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**NAVAL
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THESIS

**WILL CHINA BE CAUGHT IN THE MIDDLE-INCOME
TRAP? THE ECONOMIC PATH OF SOUTH KOREA AND
MALAYSIA MAY HELP PROVIDE THE ANSWER.**

By

Damon J. Cook

December 2014

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Robert Looney

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**WILL CHINA BE CAUGHT IN THE MIDDLE-INCOME TRAP? THE
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PROVIDE THE ANSWER.**

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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

This thesis investigates the feasibility of China's transforming to a consumption-led economy. Specifically, it seeks to determine whether China is destined to be caught in the "middle income trap," whereby it fails to graduate to high-income status, and thus is trapped in an economic state of equilibrium that is very difficult to change with short-term forces. To investigate this question, this thesis compares China's economic development with the economic trajectories of South Korea and Malaysia, which have experienced similar economic growth pressures, to assess the likelihood that China's growth will stagnate over the near to middle term. To do so, this thesis will examine the effect of rule of law, education, and demographics on economic growth.

Given China's rapid economic ascent based on its export-led and investment-dependent economy, the evidence suggests China's economic growth is decreasing despite popular belief China is on a trajectory to overtake the United States as the world's top economy. Although the Chinese Communist Party has slowly implemented phased economic reform since the Deng Xiaoping era, it still lacks many institutions necessary to transform into a consumption-led economy. This thesis concludes with a scorecard analysis that will provide insight into China's economic future.

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LIST OF ACRONYMS AND ABBREVIATIONS

CCP	Chinese Communist Party
CPI	Corruption Perceptions Index
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
IMF	International Monetary Fund
IPR	Intellectual Property Rights
NBCP	National Bureau of Corruption Prevention
NEP	New Economic Policy
OECD	Organization for Economic Co-operation and Development
PISA	Program for International Student Assessment
PPP	Purchase Power Parity
PRC	People's Republic of China
SEZ	Special Economic Zone
SME	Small and Medium Sized Enterprises
SOE	State Owned Enterprises
TI	Transparency International
WBG	World Bank Governance Indicator

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I. INTRODUCTION

Over the last 175 years, China has been humbled as its economic pre-eminence was eclipsed by an industrializing West, followed by two decades of economic backwardness under Mao Zedong. Only within the last few decades has this downtrend been reversed, with rapid economic growth resulting from Deng Xiaoping's policy of placing absolute priority on economic development. China's recent rapid ascent has created considerable debate about the future security of Asia, and how the U.S. will position itself as a response. China has become the second largest economy in the world, and many observers paint a rosy forecast that it will surpass the United States' economy in the near future. China's perceived growth has also raised concerns about the security implications in the region. How will the U.S. balance its position in the region as a result of China's growing power, fueled by its economy? How will other Asian nations in the region contemplate their relationships with the U.S. in light of the perceived power transition? While it is important to look at all elements of national power, a closer look at China's economy provides great insight into the driving force of the predicted power transition.

Despite China's dramatic growth over the last 30 years, it is still considered a developing nation. As of 2013, China had a GDP per capita of \$3,503 (2005 Constant U.S. dollars) compared to U.S. per capita income of \$45,863.¹ Economic literature indicates that growth in developing countries stagnates once per capita GDP reaches \$16,700—a phenomenon known as “the middle-income trap.”² Asia is rife with examples of countries that have become mired in the middle-income trap, only some of which have successfully escaped it. Countries such as Thailand and Malaysia saw great promise in

¹ “GDP Per Capita (2005 U.S.\$) | Data | Table.” <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD> (accessed 3/16/2014, 2014).

² Barry Eichengreen, “Escaping the Middle-Income Trap,” *Achieving Maximum Long-Run Growth: A Symposium Sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wy, Aug 25, (2012):* 410, <https://www.econbiz.de/Record/escaping-the-middle-income-trap-eichengreen-barry/10009583217>.

the 1990s only to become bogged down, while countries such as South Korea, Singapore, and Taiwan have successfully escaped the trap.

Is China today facing a “middle-income trap,” and will its policy reforms be adequate to escape and reach economic parity with the U.S.? China’s ability to escape the “middle-income trap” will affect how other states view it. For example, those who call for more concessions and accommodation today and in the near future are doing so on the basis of a judgment about China’s likely future economic trajectory. If China is destined to be entangled in a middle-income trap, then the need for accommodation and compromise is not as demanding. Conversely, those nations who are worried about the China threat and the need to take strong responses today—to stand up to a China that is rapidly closing the military gap—might be deriving policy based on faulty analysis.

Two hypotheses can be developed by comparing China’s economy with those of South Korea and Malaysia. On the one hand, China could continue to implement political and economic reform similar to South Korea, which advanced its economy past middle-income status. South Korea represents a post-war economic growth story, as it grew from a war-tattered nation to a top-ten economic nation in a relatively short period. South Korea broke free of the middle-income trap as it reformed into a market-led economy. Decentralization became the key reform that allowed for complex and speedy decision-making, which shifted more decision making to the local level by better addressing local issues of opportunity and distribution.³ Credit reforms also called for the end of outdated bankruptcy laws, which stifled risk by favoring the creditor. This new structure forced many inefficient firms out of the market through bankruptcy, and new and efficient firms were allowed to strengthen and innovate. Finally, bank privatization drastically helped reduce government debt and foster a prudent financial environment.⁴ Despite a number of bumps in the road, South Korea made the necessary political and economic reforms that allowed it to move past the middle-income status.

