

Creative Distraction

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Editor's note

Creative Distraction has turned ten! In its time, *CD* has canvassed a wide range of topics, from a large number of contributors. It has generated controversial debate on political and social matters, including articles on Howard and Costello, and the economics of terrorism. The magazine has published comic articles, such as economic horoscopes, which is reprinted in the current edition for your amusement!

Creative Distraction Issue X has a wide range of articles, canvassing higher education by Hansen Tsai, fisheries policy by Madeline Veenstra, economic planning and health, by Lisa Zhong and the political economy of Korean industrialisation by Rene Provis. There is also the much-anticipated review of *Freakonomics*, the book that made economic thought part of dinnertime conversation.

The ESA is currently finalising its work experience programme for the summer, so keep your eyes open for further details. We are also finalising staff/student sport and the annual dinner. The next event will be Red Room drinks on Thursday 13 September – see the flyer on the back page. The AGM is to be held in October, and more information will be available closer to the date.

So, sit back, relax and enjoy the tenth edition of *CD*. May there be many more editions in years to come! As always, if you have articles/reviews/etc that you wish to contribute, please feel free to email m.riley@uqesa.com

Mitch Riley (August 2007)

THE TRANSITION FROM ECONOMIC PLANNING – CONSEQUENCES ON THE HEALTH SECTOR

LISA ZHONG

Introduction

Since the late 1970's, many of the world's command economies have undergone radical reforms in pursuit of the higher productivity experienced in market economies. Subsequently, these economies have experienced a tradeoff between equity and efficiency as the transition process coincided with growing domestic inequity. This discussion is an analysis of equity-efficiency tradeoffs in the health sector, focusing particularly on the effects of reduced public funding and subsequent privatisation.

The issue of health is one of great importance from the perspective of transition economies. The International Monetary Fund only considers the economic transition complete once, amongst other indicators, a basic social safety net for national health has been implemented without excessive burdens on the private sector. However, using data from the world's two major transition economies and comparisons with Organisation for Economic Co-operation and Development (OECD) countries, it can be seen that healthcare affordability and quality in post-command economies have deteriorated due to the transition.

The Russian Experience

The former-Soviet Union (1922-1991) had been the world's first and largest Communist command economy. Its collapse in 1991 resulted in significant decreases in public health funding for the new Russian Federation, which is now the world's second largest transition economy in terms of Gross Domestic Product (GDP). Combined with the structural problems inherent within post-command economies and counter-productive privatisation, Russia has since seen substantial decreases in the national quality of health and affordability of healthcare.

From 1991-1998, spending on public healthcare was reduced by 33%. Russia's overall healthcare spending is now at stage where it is comparatively disproportionate to private spending, as well as being an inadequate percentage of GDP when compared to the WHO European Region and the European Union. Consequently, Russia has experienced high levels of "poverty-related illness", such as alcohol poisoning and infectious and parasitic disease. Life expectancy hit an all-time low of 64.1 years (71 for women, 57.4 for men) in 1994.

Many of these issues have roots within the former-Soviet healthcare structuring. Often medical techniques are forced to develop within monopolistic research institutes – an area evidently yet unprivatised – living the country with outdated technology, such as in the case of tuberculosis and Aids treatments. The spread of these two diseases alone was estimated to have cost 1.5-2% of GDP from 2001-2005. Moreover, protocol still dictates that patients are immediately directed to a specialist instead of a general practitioner.

The Russian government did embark upon the privatisation of healthcare through the introduction of the mandatory medical insurance system (OMS) in 1991, with the aims of improving quality and competition. The OMS supposedly funded a program of government medical guarantees. However, reality was that MMI funds were insufficient for such services. In 1997, OMS funds provided for only 37.5% of the basic OMS services, thus services covered by the program were cut back in 1998. Furthermore, the employer-contribution element of the OMS meant in reality employer, not patients, chose insurers, exposing the system to kickbacks and employers opting for "pocket" insurance. Despite this, privatization of the health sector appears to be growing. Market researchers predicted a 10.5% growth of the Russian pharmaceuticals and healthcare markets for 2007, and annual 10% growths for 2008-2010.

Thus, it can be concluded that Russia's national health and health system are worse off due to the forces of economic transition and inherent characteristics of the economy. Domestic inequity, a decline in government funding and an inefficient insurance system have resulted in an inferior health sector that has and will continue to hamper Russia's transition to a market economy.

The Chinese Experience

Like Russia, China is a major transition economy in terms of GDP. Previously, with the inception of the Chinese Communist Party (CCP) in 1949, public healthcare was strongly invested in. A primary rural healthcare system was a showpiece of Mao Zedong's Cultural Revolution, whilst the government had also provided for community healthcare workers, coverage for life-threatening illnesses, public health campaigns and widespread access to healthcare. The focus on rural healthcare was understandable given that even today, after years of urbanization, China's rural population officially stands at 940 million. As was the case with Russia, economic reforms saw significant reductions in government health expenditure, which resulted in poor quality of health and privatisation of the health sector. Furthermore, recent studies have uncovered a relationship between income inequality, a by-product of the economic transition, and health-compromising behaviour.

Chinese Health Minister Gao Qiang, citing data from a 2003 official national survey, stated that government contributions to hospital running costs decreased from 30% in the 1970's to under 8% in 2000, that 30% of people needing hospitalisation did not receive it due to financial difficulties and that 49% of people needing treatment did not go to doctors. Moreover, inequity occurs at a rural-urban level, with 25% of all government healthcare expenditure being spent of the China's four wealthiest localities of Shanghai, Beijing, Jiangsu and Zhejiang. Market economics meant that there was no longer a disproportionate allocation of healthcare funds in favour of rural communities. Instead, rural area governments struggle to meet expenditure mandates using limited amounts of locally generated revenues.

In order to compensate for funding deficiencies, the Chinese health sector underwent a privatisation program in the 1980's which saw the private sector accounting for 64% of healthcare expenditure in 2004, with 10% of all hospitals being privately owned by 2006.

However, this is of little assistance to rural healthcare given the incapacity of most rural residents to pay for private healthcare. Another issue is that of insufficient private health insurance cover. The 2003 China Health Insurance Development Forum announced that whilst there were 29 life insurance companies and eight property insurance companies providing over 300 health insurance products in China, none of them provided long-term care or disability income.

Moreover, the increases in micro-inequality resulting from the transition have been linked to increases in health-compromising behaviour by the citizens of these countries. Data from the China Health and Nutrition Survey shows a strong, positive correlation between income inequality and the propensity to smoke, and to a lesser extent, to drink. In the table below, the coefficient of the Gini is positive and significant at the 5 percent level, thus predicting that a one standard deviation increase in community Gini (0.10) will increase the probability of smoking by 2.1 percentage points.

Relationship between income inequality and health-compromising behaviour¹

| | Dependent variable: smoking | | Dependent variable: drinking | |
|---------------------------|-----------------------------|-----------------------------|------------------------------|---------------------------|
| | Current smoker | Cigarettes per day | Current drinker | Drinking frequency |
| | Probit (1) | Tobit (2) | Probit (3) | OLS (4) |
| Gini | 0.206** (2.11) | 8.212*** (2.84) | 0.177* (1.73) | 0.645 (1.61) |
| Income | 0.011 (1.50) | 0.423* (1.91) | 0.030*** (3.68) | 0.135*** (4.41) |
| Education | -0.010*** (3.66) | -0.315*** (-4.00) | 0.005** (2.01) | 0.003 (0.25) |
| Number of obs. | 3004 | 2899 | 3092 | 3083 |
| (Pseudo) R-squared | 0.04 | 0.01 | 0.04 | 0.04 |

Source: Hongbin Li and Yi Zhu, "Income, income inequality, and health: Evidence from China" Journal of Comparative Economics (2006) 34(4) 668.

These figures are affected by the fact that consumers in transition economies are less informed of health risks, with two-thirds of Chinese adult smokers surveyed in 1996 believing cigarettes had "little or no harm".

