created improved production and distribution systems that have fuelled a wine export boom. This export boom has increased employment in the sector and increased product availability while lowering the cost for Australian consumers (Department of Foreign Affairs and Trade, 2012, p.76). It is hoped that a similar outcome would occur in the Australian agriculture sector. Foreign investment can sustain Australia's food security. Public concern over Australia's food security being at risk from foreign investment is misguided. It in fact, has the opposite effect – it creates a secure future for Australia.

The Sino-Australia bilateral relationship is extensive and continues to grow in breadth and depth. This bilateral cooperation has allowed for both states to maximise the benefits delivered from shared economic and security interests. It is vital that the relationship between Australia and China continues to flourish. This paper has argued that Chinese investment in the Australian agriculture sector can provide the economic stimulus needed to improve the sectors competitive advantage and secure the future of the industry. Chinese investment would not only provide a source of much needed capital but will also provide greater access to growing Chinese markets. Australia has benefitted considerably from Chinese growth. It has been argued that visionary political leadership is now needed within Australia to correct misconceptions on Chinese investment in the agriculture industry. Foreign investment can secure the future of the industry ensuring the quality and quantity of production. The Sino-Australian Free Trade Agreement will ensure that Australian famers remain competitive in the Chinese market. Chinese investment will secure Australia's food security. Chinese investment will provide employment opportunities and will allow the industry the financial capital needed to embrace new and exciting technology and communication advancements. As the Sino-Australia relationship steadily expands through bilateral economic diplomacy, a growing mutual political trust is also being developed. The future of the Australian agriculture industry looks bright.

Bibliography

The Australian Bureau of Agricultural and Resource Economics and Sciences . (2014, March). Agricultural commodities: March quarter 2014. Retrieved from Department of Agriculture and Water Resources: http://www.agriculture.gov.au/abares/publications/display?url=http://143.18

8.17.20/anrdl/DAFFService/display.php?fid=pb_agcomd9abcc004201403_11a.xml

ANZ. (2012). The Global Soft Commodity Opportunity for Australia and New Zealand. *Agricultural Insights: Greener Pastures*.

Australian Department of Agriculture. (2015, February 25). Maintaining food security in Australia. Retrieved from Australian Department of Agriculture: http://www.agriculture.gov.au/ag-farm-food/food/publications/national_food_plan/white-paper/5-1-maintaining-food-security-in-australia

BDO. (2015). *An Analysis: Australian Superannuation Fund Investment in Agriculture*. Melbourne: BDO Australia.

Bilardi, S., Luckock, T., & Latimer, A. (2014, July 14). China's investors could revitalise our agriculture. Retrieved from The Australian: http://www.theaustralian.com.au/business/chinas-investors-could-revitalise-our-agriculture/story-e6frg8zx-1226987438961

Child, J., & Tse, D. (2001). China's Transition and its Implications for International Business. *Journal of International Business Studies*, 5-21.

Conley, T. (2002, Volume 16, No. 4). Globalisation as Constraint and Opportunity: Reconceptualising Policy Capacity in Australia. *Global Society*.

Department of Agriculture and Water Resources. (2013*). Australian Food Statistics 2012-2013*. Canberra: Department of Agriculture and Water Resources.

Department of Agriculture and Water Resources. (2014). *Department of Agriculture and Water Resources Annual Report 2013-2014*. Canberra: Department of Agriculture and Water Resources.

Department of Foreign Affairs and Trade. (2012). *Feeding the Future: A Joint Australia–China Report on Strengthening Investment*. Canberra: Department of Foreign Affairs and Trade.