³ Ibid.

⁴ Damon Cook, *Escaping the Middle-Income Trap: South Korea’s Experience as a Guide for China*, Research Paper, Northeast Asian Security (Monterey: Naval Postgraduate School, 2014), 14.

Conversely, China could take the path of Malaysia, which has experienced stagnated growth and remains in the middle-income phase of development. Similar to China's forecasted growth trajectory today, Malaysia entered the start of the current Millennium with exuberance, as its economy was projected to average at a 7.5-percent growth rate for the next ten years. Many predicted Malaysia's high growth rate to be the result of perceived increased productivity, innovation, and investment. This optimism failed to come to fruition, as Malaysia's growth rate slipped to 4.9 percent in the years prior to the global financial crisis in 2008.⁵ Malaysia became entangled in the middle-income trap as a result of poorly functioning (or absent) institutions that support advanced economies. Similar to many developing countries, rapid growth and investment can often hide structural weaknesses. In Malaysia's case, it enshrined mediocrity, and rewarded incompetence in general. Corrupt business practices and escalating inter-ethnic conflict brought concerns that have eroded investor confidence.⁶

The following chapter will first start with a literature review of contemporary studies surrounding the middle-income trap. This will then be used as a foundation to analytically frame the rule of law, education, and demographics as they pertain to a country's ability for growth. The following three chapters will analyze South Korea, Malaysia, and China within the analytical framework established in Chapter II. Chapter VI will provide a comparative analysis of China's trajectory as well as an assessment of its economic future.

⁵ Wing Thye Woo, *Getting Malaysia Out of the Middle-Income Trap*, SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, August 3, 2009), 3, <http://papers.ssrn.com/abstract=1534454>.

⁶ *Ibid.*, 4.

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II. MIDDLE-INCOME TRAP

In the post World War II era, many developing countries have started with great economic promise, but only a few have become high-income economies. Part of understanding economic success and failure is to understand how economies grow to maturity. Total Factor Productivity (TFP), labor, and capital are the essential ingredients of economic growth. Capital and labor are tangible quantities, whereas TFP is intangible and can be thought of as innovation and efficiency. TFP is defined as “[t]he portion of output not explained by the amount of inputs used in production. As such, its level is determined by how efficiently and intensely the inputs are utilized in production.”⁷ Less developed countries tend to grow much faster than advanced countries, mainly because they have vast pools of low cost labor, and imitation in production is cheaper than innovation—hence their growth comes more from capital accumulation than TFP. As economies advance to the middle-income stage and beyond, they become more investment-driven to sustain growth and increased TFP and services become their source of competitive advantage.

After an initial period of swift economic growth, many middle-income countries experience rapid decrease in productivity and growth, mainly due to the lack of TFP growth. Their natural instinct is often to embark on programs that increase capital and labor inputs, but fail to nurture the inputs necessary for TFP growth. This has been the experience of many Latin American and Southeast Asian countries. After great promise, many of these countries experience growth slowdowns and periods of stagnation, even lengthy recessions. This phenomenon can greatly affect these developing countries because their entire social, political, and economic systems are predicated on things continuing to go well. The possibility that growth will slow is a real challenge to both domestic and international actors, and policy makers must understand the threat so that they can overcome it.

⁷ Diego Comin, “Total Factor Productivity,” *New York University and National Bureau of Economic Research (NBER)* (2006): 1, <http://www.people.hbs.edu/dcomin/def.pdf>.

A great deal of economic literature has recently focused on the term that is commonly labeled the “middle-income trap,” which is analogous with a rapidly growing middle-income economy that stagnates at the middle-income level, and fails to graduate to high-income status. The word “trap” describes an economic state of equilibrium that is very difficult to change with short-term forces. For example, Figure 1 shows the distribution of countries’ income per person as they have advanced since 1960 to 2008. If every country had advanced to a high-income economy, they would all be found in the top row. Most countries that were middle income in 1960 remained so in 2008, as depicted in the middle cell of the chart. In 2008, only 13 countries advanced to high-income status.⁸