Overall, China's transition to a market economy has been detrimental for the health of its people and its healthcare system. The pre-reform health system coverage, whilst never medically-advanced or sophisticated, greatly exceeds that of the post-reform era. Domestic privatisation, rural-urban inequality and health-compromising behaviour have only worsened the situation, and will most likely result in a future point of social and economic discord unless the government implements significant reforms in the area.

Comparison with Traditional Market Economies

The deficiencies in Russia and China's healthcare expenditure are made all the more obvious when compared the health sectors of the major market economies. In the United States, the growth rate of national health expenditure is exceeding the GDP growth rate, whilst the annual growth rate of health insurance has recently decreased. Similarly in Australia, Federal Treasury figures show public healthcare expenditure rising faster than GDP. On average, health expenditure in OECD countries rose from 7% in 1990 to 8.9% in 2004. This deficit is apparent even when compared to developing countries. China's public healthcare expenditure in 2004 was only 0.6% of GDP, whereas the average for developing countries is 4%.

¹ Note: Robust *t*-statistics, which allow for correlation of errors within household, are shown in parentheses; all regressions include age and age squared, and provincial indicators.

* Significance levels of 10%.

** Idem, 5%.

*** Idem, 1%.

Conclusion

This analysis has only looked at the situation in two, albeit major, transition economies. The healthcare situation in other transition economies will undoubtedly bear similarities to China and Russia but factors such as population size and social and political culture, amongst other things, must be considered before drawing any conclusions. However, figures do show that public healthcare funding has fallen, sometimes sharply, in countries in which healthcare was predominately a public service in 1990, which includes most former command economies.

Thus, there is little doubt that the economic liberalisation of former command economies has brought economic benefits in terms of productivity and GDP, with Russia and China being no exceptions. However, this analysis has shown that these economic achievements come at the expense of Russia and China's national wellbeing and healthcare systems. The problem of reduced public healthcare funding has been exemplified by privatisation and the rise of health-compromising behaviour, and is made to look all the more regressive when compared pre-reform circumstances and the growing health sectors of OECD nations. Whether such problems are acceptable in light of the benefits attained from the economic liberalisation can only be judged upon the future policy decisions of the Russian and Chinese governments and the placidity of their people, but for so long as the health sector remains in such dire straits, the Russian and Chinese economies cannot be considered true market economies.

FISHERY ECONOMICS: EFFICIENCY AND POLICIES IN AUSTRALIA

MADLINE VEENSTRA

Introduction

Management of fisheries within Australian waters is a difficult process. At present valuable fish resources are being economically and biologically overfished. This has caused much debate over the sustainability of current fishing practices and policies and has fuelled the need for more efficient policy reforms to be implemented, in order to protect Australia's valuable fishery resources. This report will give a brief outlook of current fisheries in Australia and the inefficiencies that are observed in present fishing practices. Furthermore, policy reforms for sustainable fisheries in Australia will be identified and discussed.

Fishery economics management in Australia

Australian fisheries ranks fifth amongst significant primary industries within this country, with fisheries resources estimated to be worth \$2.41 billion in 2001 (AFFA 2003). At present Australian fisheries are facing many challenges in sustaining our fishery resources and creating more efficient fishing practices.

Australian fisheries are now vulnerable to overexploitation due to low productivity in selected areas of the marine environment and intensive fishing by well-developed commercial fisheries (McLoughlin 2006). Within Australian waters as well as internationally, efficient management of fisheries has proved to be very difficult. A simple reason for this is that fishery resources constitute common property (Demsetz 1967). Fishery resources are difficult to observe, except upon capture. Thus it has been thought that the costs of establishing property rights may exceed the benefits (Munro 1982). It is observed that economic overfishing can occur when unregulated competitive fishing arises and total fishing effort simultaneously expands beyond E_0 to E_B , and all resource rent is dissipated (Munro 1982). Efficient fishery management is also associated with certain level of risk and uncertainty this is due to the range, distribution, life cycle and numerous other factors regarding commercial fish species (Commonwealth Fisheries 2007).

Inefficiencies in Fisheries management

As previously mentioned the overfishing, overfished and uncertain status of several fish stocks continues to be a matter of concern for Australian fisheries, in regard to sustaining levels of fishing. In Australia's Commonwealth-managed fisheries, the number of species that are over-fished has increased by eight-times within the last decade. This implies that the number of species being overfished has risen from three to twenty-four (Australian Conservation Foundation, Sustainable Seafood 2006). It has also been predicted that if this trend and inefficient practices continue, that the world's fisheries could collapse in less than fifty years (ACF, 2007). As of 2005 the Australian government has provided \$220 million in the form of a structural package seeking to recover overfished stock levels and to improve the profitability of the fishing industry (McLoughlin 2006). This structural package along with other policy reforms, which will be discussed, are needed in order to rectify the inefficiencies in Australian fisheries.

It has been noted in an article by Greenpeace (2006) that The Pacific is one of the last moderately healthy fisheries in the world, however it is now under threat from international fishing boats that are over harvesting fish in Australian waters. Not only is the Australian marine environment being preyed upon by international fishing boats, it has also endured an increase of Australian registered vessels fishing. There are currently 1158 vessels fishing within Australian waters as of 2005-06, as opposed to 827 in 1997-98. It has been discussed that this trend to overfish and lack of effective regulation may cause key fish stocks to start collapsing within three years (Greenpeace- factsheet 2006).

One fishery within Australia that is cause for concern both domestically and internationally is the Southern Bluefin Tuna. Since the 1990s, the spawning biomass of the tuna has remained at a low albeit stable level of around 5-12 per cent of the unfished stock. However recent assessments conclude that stock will decline further if domestic and international catch remains at current levels (Fishery Status Reports 2005). Two other tuna fisheries within Australia are showing signs of being overfished; they are the Bigeye and Yellowfin Tuna fish (Greenpeace 2005). It is reported that the catch levels of these two species are no longer sustainable. Further predictions require that the fishing effort of these two species must be reduced by twenty per cent in order to reach a sustainable level of fishing.

Policy reforms for sustainable fisheries

The current habit of Australian fisheries is such that policy reforms are needed to rectify inefficiencies within fisheries and to ultimately create sustainable commercial fishing practices. There are many policies that may be used to reach the goal of sustainable fishing. According to Anderson (1994) there are two main classifications of fishing regulations. The two classifications of regulations will either affect the size of the fish that are caught (input controls) or the total amount of fishing effort that is allowed (output controls). Different regulations include, quotas on fishing, limits on fishing efforts, licenses, seasonal fishing, Total Allowable Catch (TAC) reductions, gear restrictions, permits and management plans (DPI&F 2007). It is noted that not all of these regulations are actually effective in reducing fish mortality or establishing sustainable fishing (Anderson 1994). An example of this is size limits on fish caught, this policy will only be effective if the fish can be returned to the water safely or if the size of the fish can determined before capture, so as to reduce the number of unnecessary fish mortalities (Anderson 1994). It is further concluded in this article (Anderson 1994) that exclusive use of size limiting regulations are highly unlikely to produce an optimal harvest of fish at a minimum cost. In regard to policies restricting total allowable fishing effort, this will reduce effort in the short-term however, except in the case of licensing and taxing plans will not be truly beneficial in the long-term.

Another option that has been used in order to establish sustainable fishing is the use of seafood farms or aquaculture. The use of aquaculture in Australia has increased by thirteen per cent each year for the past decade (AFFA 2003). This is now seen as a more efficient solution to sustainable fishery management. However the Australian Conservation Foundation (2006) has suggested that this answer to unsustainable seafood may cause other risks. These risks include the extent to which feed is sourced from other fish species and the damage that may be caused to surrounding marine environment due to pollution or disease.