Department of Foreign Affairs and Trade. (2013, January). *Australian Trade Report: Australia's Trade with East Asia*. Canberra: Department of Foreign Affairs and Trade. Retrieved from Department of Foreign Affairs and Trade: http://www.dfat.gov.au/publications/stats-pubs/Australia-trade-with-east-asia-2012.pdf

Department of Foreign Affairs and Trade. (2015, October 20). *Australia's Trade in Goods and Services 2014*. Retrieved from Department of Foreign Affairs and Trade: http://dfat.gov.au/about-us/publications/trade-investment/australias-trade-in-goods-and-services/Pages/australias-trade-in-goods-and-services-2014.aspx

Department of Foreign Affairs and Trade. (2015, August 26). *China-Australia FTA (ChAFTA): myths versus realities*. Retrieved from Department of Foreign Affairs and Trade: http://dfat.gov.au/trade/agreements/chafta/fact-sheets/Pages/chafta-myths-versus-realities.aspx

Dowrick, S. (2001). *Reshaping Australia's Economy*. Cambridge: Cambridge University Press.

Foreign Investment Review Board. (2015, June). *Australia's Foreign Investment Policy June 2015*. Retrieved from Foreign Investment Review Board: http://www.firb.gov.au/content/_downloads/Australias_Foreign_Investment_Policy_June_2015.pdf

Garnett, A. (2013, November 5). *Why we should sell the farms*. Retrieved from The Land: http://www.theland.com.au/news/agriculture/general/opinion/why-we-should-sell-the-farms/2677211.aspx

Global Food Security Index. (2015, May). *Australia Food Security*. Retrieved from Global Food Security Index: http://foodsecurityindex.eiu.com/Country/Details#Australia

Huang, C. (2015, May 6). *Agriculture could be the next boom for Australia*. Retrieved from The Conversation: http://theconversation.com/agriculture-could-be-the-next-boom-for-australia-40560

Hunt, W., Birch, C., Vanclay, F., & Coutts, J. (2014). Recommendations arising from an analysis of changes to the Australian Agricultural Research, Development and Extension System. Food Policy, 129-141.

Kasper, W. (2000). *Building Prosperity*. St. Leonards: The Centre for Independent Studies.

KPMG; The University of Sydney: China Studies Centre. (2015, May). Demystifying Chinese Investment in Australia. Retrieved from KPMG: https://www.kpmg.com/AU/en/IssuesAndInsights/ArticlesPublications/china-insights/Documents/demystifying-chinese-investment-in-australia-may-2015.pdf

Lovett, S., Simmons, L. C., & Kali, R. (1999). Guanxi versus the market: Ethics and Efficiency. Journal of International Business Studies, 231-247.

McCord, A., & Payne, R. (2004). *Report on the Condition of Agricultural Land in South Australia*. Adelaide: Soil Conservation Council South Australia (Government of South Australia).

Sanyal, K. (2014). Foreign Investment in Australian Agriculture. *Parliamentary Library: Informational Analysis Advice*.

Smith, B., & Ning, M. (2013, January 21). Minter Ellison Briefing / *Strengthening China-Australia relations in agriculture to feed the future*. Retrieved from Minter Ellison: http://www.minterellison.com/publications/strengthening-china-australia-relations-in-agriculture-to-feeding-the-future/

Sunday Night (Director). (2015). *Foreign Investors on Hunt for Aussie Farms* [Motion Picture].

Teng, P. (2014, September 9). *Food Security: What is means for a Food-Importing Country*. Retrieved from S. Rajaratnam School of International Studies: http://www.rsis.edu.sg/rsis-publication/nts/2110-food-security-what-it-means-f/#.VjGRO4103IV

The Australian Government. (2015). *Agricultural Competitiveness White Paper*. Canberra: The Australian Government.

Wells, L. (2015, March 1). *Does Australia's farm sector need foreign investment?* Retrieved from BBC: http://www.bbc.com/news/world-australia-31634751

World Bank. (2015). *Agricultural Land (%)*. Retrieved from World Bank: http://data.worldbank.org/indicator/AG.LND.AGRI.ZS

Zhao, F. (2015). An Analysis of the Current State and Future Prospects of China-Australia Agricultural Cooperation. *World Agriculture (Shijie Nongye)*, 52.