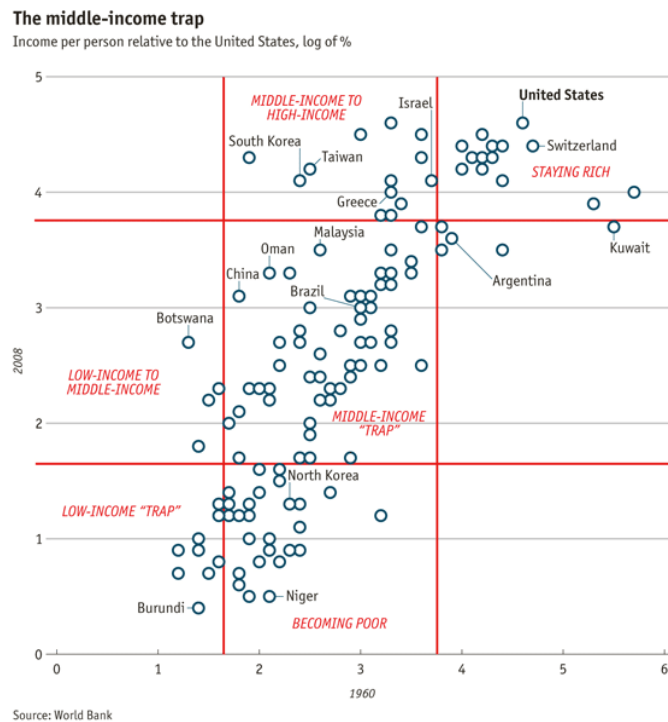


Figure 1. Stagnation of Economic Development Relative to the United States from 1960 to 2008⁹

⁸ “The Middle-Income Trap,” *The Economist*, March 27, 2012, <http://www.economist.com/blogs/graphicdetail/2012/03/focus-3>.

⁹ Ibid.

The World Bank classifies gross national income (GNI) groups as follows (in 2010 dollars): “Low income (\$1,025 or less); middle income (lower middle income, \$1,026-\$4,035, upper middle income \$4,036-\$12,475); and high income (\$12,476 or more).” Countries with a GNI between \$1,026 and \$12,475 are considered to be in the middle-income group.¹⁰ For the remainder of this thesis, however, when referring to income categories, these thresholds are based on year 2005 purchase power parity (PPP) dollars. Low-income economies will be defined below 2,000 constant dollars, and high-income economies will be defined above 15,000 dollars. Year 2005 PPP dollars are used commonly in recent comparative economic literature, because gross domestic product (GDP) per capita classification generated by these cut-off points is very close to the GNI per capita used by the World Bank.¹¹ Furthermore, for comparative consistency, this thesis defines a growth slowdown when growth from the prior period slows by more than 3.5 percent annually, and the country’s GDP per capita income exceeds U.S.\$10,000 in 2005 constant international prices.¹²

The International Monetary Fund (IMF) conducted a broad analytical study on the characteristics of the middle-income trap. The sample consisted of 138 countries in 2010, comprising 24 low-income countries, 36 lower middle-income countries, 33 upper middle-income countries, and 45 high-income countries. The results found that middle-income countries had a statistically significant likelihood to experience growth slowdowns at the middle-income threshold of 12,000–15,000 per capita dollars measured in 2005 constant international prices.¹³ Similarly, Eichengreen, Park and Shin (2013) found that when per capita income reaches \$16,700¹⁴(2005 constant U.S.\$), per capita

¹⁰ “Changes in Country Classifications | Data,” accessed September 25, 2014, <http://data.worldbank.org/news/2010-GNI-income-classifications>.

¹¹ Shekhar Aiyar et al., *Growth Slowdowns and the Middle-Income Trap*, Working Papers (International Monetary Fund, 2013), 12.

¹² This definition is used by IMF, and Eichengreen, Park and Shin (2013), which use the same methodology for identifying growth slowdowns.

¹³ Aiyar et al., *Growth Slowdowns and the Middle-Income Trap*, 13.

¹⁴ \$16,700 is the mean; the median is \$15,100, which is consistent with World Bank data.

GDP slows from 5.6 to 2.1 percent.¹⁵ Growth slowdowns are positively correlated with a number of key economic factors. Countries have a high probability of being caught in the middle-income trap if they experience high growth rates in the earlier periods of development, high old-age dependency ratios, high investment ratios, and an undervalued exchange rate.¹⁶ The crucial factor is innovation, such that companies must advance to new types of strategies and investment priorities. The move to an innovative economy is much more difficult than the move to an investment-led economy. Creating an innovative economy takes decades, as the many institutions that foster innovative societies take time to develop.¹⁷

So why does growth begin to slow as the economy advances? The answer is rather intuitive: because an economy cannot grow at double-digit rates forever. The more successful the catch-up and convergence, the more difficult it becomes to maintain fast growth. The higher the rate of workers transferred from agriculture to industry, the faster the pool of underemployed labor is consumed. The faster the demographic transition is complete, the faster the population will age and begin to extract savings. The faster the population is educated, the more difficult it becomes to sustain the rate. The faster capital is accumulated, the more savings and investment are needed to cover the depreciation of the capital stock. Finally, the closer a country gets to the technological frontier, the less room it has for advancement through imported machinery and intellectual property from abroad. Countries that have their house in order are able to make the transition to high-income economy. Impressive growth rates will only get a country so far, but it is sound experience, awareness, and careful planning that will take a middle-income country to the next level.

¹⁵ Barry Eichengreen, Donghyun Park, and Kwanho Shin, "When Fast-Growing Economies Slow Down: International Evidence and Implications for China," *Asian Economic Papers* 11, no. 1 (January 1, 2012): 11, doi:10.1162/ASEP_a_00118; *ibid.*, 410.

¹⁶ Barry Eichengreen, Park Donghyun, and Shin Kwanho, *Growth Slowdowns Redux: New Evidence on the Middle-Income Trap* (Cambridge, MA: National Bureau of Economic Research, 2013), 26, <https://www.nber.org/papers/w18673>.