In Anderson (1994) it is stated that Australia's long history of open-access fishing has led to the present situation where only a reallocation of resources will be able to correct the over-capitalisation or overfishing that is occurring in most fisheries. The Ministerial Direction to AFMA (The Australian Fisheries Management Authority) has specified a number of measures that may be implemented in order to improve the current management of the Australian Government-managed fish stocks. These policies include further quota reductions and an introduction of limits on fishing efforts. Although it has been noted that some stocks will rebuild quickly, it will be years before the effectiveness of this measure will be apparent for other stock species. This policy of limits on fishing efforts has helped to rebuild the stocks in the Northern Prawn Fishery. In particular stocks of grooved and brown tiger prawns have recovered and are no longer have a status of being overfished (McLoughlin 2006). AFMA has also introduced Bycatch action plans in order to manage impacts on non-target species.

It has been suggested by Huang and Lee (1976) that in order to establish well-managed fishery resources and to reduce diseconomies arising from resource stock, that fishery management requires not only limiting entry of boats among fishing areas and also making sure that the distribution of boats among those fishing grounds is equal such that the marginal productivity of each boat is equal in each area.

Whether regulations are chosen in order to reduce fishing effort or to restrict size of the fish caught, it is important to introduce policies that allow both biological and economic regulation of fisheries, in order to harvest at the optimal rate for minimum cost. It is also suggested in Fujita, Foran and Zevos (1998) that firms that favour sustainable catches over the long term over unsustainable fishing in the short term should be rewarded.

Conclusion

Commercial fisheries within Australia are currently facing sustainability difficulties over fish stock and species. At present there are many species that are either overfished, or fishing vessels are exploiting resources by overfishing. It is suggested that a combination of over harvesting of fish stock and inadequate industry regulations are the main cause for the decline in fish species and stock in Australian waters. It is now imperative that the government implement a combination of output and input regulation controls in order to rectify stock levels, and to further produce a level of sustainable fishing within the Australian marine environment.

BOOK REVIEW: *FREAKONOMICS*

Fay Chen

Freakonomics: A Rogue Economist Explores the Hidden Side of Everything is an easy-to-read book, full of unconventional wisdom, written by the economist Steven D Levitt (described by the Wall Street Journal as economics' answer to Indiana Jones) and journalist Stephen J Dubner. The style of, and the approach taken by, the book is best described by the authors:

Most books put forth a single theme, crisply expressed in a sentence or two, and then tell the entire story of that theme: the history of salt; the fragility of democracy; and the use and misuse of punctuation. This book boasts no such unifying theme. We did consider, for about six minutes, writing a book that would revolve around a single theme -- the theory and practice of applied microeconomics, anyone? -- but opted instead for a sort of treasure-hunt approach. Yes, this approach employs the best analytical tools that economics can offer, but it also allows us to follow whatever freakish curiosities may occur to us. Thus our invented field of study: Freakonomics. The sort of stories told in this book are not often covered in Econ. 101, but that may change. Since the science of economics is primarily a set of tools, as opposed to a subject matter, then no subject, however offbeat, need be beyond its reach.

Much of the book, however, focuses on simple microeconomic utility maximisation. Levitt himself is not so much a 'rogue' economist, but rather a theoretically traditional one who merely applies economic theory to unorthodox situations. The studies on why schoolteachers and sumo-wrestlers cheat are simply applications of cost benefit analysis. The chapter on real estate agents illustrate the importance of incentives. The large portion of the book dedicated to what makes a good parent is largely just statistical analysis. To make the book simpler and more accessible, Levitt omits nearly all raw data and research methods, and leaves only his findings.

This academic scrutiny of *Freakonomics*, however, belies one important fact -- the book illustrates, to economists and non-economists alike, that economic analysis is an inherent part of every action that we make, even those that seem far-removed from the stodgy world of banks and classrooms (the Klu Klux Klan, anyone?). The controversial argument that legalising abortion was the reason crime rates in the US decreased in the 1980s exemplifies how economic reasoning can have significant social and political ramifications.

Freakonomics is a book written to provoke discussion and thought, and it does so brilliantly. It also provides its reader with enough anecdotes and stories for many dinner parties to come. Most of all, it provides the world with an example of how economics is more than just academic theory -- it is prevalent in the thoughts and actions of all.

THE ECONOMICS OF HIGHER EDUCATION

HANSEN TSAI

Given the context of rising tuition fees in Australia's higher education, should there be an increased public funding (e.g. HECS)? Or should there be a greater emphasis on individual contribution and private endowments? If so, does the price affect the lower income group's demand for higher education? Discuss the socioeconomic effect on the society should the emphasis on students' contributions is strengthened.

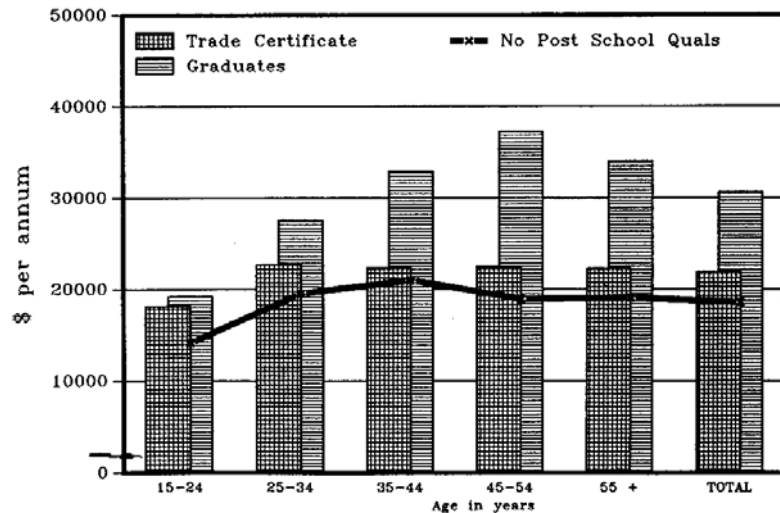
Over the spread of a decade, Australia has continued to disinvest in the education sector, reducing its funding in higher education from 3/5 to the current 2/5 (Mandeville, 2007). Recent research also shows that Australia is sharing common features in this regard with the United States and United Kingdom, in that the higher enrolment rates in the past few decades have been accompanied by declining levels of government support per student (Miller & Pincus, 1999, p. 8). This is mainly due to the government's perception that the education sector is capable of raising revenues from sources other than the state coffers. Also, as a result of the human capital model concept (Quiggin, 2007) introduced into the public domain, there is a shift of emphasis away from education being a public good to education being a mixed good of both public and private elements (Miller & Pincus, 1999, p. 8). However, it has been argued that the increased productivity in the workforce, as a result of the skills of the higher educated, is a marginal social benefit (Chapman, 1988, p. 174). This essay will be evaluating the socioeconomic effects a strong emphasis on individual contribution will have on the students of the lower-income group and possible changes in demand for this group as a result of this.

There is strong evidence that the economic returns to investment in university have grown substantially in recent years, and this in turn explains the growth in university attendance. According to Australian Vice-Chancellors' Committee (AVCC) in November 2003, there has been a 73 percent increase in the number of domestic students undertaking higher education from the years 1994 to 2002. The declines in the real incomes of the high school graduates compared with the large real gains of university-attendees, 14.5 percent, has been the main incentive behind this substantial increase (Quiggin, 2007).

The research quality framework suggested will reward the best research universities (i.e. Go8) with more resources, which can be used to make them even stronger (Schwartz, 2007). Inversely, those universities that are less prestigious will become even weaker. As a consequence of this, there will be an excess demand for places in those universities, which could furthermore lead to an inequality of access between the advantaged and less-advantaged. This inequality is caused by the assumption that entry could be raise to accept only the very best of the applicants for the places, and seeing that most of the affluent would undoubtedly have received better secondary education than those from lower-income socioeconomic backgrounds, the chances are higher for them. Consequently, there will be a concentration effect, in which the best will be concentrated in the best research universities, while the mediocre will be forced to go to inferior institutions (Jones, 2007). This in turn could offset the intended effect of the research quality framework, which was to enhance the competition between universities to better themselves, and thus provide better education and service to its students.

Despite the incentive, many economists suspect that the demand for post-secondary education in the United States is valid in most other nations, and Australia is gradually moving towards the US model (Marginson, 1999, p. 123). That is, the enrolment demand is price sensitive and the price elasticity is higher for students from lower-income families (McPherson & Schapiro, 1999, p. 13). The work of McPherson and Schapiro (1991a) on the US model has indicated that the magnitude of the coefficient on net cost implies that for lower-income students a \$150 net cost increase results in a 1.6 percent decline in enrolment for that income group. This indicates that if a stronger emphasis is placed on private contributions, the lower income families would be hit the hardest, and could deter students of this income group from participating in higher education, which could furthermore exacerbate income disparity within the society, seeing that high school graduates would earn substantially less than university graduates (Fig. 1).

Figure 1(a)
Earned Income by Age and Education
Persons: Full-year Full-time Workers; Mean Gross Annual Earned Income; 1985-86.



Source: Income Distribution Survey (ABS 6546.0)

The same study was conducted for the more affluent students, and no evidence of increases in net cost inhibits enrolment for this income group was found. This suggests that a reduction or removal of subsidies would not affect the affluent as it would on the lower-income groups.

HECS has addressed the equity question for most of the 20th century in that its income-contingent loan has allowed many underprivileged students to undertake university courses without upfront payments. This was an Australian innovation (Quiggin, 2007) that derived from Friedman's concept of 'providing loan funds sufficient to assure opportunity to all' (Friedman, 1980, pp. 183 - 184), whereby it is perceived as an 'equity investment', to advance the student the fund needed to finance his training on condition that he agrees to pay the investor (i.e. the government/society) a specified fraction of his future earnings. In this way, the investor could recoup more than his initial investment from relatively successful graduates, which would compensate for the failure to do so from the unsuccessful. This not only ensures a balance in equity, in that it gives every person from various socioeconomic backgrounds a fair go, but it also increases the country's human capital, which essentially enhances the diversity of talents in the economy and it has even been suggested that higher educated workers contributes to the increase in competitiveness and productivity in a nation's economy (Chapman, 1988, p. 174). Failure to address the need for increased funding per student (Armitage & Illing, 2007 & Fig. 2) could lead to potential brain-drain of talented students (Chapman, 1988, p. 185), since the tuition fees are relatively high by world standards (Quiggin, 2007) and it would be unaffordable for the less advantaged students to continue with their studies.

Some economists believe that there are various benefits of living in a highly educated society. Benefits such as increased tolerance (hence, lowered violent crime rate) and more informed public debate and voting (Chapman, 1988, p. 174) are elements that makes higher education a public good. Higher education also accrues workers from the imitation of the skills of the highly educated, thus enhancing the efficiency and competitiveness of the economy. It is generally accepted that more highly educated person probably has the ability to deal with disequilibria such as sufficiently using and deciphering new information. For that reason, there is justification for increased public funding of higher education, since it will bring greater good and productivity to the society. Although there

is the equity-equality trade-off, which suggests that there will still be specific groups within that society that are unable to utilize the HECS system due to their individual constraints and, as a result of this, they are unable to improve their financial or social status. Thus, it has been argued that whatever the size of the mentioned external benefits of higher education, there is no controversy that higher education creates a private benefit, and hence the theory suggests that costs should be borne by students (Barr, 1999, p. 103).

The paper by Miller and Pincus (1997b) refers to the government as having a redistributive goal with regard to higher education, as well as an efficiency goal. There seems to be less emphasis on a redistributive aim in recent years, in the sense of wanting to narrow the income inequalities through educational investments, than in a goal of 'equalising educational opportunities'. The aim is not so much to reduce the gap between high and low income earners in the next generation than it is to reduce the probability that most of the next generation of high-income earners will be drawn from the current generation of high-income earners (McPherson & Schapiro, 1999, p. 35). In this regard, the government has tarnished the justification for HECS: to improve the chances the least advantaged have in life to become one of the high-income earners, which could help explain the gradual decrease in government funding and subsidies in HECS and budgetary reductions of expenditure in the education sector. But given the current demand for higher education, and the recognised benefits of participating in higher education, there is little doubt that the demand would decrease should current trend continues (Karmel, 1999, p. 21).

In conclusion, the sum of the costs should be borne by the students since higher education creates more private benefits than public benefits. However, given the external benefits, such as the possibility of lowered violent crime rate and increased tolerance due to a higher educated society, the government should still sustain, if not increase, its HECS subsidies. Failure to invest in higher education and, hence, human capital development to create local talents within the domestic market could lead to decreased international competitiveness and reliance on foreign human capital. As a result of the government's indifference to higher education, there could be potential brain-drains of talented students that cannot afford such costly unsubsidised higher education. Since we're in an era that emphasizes on the knowledge-based economy, such results will be devastating to the economy.

Horoscopes with Jimmy Liu

Aries (Mar 21 – Apr 19)

Your current relationship is sub-optimal. Perhaps it's time you realise that your partner is not a positively related argument of your utility function. I see dumping measures taking place this week.

Taurus (Apr 20 – May 20)

You will have some unexpected visitors knocking on your door this week. But do not let this unanticipated shock deter you from removing barriers to entry. It could prove quite beneficial.

Gemini (May 21 – June 21)

Your current relationship radiates with positive externalities. It's time to take it to the next step. I see convergence to a new steady state of marriage in the near future.

Cancer (June 22 – July 22)

Your future beyond the immediate short run is uncertain. I will have to run a nonparametric analysis because you are clearly not normal.

Leo (July 23 – Aug 22)

It's time to curb that inflation you've been experiencing recently and institute some dieting policy. Not only will this decrease your level of consumption, members of the opposite sex will start raising their interest rates in response.

Virgo (Aug 23 – Sept 22)

It's time to change that rigid lifestyle of yours. Stop letting others central plan your life. Because once you've become a Friedman, you will be able to live life to the Marx and not feel Solow anymore.

Libra (Sept 23 – Oct 22)

You must realise that a relationship is a nonzero-sum game. Perfect information and cooperation are both vital if you and your partner want the maximum payoffs. Not doing so would create quite a dilemma.

Scorpio (Oct 23 – Nov 21)

You know your boss is a dummy variable, but it would still be a good idea to appear confident at regular intervals. Only then will you be able to boost output and reach your full potential.

Sagittarius (Nov 22 – Dec 21)

You are faced with sterilisation problems and realise that your p-value is insignificant. Micro reforms involving Viagra will help put these worries to ease, as well as boosting performance.

Capricorn (Dec 22 – Jan 19)

When you feel stressed out this week from studying economics OVA ANOVA ANOVA, take a random walk outside. The air will help you adjust back to equilibrium.

Aquarius (Jan 20 – Feb 18)

A close long-time friend of yours will ask you out this week, and there is a strong possibility of free trade. This shouldn't come as shock to you given the recent leading indicators. Non-rejection would be the way to go.

Pisces (Feb 19 – Mar 20)

It's time for a career change. Given the shape of your curves, modelling was never going to get you anywhere.

THE POLITICAL ECONOMY OF KOREAN INDUSTRIALISATION

RENE PROVIS

This paper presents the experience of South Korean (from hereon Korea) industrialization as a challenge to contemporary economic orthodoxy. Within any discipline there exist a number of unresolved and continually evolving debates between competing versions of truth. Korea's experience has here contributed significantly. The history of Korean industrialization is therefore couched in terms of the epistemological debates animating the economics discipline (and, in particular, developmental economics) over the same historical period; dependency versus modernization and neoclassical orthodoxy versus developmental state heterodoxy for example. This paper then concludes with a broader discussion on epistemology and the shifting nature of 'conventional wisdom' (Galbraith 1958), particularly in terms of the World Bank.