¹⁷ Damon Cook, *Is China's Economy Running out of Steam? Power Parity May Not Be That Close after All.*, Research Paper, Chinese Foreign Policy (Monterey: Naval Postgraduate School, 2014).

A. ANALYZING THE MIDDLE-INCOME TRAP

One goal of this thesis is to establish an analytical framework to assess an economy's vulnerability to the middle-income trap. While all growth scenarios are not the same, the growth progression to middle-income status tends to follow a common theme. As nations develop, they advance through stages of competition based on comparative advantage. Developing nations generally have access to low-cost labor, which is the key to their initial comparative advantage. At this stage, commodities and relatively simple products are produced, which are designed in more advanced countries. Technology is imported and integrated through imitation and foreign direct investment (FDI).¹⁸ Developing nations compete for price on the world market instead of relying on domestic consumption. Furthermore, they exist at the low end of the value-added chain, and most efforts focus on assembly and labor-intensive manufacturing. Middle-income countries' products become more sophisticated as they advance, but innovation is still predominately imported from advanced countries.¹⁹ At this stage, many developing countries tend to plateau or become entrapped, as they fail to advance to an innovation-driven advanced economy. It is at this point that developing countries become caught in the middle-income trap.

There is little dispute that developing countries generally follow a common growth and slowdown pattern as previously described, but what are the core factors that determine the propensity for long-term growth once a country has reached the upper middle-income threshold? Countries that are caught in the middle-income trap exhibit a number of common traits that inhibit their ability to grow—and countries that have been able to break through the middle-income trap have outperformed in these same common traits. Therefore, one focus of this thesis is to analyze how several of these common traits affect economic growth, I will examine the roles institutions, demography, and education play in the middle-income trap. Limiting an analysis to these categories cannot provide a

¹⁸ Barry Eichengreen, *From Miracle to Maturity: The Growth of the Korean Economy* (Cambridge, Mass: Harvard University Asia Center, and distributed by Harvard University Press, 2012), 307.

¹⁹ Ibid.

comprehensive assessment; however, due the complexity of the subject, these categories help build a foundation of understanding that can be applied to future research. Therefore, the main focus for this thesis is to analyze how these common traits helped shape South Korea and Malaysia's economic growth, and uses the results to analyze how these traits will affect China's ability to escape the middle-income trap. A brief discussion of each factor follows.

1. Institutions

Institutions are critical for growth, and play a crucial role in whether a middle-income country has a high probability of being trapped. Specifically, they must create a level playing field for all actors. The degree to which a country enforces property rights across a broad spectrum of society has been empirically shown to influence growth. Additionally, there must be legal constraints that hinder the actions of elites so they cannot extract resources from the economy, or unfairly rig the rules of play, e.g., through corruption.²⁰ In many low and middle-income countries around the world, these institutional categories are non-existent or are in their infancy. In middle-income countries, many of these institutions are absent or immature, which greatly inhibits their ability to graduate beyond middle-income status. For instance, in many trapped countries, laws are selectively applied to the elite, property rights are absent or limited, and the elites have unlimited economic and political power.²¹

Effective rule of law propels prosperity and, in the same way, countries that lack rule of law tend to be poor (see Figure 2). Although there are many sub-institutions within rule of law, corruption and property rights are key factors underpinning economic development. Furthermore, these two concepts provide a basic foundation for measuring the propensity for growth and play a key role in escaping the middle-income trap.

²⁰ Daron Acemoglu, "Root Causes," *Finance & Development* 40, no. 2 (2003): 27.

²¹ *Ibid.*, 28.