Contrary to the neoclassical conventional economic wisdom that has dominated contemporary economic thought in recent decades (Rodrik 2006), a large body of literature has developed emphasising the institutions fundamental to the analysis of the deeper determinants of economic growth. The positive relationship between institutional quality and economic performance is widely documented (see, for example, Acemoglu et al. 2001, Hall & Jones, 1999, Rodrik 2006, 1999, Rodrik et al. 2004, North & Thomas 1973, Jones 1981, North 1981). Broadly defined as the 'rules of the game in a society' (Miles & Scott 2005) institutions are, more specifically, the socially constructed memes that define and constrain various human interactions, consisting of formalistic laws, rules and informal social conventions, practices and behaviors (North 1990, 1993). Such was the theme of laureate Douglas North's 1993 recognition with the Nobel Prize for Economics. The focus on institutions dissents considerably from neoclassical orthodoxy,² in part by challenging two fundamental assumptions: that institutions do not matter and nor does time (North 1993, see also Alston et al. 1996, North 2005).³ These are, however, two features key to an understanding of Korea's growth experience of the second half of last century.

Early social institutions: the Confucian Way and the Yi Dynasty

The Korean adoption of Confucian philosophy largely occurred under the Yi Dynasty, which controlled Korea from the fourteenth century until the beginning of Japanese occupation in 1910 (Edwards 1992). Although widely adopted throughout East Asia, the Korean contribution Neo-Confucian thought between the thirteenth and seventeenth centuries constitutes a philosophical renaissance⁴ of sorts (de Bary 1985), the result of tensions between the rising Neo-Confucianism and Buddhist orthodoxy's competing claims over the spiritual sphere of life at the time (Deuchler 1985). While reflecting intellectual dynamism to the scholar of modern philosophy (for example, de Bary 1985, Deuchler 1985), the Yi Dynasty's Neo-Confucian contributions to economic development was lacklustre at best – the Japanese colonisers inherited a largely agrarian society characterised by 'rural destitution, coupled with corruption and nepotism in the cities.' (Edwards 1992)

Defined largely in terms of anti-Buddhist sentiment characteristic of the time, Neo-Confucianism stressed through a number of esoteric principles the solid, concrete and immutable over the ethereal and uncertain, discipline of the mind and a dedication to one's studies/work, reverence and respect for authority and hierarchy, and the *Way* as

² And in particular, the methodological conclusions and implications of general equilibrium theory (North 2005, North et al. 1996).

³ 'Institutions form the incentive structure of a society and the political and economic institutions, in consequence, are the underlying determinant of economic performance. Time as it relates to economic and societal change is the dimension in which the learning process of human beings shapes the way institutions evolve. That is, the beliefs that individuals, groups, and societies hold which determine choices are a consequence of learning through time' (North 1993).

⁴ One interpretive volume authored by the Korean scholar Ch'u Ch'ok in the thirteenth century had even reached Europe in Spanish translation by the seventeenth century (de Bary 1985).

ultimate truth under the guise of 'orthodoxy' (de Bary 1985, Lau 2005). A cursory glance at the social institutions contributing to the European industrialisation experience and the emergence of capitalism reveals some important parallels. In particular, the existence of a disciplined and thrifty workforce to facilitate savings and investment are key elements of capitalism (Weber 1976). Korean Neo-Confucianism, conflated with capitalism, would become a key modern Korean social institution of the type identified in the institutional literature mentioned above as causal, even crucial, to growth. The amenability of Neo-Confucianism and capitalism, if coincidental, was nonetheless effective; 'Confucian capitalism' (Clark & Roy 1997) would thus characterise Korean industrial development.

Modern state formation 1910-1960

The Japanese colonial legacy, despite enduring hostility from Korea after liberation (Cheong 1991), contributed positively to institutional evolution within Korean society, and in particular to the development of modern Korean state structures and bureaucracy. Japanese hegemony in East Asia was asserted with their military defeat of Russia in 1904-05. The subsequent increased Japanese influence in Korea extended to outright colonisation by 1910, and helped purge Korean society of certain hierarchical elements of Neo-Confucian orthodoxy which resisted change and imposed a land tenure system similar to that of feudal Europe (Edwards 1992). As such, the monarchy was replaced with a centralised state administration (even if solely staffed by Japanese) and notions of private ownership – an essential component of capitalism – were introduced. Land reform, however, was not as comprehensive as some authors have claimed; the rural hierarchy persisted and became comprador elite, facilitating the agricultural surplus extraction typical of colonial economies (Lie 1998). Further, while Japanese industry was established on the Korean Peninsula in step with the rapidly accelerating Japanese war machine, most heavy industry was based in the North and that which was in the South was later destroyed by war (Edwards 1992, Lie 1998).

The most important feature of the Japanese colonial era, therefore, was surely its contribution to institutional evolution; geopolitically through bureaucratic centralisation and the formation of the modern Korean state, politically through rising nationalism and communism in opposition to the Japanese, economically through the introduction of an albeit small scale entrepreneurialism, export orientation through integration with the Japanese economy, and increased education levels – 'Japan delivered the modern to Korea' (Lie 1998).

Korea's later experience with war, first with World War II, then with the Korean War and the resultant hostilities between North and South deepened the formation of strong state structures as a necessary response to these geopolitical pressures. Though US influence replaced Japanese after World War II, US involvement in state affairs was far more limited and, maintaining the Japanese built state apparatus, focused instead on the Cold War policy of containment. Subsequently Korea received large inflows of US aid providing the exchange reserves necessary to pursue import substitution industrialization (ISI) policies consistent with dependency theory (Clark & Roy 1997, Edwards 1992, DFAT 1999). Large scale land reform followed liberation from the Japanese, accelerated through the confusion of the Korean War and later contributed to increased agricultural output. In fact, land reform and the associated productivity gains are one common feature of the immediate pre-industrial eras of South Korea, Japan and Taiwan (Lie 1998), and indeed of Europe in for example, the seventeenth century.

Early industrial development and policy under Park Chung Hee 1961 to 1979

Agrarian reform

Despite the ISI policies land tenure reform described above, Korean society was in the early 1960s still, by and large, an agrarian society. The impetus for rapid Korean industrial development did not come until the ousting of the then incumbent government by military coup in 1961. Amidst the climate of corruption, fear, increasing political instability and, importantly, a stagnant economy, that had developed under the US backed Rhee government, the path to industrialization offered a more secure future (Lie 1998).

US influence had also prompted a shift toward developmentalism as a viable alternative to US aid (Amsden 1989). The new military government, headed by Park Chung Hee, therefore immediately introduced an intensive state led policy of industrialization.

Guided by a newly established Economic Planning Board, which was responsible for coordinating the differing economic ministries and implementing the executive's five year economic development plans (DFAT 1999), the evolution of social institutions that had occurred within Korean society up to that time were thus consolidated; the conditions were ripe for growth. Further, the undemocratic nature of military rule continued to build the capacity of the strong state and established a certain policy momentum that avoided, for example, election cycle disturbances and the political consensus building typical of democratic institutions (Amsden 1989, DFAT 1999). The rise of Korean state power during the 1960s occurred in the absence of any countervailing power: workers comprised only a small and disorganized group, land reform had abolished the feudal aristocracy, and the capitalist class was anyhow dependent on state largesse (Amsden 1989). As Park was quoted in *Newsweek* in 1962, 'There are two kinds of democracy. One pursues complete freedom. The other one is guided democracy. The latter will suit South Korea.' (Lie 1998)

Guided democracy and state led industrialization

Like Japan, however, Korea is poorly endowed with natural resources. In both cases developmental success has run contrary to theories of comparative advantage propounded by neoclassical orthodoxy (Amsden 1989, Miles & Scott 2005). Rather, Korea followed the Japanese model whereby industrialization was led by a strong state formation (Inoue et al. 1993, Clark & Roy 1997) – the necessary outcome of political struggles and geopolitical pressures over the preceding decades. The agricultural productivity gains resulting from the then recent land reforms released the required labor from agriculture into the emergent manufacturing industries. A relatively well educated population – a legacy of the Japanese colonial era (Edwards 1992) – coupled with a sizable and effective workforce, complimented these emerging industries. Further, that the industries established were closely related to the agricultural sector – food-processing and textiles for example – enabled the utilization of surplus produce and the beginning of value added production processes with a view to export. Given the relatively cheap factor inputs and skilled workforce, early exports proved competitive sustaining demand and promoting employment and wages growth. Over the longer term, savings rates courtesy of the thrifty Neo-Confucian workforce increased commensurately leading to a virtuous cycle of reinvestment and industrial expansion (Amsden 1989, Clark & Roy 1997, Edwards 1992, Lie 1998).