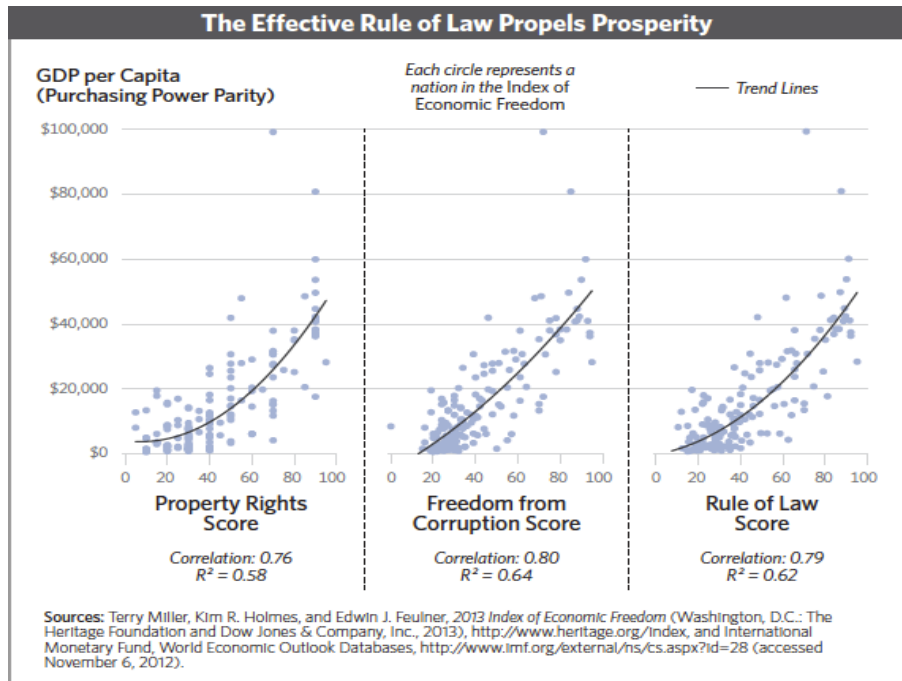


Figure 2. Correlation Between Effective Rule of Law and GDP ²²

a. Property Rights

Legal institutions such as judicial independence, contract enforcement, protection of property rights, and regulations on the sale of real property are the cornerstone of high-income countries.²³ The quality of legal institutions greatly affects a country’s ability to promote financial development,²⁴ and firms must engage in design and engineering activities in order for middle-income countries to transition from imitation to innovation. Indeed, it is highly likely that without the enforcement of patents, firms will lack incentive to invest. In developing countries, the necessary legal institutions are often lacking, which creates a burden, and increases the probability of a growth slowdown. Inversely, enforcement of property rights boosts innovation, which results in higher

²² Edwin Feulner, “The Rule of Law,” *Index of Economic Freedom 2013* (2013): 36, <http://www.heritage.org/index/download>.

²³ Aiyar et al., *Growth Slowdowns and the Middle-Income Trap*, 13.

²⁴ R. La Porta et al., “The Quality of Government,” *Journal of Law, Economics, and Organization* 15, no. 1 (March 1, 1999): 224, doi:10.1093/jleo/15.1.222.

wages, and attracts specialized workers to the sector. Property rights are essential for the broader society, which enables a variety of individuals to be incentivized to invest and take part in the economy. The result of this dynamic greatly increases social capital, which is an essential element to increasing TFP necessary for advancement.²⁵

b. Corruption

Corruption is found in varying degrees within almost all countries. Corruption cannot be uniformly defined because it depends on the actors, profiteers, and initiators. Some countries define corruption in general terms, while others define and legislate it in strict terms.²⁶ In developing countries, petty corruption is most often prevalent, taking the form of “grease money,” which includes bribes and extortion. For example, grease money might include someone bribing a corrupt licensing official to approve a business application, while extortion money is paid to government officials, such as the police, to avoid penalties. In advanced economies, corruption is subtle, and includes activities such as special privileges for elites, abuse of government contracting system, and cronyism. Corruption is often found in governments that claim a significant economic role as a property holder, regulator, business operator, or in programs that are involved in distribution of wealth.²⁷ The degree of corruption within a country often greatly influences its economic direction. There is strong empirical evidence that corruption lowers investment and leads to slower growth.²⁸ In countries where governments do not always act in their citizens’ best interest, corruption increases the opportunity costs of investments, products, and services. There is debate that corruption raises economic growth by circumventing bureaucratic red tape, or incentivizes government employees to

²⁵ Pierre-Richard Agénor, Otaviano Canuto, and Michael Jelenic, “Avoiding Middle-Income Growth Traps,” *Poverty Reduction and Economic Management Network*, Economic Promise, 98 (November 2012): 4, <http://www.voxeu.org/article/avoiding-middle-income-growth-traps>.

²⁶ Adenike Egunjobi, “An Econometric Analysis of the Impact of Corruption on Economic Growth in Nigeria,” *E3 Journal of Business Management and Economics*. 4, no. 3 (2013): 54.

²⁷ Feulner, “The Rule of Law,” 37.

²⁸ Research analyzed data consisting of subjective indices of corruption, the amount of red tape, the efficiency of the judicial system. Paolo Mauro, “Corruption and Growth,” *The Quarterly Journal of Economics* 110, no. 3 (August 1, 1995): 681–712, doi:10.2307/2946696.

work harder in an effort to garner more bribe money; however, the same argument can be made that corruption distorts the market and induces inefficiency. Pellegrini and Gerlagh found that “one standard deviation increase in the corruption index is associated with a decrease in investments of 2.46 percent, which in turn decreases economic growth by 0.34 per cent per year.”²⁹ Furthermore, another study found that corruption has a direct negative affect on economic growth.³⁰ While corruption may seem to create short-term benefits, in the long run it is shown to slow growth. Grease money may be viewed as an ordinary business expense to some, but in the aggregate, corruption creates an uneven playing field that does not always reward the best product or service, and therefore erodes economic growth potential.

2. Education

Human capital, principally attained through education and bringing more workers into the labor force, is a key element to economic progress. A well-educated population produces a larger skilled labor force that results in high levels of labor productivity, which allows the country to absorb advanced technology from advanced countries. Factors such as availability, level, and distribution of educational attainment also influence social outcomes. Child mortality, education of children, and income distribution has been show to be positively affected by strong education policy.³¹

In a comprehensive study, Barro and Lee calculated the average number of years of schooling for the population aged 15 and above. Contrary to conventional wisdom, the years of schooling in total showed no apparent correlation with economic slowdowns; however, when years of schooling at the secondary level and higher were assessed separately, a strongly negative correlation became apparent—on average, the more

²⁹ Lorenzo Pellegrini and Reyer Gerlagh, “Corruption’s Effect on Growth and Its Transmission Channels,” *Kyklos* 57, no. 3 (August 1, 2004): 58, doi:10.1111/j.0023–5962.2004.00261.x.

³⁰ Egunjobi, “An Econometric Analysis of the Impact of Corruption on Economic Growth in Nigeria,” 64.

³¹ Robert J. Barro and Jong Wha Lee, “A New Data Set of Educational Attainment in the World, 1950–2010,” *Journal of Development Economics* 104 (September 2013): 194, doi:10.1016/j.jdeveco.2012.10.001.

university attendees and graduates, the less the likelihood of a slowdown.³² More advanced education may be especially valuable for middle-income countries seeking to avoid a slowdown by moving into the production of more technologically sophisticated goods and services.

The key to education is not necessary the number of years of schooling, but the quality of education and relevancy to meeting the demands needed to compete at the technological frontier. Barry Eichengreen argues that “countries with some educational attainment that falls short of secondary are better able to move into relatively low-value added industries and activities (assembly operations and the like), leading to an acceleration of growth, but then find it harder to move up market when challenged from below by other late-industrializing, low-labor cost countries. This renders them vulnerable to the so-called middle-income trap.”³³

While the average number of years of education is an important metric, an equal amount of weight must be applied to the kind of education. William Baumol argues that the way one is educated is also a key factor in the contribution to an economy’s technological innovation. Heavy emphasis is placed on the mastery of math and science in industrialized economies. This rigid focus on math and science results in a labor force that is technologically competent at existing technology; however, that same educational paradigm can stifle unorthodox innovation that leads to entrepreneurial creativity.³⁴ Educational institutions that provide high levels of math and science, but are less rigid and more diversified, create a paradigm that fosters innovation and entrepreneurship.³⁵

Research show that innovation comes from two fronts: the routine activities of large firms, and from independent inventors associated with small firms. Large firms

³² Ibid., 184.

³³ Eichengreen, Donghyun, and Kwanho, *Growth Slowdowns Redux: New Evidence on the Middle-Income Trap*, 9.

³⁴ William J. Baumol, *Education for Innovation: Entrepreneurial Breakthroughs vs. Corporate Incremental Improvements*, Working Paper (National Bureau of Economic Research, June 2004), 4, <http://www.nber.org/papers/w10578>.

³⁵ Ibid., 28.

focus on incremental innovation of already known technologies and processes, while independent innovators in small firms often disrupt the market with revolutionary breakthroughs. Innovators in these small firms are unrestrained by conservative policies like those in large firms, and thus are free to break the paradigm of incremental innovation based on existing technologies and practices.³⁶ This relationship creates a cycle that is necessary to be a first mover on the technological frontier.

Certainly, educational institutions that produce high levels of technological competency are extremely important to break the middle-income trap, but a balanced approach to education that produces breakthrough innovation is equally important. While the years of secondary and tertiary education are strongly associated with high-income status, educational institutions must stimulate innovation that enables a country to be a first mover on the technological frontier. Without high levels of innovation, a country will eventually stagnate as a second mover in a highly competitive world.

3. Demography

Demography defines a population in terms of size, density, distribution, and vital statistics.³⁷ Furthermore, demography is one of the key elements to growth during a country's early development as it capitalizes on cheap labor to increase its competitive advantage globally; however, as a country advances, population growth begins to slow from earlier stages for a number of reasons. This dynamic is seen in middle-income countries, and is associated with a demographic bubble of able-bodied workers moving through the country's economic life cycle; however, this same phenomenon produces a penalty later as the population ages and creates a strain on the economy. As a country initially begins to develop, mortality rates begin to fall in the wake of advancements such as disease prevention, healthcare, and safety. This early surge of the labor force is commonly called the "demographic dividend," which is a one-time benefit to the growth phase. In the later stages of demographic transition, fertility rates begin to fall as more

³⁶ Ibid.

³⁷ "Demography," *Merriam-Webster*, n.d., <http://www.merriam-webster.com/dictionary/demography>.

females enter the labor force, which causes the youth dependence ratio to decline. This surge in labor force population causes per capita output to grow more rapidly than prior periods.

The demographic dividend also greatly increases the savings of the population, as theorized by the life-cycle model. Life-cycle theory, developed by Franco Modigliani, asserts that “people make consumption decisions based both on the resources available to them over their lifetime and on their current stage of life.”³⁸ Individuals accumulate assets (retirement savings) during their productive years, and make use of their savings in their retirement years. During an individual’s life cycle, they adjust their consumption mix according to their needs at different stages of their lives. The demographic dividend thus provides liquidity to the financial sector, providing the necessary funds for investment, lowering pressure on wages, and lowering profits downward.³⁹ There are many examples of how the demographic dividend has worked to increase economic growth. For instance, Ireland, in 1979, legalized contraception devices, which began to create a demographic dividend that helped to fuel the Irish economy in the 1990s. China’s one child policy, introduced in 1978, has also created a surge in its labor force.⁴⁰

As the population ages and becomes more dependent, the demographic penalty begins to strain the economy. As the dependency ratio⁴¹ increases, there is less saving available for investment. Aiyar, et al. found that a high dependency ratio is significantly related to slowdown probabilities.⁴² This is significant because many of the fast growing middle-income countries of the last several decades have greatly benefitted from the demographic dividend, but have yet to experience the demographic penalty associated from the inevitable high dependency ratios.