Later moving away from the ISI policies of the 1950s that had contributed to the development of Korean light industry, the Park government broadly supported exports, but favored specific sectors (Perkins et al. 2001) without dismantling the tariff and non-tariff barriers to trade (Lie 1998). A second phase of import substitution sought to increase the value of Korean output through moving into more sophisticated manufactures when in the 1970s state led development focus shifted to heavy industries – ship building, heavy chemicals, automobiles and high-tech electronics industries for example. This drive came on the back of financial sector nationalization (see below) through channeled investment into these capital intensive industries (Edwards 1992).

Output growth through this period is a direct result of these policies. 'Between 1971 and 1984, heavy industry's share of total industrial production rose... from 40 percent to 62 percent' (Clark & Roy 1997). The Korean industrial transformation is highlighted by the relative sectoral contributions to GDP:

| <i>Sector</i> | <i>1960</i> | <i>1970</i> | <i>1980</i> | <i>1990</i> | <i>1995</i> |
|---------------|-------------|-------------|-------------|-------------|-------------|
| Agriculture | 39.9 | 31.1 | 14.6 | 9.0 | 6.6 |
| Industry | 18.6 | 28.4 | 41.4 | 44.7 | 43.5 |
| Mining | 2.3 | 1.3 | 1.4 | 0.5 | 0.3 |
| Manufacturing | 12.1 | 19.1 | 29.6 | 28.9 | 26.9 |
| Construction | 3.5 | 6.4 | 8.2 | 13.2 | 14.1 |
| Utilities | 0.7 | 1.6 | 2.1 | 2.1 | 2.2 |
| Services | 41.5 | 40.5 | 44.0 | 46.3 | 49.9 |
| Total (GDP) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 1. Sectoral distribution of GDP 1960-1995 (Kwong et al. 2001)

Similarly, export growth registered 41 percent annually for the 1960s and 37 percent annually for the 1970s. Translating to GDP growth, average growth from the early 1960s to early 1990s was above 7 percent per annum (Eichengreen & Chung, 2004).

The Korean growth experience presented here is the result of successful investment and trade, (in part attributable to the economies of scale achievable with domestic demand when compared to other Asian Tiger economies), but in particular, attributable to the speed with which the authoritarian Korean state could implement new policies (Clark & Roy 1997). This was particularly the case once Park's *Yushin* constitution was accepted in the early 1970s (Edwards 1992), effectively ending Korean flirtations with democracy until the next real elections in 1987.

Trade, investment and industry policy

It is difficult to talk of a singular industry policy, as a range of policy instruments were involved. Key among these, however, were the targeted trade policies and tight regulation of the finance sector (Clark & Roy 1997).

Trade policy

Export orientation was not a high priority in Park's initial five year plan (Lie 1998). The experience of the textiles industry – cotton spinning and weaving – Korea's leading sector through the 1960s focused attention on the export solution for excess capacity. As Park said in 1965, 'we have acquired the confidence that we, too, can successfully compete with others in the international export race' (Amsden 1989).

Success in the international trade sphere did not take the form of special export processing zones as elsewhere in Asia, or occur through the adoption of free trade policy as professed within neoclassical academic circles, but rather as the outcome of targeted trade policy. Protection was continued from the ISI period of the 1950s, particularly in those industries where firms involved in productive activities were also exporting. This provided both discipline and incentive as maintaining competitive exports meant responding to international market price signals – a feature often absent under ISI policy elsewhere. The rewards came in the form of licenses to import restricted goods and, importantly, protected access to domestic markets, which tended to counter the uncertainties associated with the sometimes loss making export drive. Despite this, the targeted export quotas were considered necessary to encourage economies of scale in industries where the domestic market provided insufficient demand (Kwong et al. 2001, Amsden 1989, Edwards 1992).

Financial control and investment

Control of the financial sector emerged initially with the *Law for Dealing with Illicit Wealth Accumulation* as an attempt to recoup US aid funds siphoned by corrupt individuals during the Rhee government in the 1950s. These individuals, however, comprised a significant proportion of the entrepreneurial elite so rather than seizing assets and prosecuting, an unusual alliance was formed between the elite capitalist class

and the Park government that would come to characterize the Korean industrial structure. When the banking sector was actually nationalized shortly thereafter, credit control became one of the state's most important policy instruments (Clark & Roy 1997), and while 'subsidized credit for working capital was available to any exporter, long-term capital at favorable interest rates was allocated only to targeted firms and industries.' (Amsden 1989) As such, real interest rates to depositors were, by and large, zero or negative in real terms for most of the 1960s and 1970s – depositors were effectively taxed and the proceeds channeled into subsidized investment (Edwards 1992). All this enabled the state to 'funnel these funds to enterprises selected as "national champions" in a specific industry and to enforce performance standards by threatening to withdraw credit if production, export, or quality goals are not met' (Clark & Roy 1997, p. 80-81). Specific investment goals were set out in the Planning Board's Five Year Plans:

| | A Plan | B Achievement | B/A Percentage |
|-------------------------------------|-----------|------------------|-------------------|
| Heavy Industry | 2,893 | 2,806 | 97 |
| Basic metals and machinery, etc. | 731 | 951 | 130 |
| Shipbuilding, etc. | 1,145 | 827 | 72 |
| Chemicals, etc. | 1,017 | 1,028 | 102 |
| Light Industry | 1,621 | 746 | 46 |
| Textiles | 900 | 447 | 50 |
| Other | 721 | 302 | 42 |
| Total | 4,515 | 3,555 | 78 |

Table 2. Targeted and actual investment in manufacturing 1977 to 1981 (Woo 1991)

Domestic savings rates, responding to poor or even negative real interest rates were initially low. However, later structural adjustment of the finance sector saw savings increase at the end of the 1970s and particularly since the early 1980s (Kosis 2007).

The macroeconomic environment

Trade and investment were broadly supported by the macroeconomic environment. Multiple exchange rates on the back of consistently low real exchange rates created further incentive for firms pursuing exports though causing some problems for manufacturers dependent on imports, particularly in textiles in the early 1960s. Through the recently nationalized banking sector credit was subsidized with low interest rates, though debate centered around the disincentive this would provide for the domestic savings drive. A brief interlude of interest rate liberalization in the late 1960s did little to fund further industrial expansion but did help secure foreign borrowings, giving rise to a system of multiple interest rates similar in principle to the multiple exchange rate subsidy system prevalent through the 1970s (Amsden 1989, Woo 1991). As a consequence of the low interest rate export drive, and the first oil shock of 1973-74, external debt increased considerably through the 1970s. Yet despite this external exposure, Korea kept debt service ratios manageable through focusing on long-term loans and thus avoiding any future defaults as export growth continued providing the foreign exchange necessary for repayments (Edwards 1992).

| | 1967 | 1971 | 1973 | 1975 | 1978 |
|--------------------|--------|--------|--------|--------|---------|
| South Korea | | | | | |
| All lenders | 1199.2 | 3243.8 | 4940.0 | 7173.9 | 18146.3 |
| Official sources | 434.7 | 1415.7 | 2730.7 | 3796.8 | 8210.9 |
| Suppliers + others | 703.3 | 1327.8 | 1308.8 | 1466.2 | 3921.6 |
| Financial markets | 61.3 | 500.3 | 900.5 | 1910.9 | 6013.8 |

Table 3. Korea's external debt 1967-1978 (Woo 1991)

Unemployment also remained relatively stable over the same period (since 1970s), resulting in labor shortages by the late 1980s. Inflation, a byproduct of the industrialization strategy, averaged 14 percent during the 1960s, 19 percent in the 1970s

and did not decline until policy shifts during the 1980s (Kwong et al. 2001); growth had not been constrained in the interest of price stability (Amsden 1989).