³⁸ Albert Ando and Franco Modigliani, “The ‘Life Cycle’ Hypothesis of Saving: Aggregate Implications and Tests,” *The American Economic Review* 53, no. 1 (March 1, 1963): 56, <http://www.jstor.org/stable/1817129>.

³⁹ Eichengreen, “Escaping the Middle-Income Trap,” 410.

⁴⁰ Ibid.

⁴¹ Ratio of children and old people to people of working age.

⁴² Aiyar et al., *Growth Slowdowns and the Middle-Income Trap*, 19.

B. CASE EXAMPLES

The next two chapters of this thesis will focus on case comparisons from South Korea (Korea hereafter, except occasionally), and Malaysia using the established framework from this chapter. Each chapter has three goals: (1) Provide a brief survey of the country's development history, (2) assess the how rule of law, education, and demography shaped the country's ability to break through the middle-income trap, (3) assess future implications for the country. A final empirical chapter will use the analytical framework on the middle-income trap and the case comparison of Korea and Malaysia to offer an assessment of the extent to which China is enmeshed in the middle-income trap and its prospects for escaping it.

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III. KOREA CASE

Many people assume Korea's economic rise would not have occurred so quickly without U.S. and U.N. involvement in the years after World War II and the Korean War. Most of us will readily agree that this is true, but where this agreement usually ends, however, is on the question of what factors actually drove Korea to where it is today? There are many countries that have received aid through the IMF, or developmental support through The World Bank, which should have provided basic grounding for development, but many are still struggling to break the middle-income trap. By contrast, there are others that have shown great promise without external support, only to eventually fizzle out. The works of Eichengreen (2012), Perkins (2012, 2013), and Shin (2012) provide important empirical data that will be used to help answer this question. By analyzing these core studies (and supporting smaller studies), this chapter will dissect Korea's experience to determine what worked and what did not work in its economic development.

The ultimate aim of this thesis is to assess China's future economic potential, and many of Korea's experiences will provide necessary evidence required to make a comparative analysis with China in the final chapter. This chapter will first focus on Korea's historical economic path for context, and then assess how each common trait played a part in Korea's ability to break through the middle-income trap, and what this means for the future of Korea.

A. ECONOMIC HISTORY

Over the last 50 years, Korea's economy has grown at an astonishing rate, and has successfully broken through the middle-income trap to join the ranks of advanced countries. Per the World Bank data, from 1961 to 2013 Korea's GDP per capita has grown to just shy of \$25,000US in 2013 (see Figure 3). Furthermore, Figure 4 shows Korea has averaged 7.5 percent annual growth over the same period (even with negative growth in 1981 and 1998). During Korea's heavy industrialization period from the early

1960s through 1980, it averaged a 9.25 percent growth rate, and then began a slow decline to average 5.76 percent from the 1990s to present. Since the Global Financial Crisis in 2008, Korea’s growth has declined to average 3.1 percent, which reflects a growth rate similar to high-income economies.¹

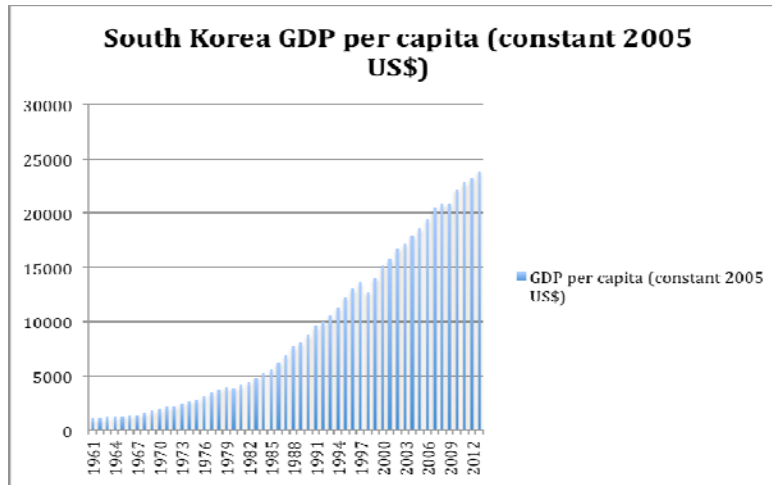


Figure 3. South Korea GDP per Capita (constant 2005 U.S.\$)²

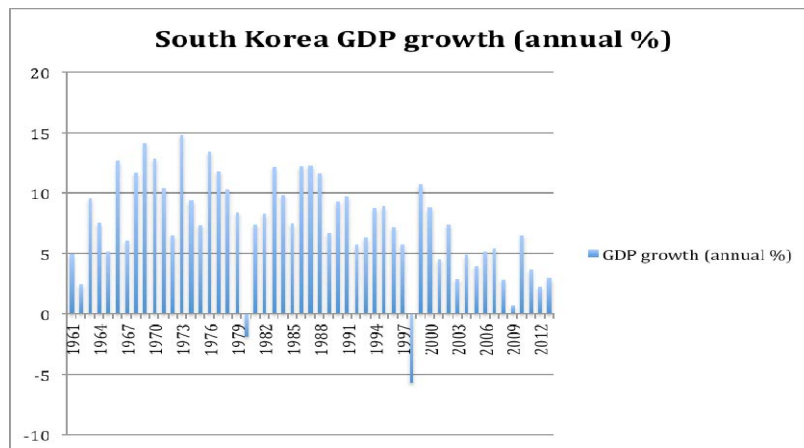


Figure 4. South Korea GDP Growth (annual %)³

¹ World Bank, “Republic of Korea Data,” *The World Bank*, 2014.