Industry structure, institutions and state-business relations

The industry structure that emerged was similar to the Japanese keiretsu, though the Korean chaebol came to control an even greater proportion of output (Clark & Roy 1997). Characterized by either monopolistic or oligopolistic enterprise, the chaebols again countered the neoclassical nostrums of what an efficient industry should resemble (Amsden 1994). Yet such business concentration was necessary if the financial system outlined about was to be effective – small enterprise was thus discouraged until later. But what the larger conglomerates lacked in flexibility they more than compensated for in scale. The institutional problems of relatively weak markets and contract enforcement were also avoided through internalizing transactions within the chaebol, transactions that would otherwise be difficult to conduct ‘at arms length’ as is normally prudent (Chung & Eichengreen 2004).

This formation, however, has somewhat eschewed the need for further institutional reform, contributing to Korea’s relatively poor showing measures of corruption and accountability when compared to both industrially advanced nations and the Asian Tigers (Transparency International 2006). World Bank research supports this position (Kaufmann et al. 2006).

| Rank | Country & score | Rank | Country & score |
|------|-----------------|-----------|------------------|
| 1 | Finland 9.6 | 23 | Spain 6.8 |
| 1 | Iceland 9.6 | 26 | Macao 6.6 |
| 1 | New Zealand 9.6 | 34 | Taiwan 5.9 |
| 5 | Singapore 9.4 | 37 | Botswana 5.6 |
| 6 | Sweden 9.2 | 41 | Hungary 5.2 |
| 9 | Australia 8.7 | 42 | Mauritius 5.1 |
| 11 | Austria 8.6 | 42 | Korea 5.1 |
| 11 | UK 8.6 | 44 | Malaysia 5.0 |
| 15 | Hong Kong 8.3 | 45 | Italy 4.9 |
| 16 | Germany 8.0 | 59 | Colombia 3.9 |
| 17 | Japan 7.6 | 63 | Thailand 3.6 |
| 20 | Chile 7.3 | 70 | India 3.3 |
| 20 | US 7.3 | 70 | China 3.3 |

Table 4. Corruption Perceptions Index data for Korea and select comparators (Transparency International 2006)

Institutional evolution and inequality

Despite Korea’s poor performance on corruption measures relative to other countries of similar incomes and development experiences, the political legitimacy of Park’s government can be understood in terms of several factors. Initially, as mentioned above, there existed no effective organized social group capable of mounting an effective challenge. As industrial development proceeded apace, the labor force expanded and through the 1970s became increasingly organized and vocal. This factor, however, seems to have been limited by both the strong state and a relatively egalitarian structure of income distribution (World Bank 2005a, Kim 1997). Taiwan’s growth experience produced similar results on measures of inequality (Amsden 1979). Though time series data is difficult to obtain, income inequality appears to have reached its height in the early 1970s and thereafter decreased (WIDER 2007, Cheong 1999).

Human capital investment, technology acquisition and R&D

Following Amsden (1989), the Korean experience is termed ‘late industrialization’, distinguishing it from the earlier experiences of Western Europe. Whereas European, and particularly British, industrialization invented and innovated required productive techniques, Korea was able to learn by copying the appropriate technologies. FDI contributed less to this learning than elsewhere (Kwong et al. 2001), Korea instead

encouraging the importation of capital goods through its finance system (Chung & Eichengreen 2004).

Coupled with historically high education levels, in part a legacy of the Japanese colonial era (Amsden 1989), an initial public commitment to R&D investment and a concentrated industry structure through the chaebol, foreign technologies efficiently diffused throughout the national economy. Korea's technological development is thus characterized in three phases. The first involved 'duplicative imitations in the 1960s and 1970s', the second 'creative imitations' since 1980 and finally, innovation since 1990 (Kwong et al. 2001). Despite Korea's consistently high education levels, Amsden (1989) argues its 'quality was modest and its role largely passive'. Korea's growth performance was supported by its high education levels, but not necessarily driven by them. Rising R&D activities since the 1970s, and particularly since the 1980s, however, contributed substantially to continuing industrial transformation, technological deepening, and ultimately 'international technological competitiveness' (Kwong et al. 2001).

| | 1975 | 1980 | 1985 | 1990 | 1994 |
|----------------------|------|------|------|------|------|
| R&D expenditures | 43 | 283 | 1237 | 3350 | 7895 |
| Government | 30 | 180 | 307 | 651 | 1257 |
| Private Sector | 12 | 103 | 930 | 2699 | 6635 |
| Government (% total) | 71 | 64 | 25 | 19 | 16 |
| R&D/GNP | 0.32 | 0.77 | 1.58 | 1.95 | 2.61 |

Table 5. Korean R&D expenditure, billions of Won, 1975 to 1994 (Kwong et al. 2001)

The sharp rise in R&D/GNP between 1980 and 1985 is the result of increased private sector R&D activities – a response to both government incentives and increased external competitive pressures. The policy environment was in fact highly supportive of R&D – Korea's Ministry of Science and Technology, established in 1967 was the world's first such government department. This culture continued and during the 1980s was extended to infrastructure support, direct preferential financial subsidies, multiple layer taxation subsidies and specialised support for small to medium enterprises involved in R&D activities. This resulted in the highest R&D growth rate in the world, ultimately promoting the desired shift from emulation to indigenous innovation (Kwong et al. 2001, Inoue 1993). The R&D focus continued and perhaps constitutes the most important aspect of Korea's later industrial policy reflected, for example, in the title of a World Bank (2000) paper, Republic of Korea: Transition to a Knowledge Based Economy.

Structural reform in the 1980s and the decline of the developmental state

Park's control of Korea came to a grinding halt with his assassination in 1979 amidst a backdrop of rising government oppression under the Yushin regime and commensurate anti-government sentiment (Lie 1998). The beginning of the 1980s also brought the first recession since the beginning of rapid growth in the 1960s prompting dramatic restructuring through the 1980s. The Chun government succeeded Park and, responding to pressure from both chaebol and labor, presided over a reform process that subsequently limited the role of the developmental state. Union organization, in part a response to decades of subjugation under authoritarian rule, increased through the 1980s becoming one of the most militant within Asia and spearheading the drive for democracy that was realized in the elections of 1987 (Kim 1997). Despite this internal turmoil the economy continued to mature – whereas Korean exports had consisted of 'stuffed toys, wigs, sneakers, and cheap clothing, they now included electrical and electronic appliances, computers, and automobiles... many existing products moved out of the market's low end to the middle and upper ranges.' (Kim 1997) R&D policy actively endorsed such maturing, indeed 'Korean history is replete with crises and watersheds, but the year 1980 seemed to mark a genuine turning point.' (Lie 1998)

Since the main goal of industrial development by the state had, by and large, been attained by the 1980s, the Economic Planning Board and associated state apparatus faced pressure to reestablish their 'institutional goals and functions' (Kim 1997). The

opportunities for growth through learning were exhausted 'it sought to move up the ladder into the production of more technologically sophisticated goods.' (Chung & Eichengreen 2004) The experience of Korean structural adjustment during the 1980s is of particular interest when considered in the context of the historical continuity of development debates and the rise of neoclassical economic philosophy over the same period.

Development debate and historical continuity: from dependency to Washington Consensus

The development debates of the 1960s were primarily fought between modernization and dependency schools. Modernization, according to the Rostovian model, is a general theory of societal evolution which can be achieved if undeveloped states follow particular stages of economic development, derived of the European historical experience and thought to be universally applicable. Accelerated growth is possible by those states implementing this process later than their European counterparts as the experience of the latter translates into a more efficient process applicable to the former. Capital imports are significant in the earlier stages of development (Rostow 2000, pp. 100-3). Modernization theory, as applicable to the developing world, reflects the Fordist-Keynesian consensus achieved during the post-World War II reconstruction effort, and in particular, the central role of the state in guiding this process.

Korea's ISI policies of the 1950s reflected the policy conclusions of the oppositional dependency theory, as propounded by the Prebisch-Singer hypothesis (Miles & Scott 2005, Amsden 1979). However, under the guidance of Park's military government from the early 1960s, the modernization paradigm was adopted in earnest. Yet any shift to export-oriented modernization, importantly depends on a degree of previously implemented ISI to provide an industrial base upon which later expansion, even outright transformation, is based (Lie 1998). The latter was possible exactly because of the former. Planning, however, became the primary tool of the modernizers, joining 'the national anthem and the flag as a symbol of sovereignty and modernity... the diffusion of development planning became world-wide' (Waterston in Lie 1998).

By the beginning of the 1980s though, the debates animating the economics discipline in the first world shifted to, on the one side, a resurgent neoclassicism promoted by the electoral success of the New Right, and on the other, the waning Keynesian style welfare state model. Translating to development discourses, the former replaced the latter's notions of modernization with a market fundamentalist and reformist zeal, promoted in particular by institutions such as the IMF, World Bank and US Treasury based in Washington. The 'Washington Consensus' as it became known preached reform consistent with market principles embodied in neoclassical thought and was thrust upon a wide range of developing countries from Africa to Latin America, Eastern Europe (after the fall of the USSR) to East Asia (Rodrik 2006, 2004). "'Stabilize, privatize, and liberalize" became the mantra of a generation of technocrats who cut their teeth in the developing world and of the political leaders they counselled.' (Rodrik 2006) In Africa for example, over half of the state's assets were sold off during the 1990s in the Central African Republic, Ivory Coast, Gambia, Ghana, Guinea-Bissau, Kenya, Mali, Tanzania, Togo, Uganda and Zambia. Further, there was more 'privatization, deregulation and trade liberalization in Latin America and Eastern Europe than probably anywhere else at any point in economic history.' (Rodrik 2006)

For ideologues, however, Korea's 1980s financial reforms would prove disappointing. That Korea's financial system was so closely linked to the industrial drive more or less precluded the sort of reform that was or would become *de rigour* elsewhere. Amsden and Yoon-Dae (1994, emphasis in original) describe the tone of East Asian liberalization: 'We distinguish old and new forms of state control over finance and *prohibitive* and *preventative*, taking 1980 as a somewhat arbitrary turning point. Before the 1980s, the government prohibited a myriad of financial practices; since the 1980s it is more likely to prevent them. At one time, everything was prohibited except what the government allowed. Since then, all is allowed that is not prohibited' – hardly the hallmark of flexibility and freedom envisioned by proponents of the Washington Consensus.

Some of the analytical tools developed under the neoclassical methodological assumptions are worth surveying in the context of Korea to shed light on the fundamentals of this ideological shift. The Cobb-Douglas production function is one such analytical tool. Like the Harrod-Domar, Solow (Perkins et al. 2001) and Mankiw (Mankiw et al. 1992) models, the Cobb-Douglas production function combines a number of exogenous factor inputs in such a way as to provide an account of growth – a growth accounting framework as it is known (Miles & Scott 2005). Capital, labour and total factor productivity or TFP, the Solow residual (Solow 1956), are thus combined algebraically:

$$Y = TFP K^{\alpha} L^{1-\alpha} \text{ (where } \alpha \text{ is the capital share of income and where } 0 < \alpha < 1 \text{)}$$

Crafts (1999), following such a growth accounting framework, disaggregates Korean output so that for the years 1960-94 capital is shown to contribute proportionately more to total average output than both labour and TFP combined. Accordingly, Korea provides an excellent example of high growth promoted simply by high levels of investment and capital accumulation.

| | Capital | Labour | TFP | Output |
|--------------|---------|--------|------|--------|
| 1950-73 | | | | |
| France | 1.6 | 0.3 | 3.1 | 5.0 |
| Italy | 1.6 | 0.2 | 3.2 | 5.0 |
| Japan | 3.1 | 2.5 | 3.6 | 9.2 |
| UK | 1.6 | 0.2 | 1.2 | 3.0 |
| West Germany | 2.2 | 0.5 | 3.3 | 6.0 |
| 1960-94 | | | | |
| China | 3.1 | 2.7 | 1.7 | 7.5 |
| Hong Kong | 2.8 | 2.1 | 2.4 | 7.3 |
| Indonesia | 2.9 | 1.9 | 0.8 | 5.6 |
| Korea | 4.3 | 2.5 | 1.5 | 8.3 |
| Malaysia | 3.4 | 2.5 | 0.9 | 6.8 |
| Philippines | 2.1 | 2.1 | -0.4 | 3.8 |
| Singapore | 4.4 | 2.2 | 1.5 | 8.1 |
| Taiwan | 4.1 | 2.4 | 2.0 | 8.5 |
| Thailand | 3.7 | 2.0 | 1.8 | 7.5 |

Table 6. Sources of Growth, Europe and Japan compared to East Asia more recently (Crafts 1999)

Conspicuously absent are, for example, the discussions about technological change, as well as any endogenous interactions between these and other factors (Romer 1990), and the discussion of institutions in a deeper historical context. In this light, neoclassical attempts to understand Korea's industrial development have, in the criticisms of North (1993, 2005), Lie (1998) and Amsden (1997, 1994, 1993, 1989) failed to take full account on the broad range of factors influencing development trajectories over time. The enduring popularity of such a framework, however, is identified by North (2005, 1993, North et al. 1996) as the result of perceived precision offered by general equilibrium theory – a precision difficult to match in the development of alternative analytical instruments. Indeed, this resurgent interest prompted Amsden (1989) to comment that the 'market explanation for economic development poses as the grand mover and shaker of the past 200 years of economic progress.' Nonetheless, precision does not compensate for fallacy, and by the late 1990s much of this debate had run its course (Clark & Roy 1997), compelling Rodrik (2006) to ask 'The question now is not whether the Washington Consensus is dead or alive; it is what will replace it'?

Conclusion - the Korean experience: challenging orthodoxy

The Korean industrial experience, following the broader principles of the East Asian development model first pursued by the Japanese, has countered many notions of the conventional economic wisdom. As one official from Japan's Ministry of International

Trade and Investment said, 'We did the opposite of what American economists said. We violated all the normal concepts.' (quoted in Clark & Roy 1997) The point, however, is not simply to just understand what actually occurred in Korea, but to discern what conclusions, if any, and with regard to conclusions gained through other countries' growth experiences, might be applicable elsewhere. Such is the goal of academia and institutions like the World Bank who support, even actively encourage, such policy conclusions with repercussions for millions if not billions of people. Rodrik's (2006) survey of recent World Bank ideological shifts provides some insight into the evolutionary tendencies of epistemology animating the economics discipline. Following from the poor growth performances and financial instabilities caused by the reforms of the 1990s, the World Bank's (2005) Economic Growth in the 1990s: Learning from a Decade of Reform heralded an important turning point in, if not the practice, at least in the thinking within the organization. However, as late as 1993 the World Bank was calling Korea's industrial policy 'ineffective' (World Bank in Amsden 1994). This shift is further underlined in the World Development Report 2006 with the rising acceptance of the role of institutions and endogenous change in relation to Korea:

'Although institutions are sometimes created by colonialism or military conquest, they can often evolve through good decisions, virtuous paths, and the intrinsic dynamics of the development process... It is also possible that even transitory conditional solutions lead to permanent change, because growth unleashes transformations that induce beneficial changes in institutions. This... is precisely what may have happened in the Republic of Korea.' (World Bank 2005a)

Perhaps North's methodology is applicable even to the internal philosophical machinations of an organization like the World Bank? In any case, Korea's development experiences have consistently challenged establishment thinking and contributed to a colourful, changing and incredibly important debate affecting the lives of so many.



You are **cordially** invited to attend the **UQ ESA** Bi-Annual Drinks!

When: Thursday, Sept 13th @ 7pm.

Where: Red Room, Union Complex.

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