² Ibid.

³ Ibid.

In keeping with the middle-income trap threshold defined in Chapter II, Korea passed through the middle-income trap beginning in year 2000, and has been steadily increasing by almost 700US each year since. This data coincides with Figure 4 as it depicts a downward trend in growth rate to present. Year 2000s growth spike of 10.75 percent is a statistical outlier, but marks the beginning of many new reforms that were implemented as a result of the Asian Financial Crisis from 1997–1998. While these numbers are impressive on the surface, the following section will provide more insight and context to the data.

At the turn of the 19th century, Korea's elite consisted mostly of wealthy land aristocracies. Japan's colonial domination eliminated much of these holdings, but also strengthened the remaining elite in other forms. Post WWII, the old elite still dominated the countryside, and viewed reform as a threat to their powerbase once again. As new rules and institutions began to emerge, segments of this elite class began to transfer their wealth into industry and commerce under U.S. supervision. Through land reform measures brought on by the Syngman Rhee regime and the U.S., landlordism no longer hindered economic growth, but set in motion the first wave of businessmen that would later come to support the large family-owned conglomerates known as chaebols.

While the U.S. and U.N. helped build a structured Korean state, Korea started from a relatively egalitarian base.⁴ Through the late 1980s, the Korean government consisted of authoritarian regimes, and operated with a heavy hand through a system of intergovernmental institutions. Under these autocratic conditions, Korea's first president, Syngman Rhee, sought to increase his own power and use foreign aid supplied by the U.S. and U.N to purchase necessary imports.⁵ During Rhee's leadership, Korea's growth stagnated due to low export levels, as the country was dependent on foreign aid. Realizing the need to get out from under U.S. influence, in 1962 the new Park regime devised a series of five-year economic development plans designed to shift towards an

⁴ Dwight H. Perkins, *East Asian Development: Foundations and Strategies*, The Edwin O. Reischauer Lectures (Cambridge, Massachusetts: Harvard University Press, 2013), 9.

⁵ Carter Eckert, "Korea's Economic Development in Historical Perspective, 1945–1990," in *Pacific Century: The Emergence of Modern Pacific Asia*, vol. 2nd (Westview Press, 2007), 297.

export-led economy. The government took the role of general manager of a command economy, emphasizing heavy industry export-led growth with full governmental support of the selected industries—also known as Gerchenkronian economics.

State supported Gerchenkronian economics also played a crucial role in Korea's development. Gerchenkronian strategy can be defined as the pursuit of convergence between developing and advanced countries by emphasizing unbalanced growth. In Korea's case, the country focused its efforts on catching-up to sectors where it had the most comparative advantage, which was low cost skilled labor. The state and the large family owned conglomerates, known as chaebols, substituted for missing markets by risk sharing, a technique in which the state controlled bank issues loans to under the guise of industrial policy. The state picked strategic manufacturing areas and selected business groups to build out the new industries, while at the same time providing protection. The triad between the state, banks, and chaebols became the essence of the Korean economy.⁶

Under the chaebol-bank-state triad, Korea enjoyed sustained rapid growth for more than 25 years. Recent data, however, suggest the growth rate actually peaked in 1989.⁷ Post 1989, most charts depict continued growth at an average 8 percent well into the mid 1990s, but much of that high growth was unsustainable. An abnormally high investment rate of 40 percent artificially masked a deceleration in real growth. Through creative accounting and finance, the chaebols were able to shift investment funds to unprofitable activities through their free access to external capital.⁸ Although the GDP growth rate appeared to be sustained, overall profitability declined due to problems with external competitiveness, namely total factor productivity.

Figure 5 depicts how labor, capital, and TFP contributed to varying degrees throughout the years. Eichengreen points out that in the early years, capital formation

⁶ Jang-Sup Shin, *The Economics of the Latecomers: Catching-Up, Technology Transfer, and Institutions in Germany, Japan, and South Korea*, Book, Whole (Florence, Kentucky: Psychology Press, 1996), 141.

⁷ Eichengreen, "Escaping the Middle-Income Trap," 413.

⁸ *Ibid.*, 414.

contributed far more than TFP, as much of Korea's money was being directed into capital-intensive industry.⁹ In the 1980s, Korea ended its industrial drive and started a series of reforms in the later years, which led to an increase in TFP. In the 1990, however, TFP slowed again while investment remained at 35% of GDP, as chaebols broadened their scope of new businesses, which lacked the same kind of expertise seen in their core business. This resulted in a sharp reduction in return on capital, which resulted in accelerated short-term borrowing in foreign currency.¹⁰ These factors set the stage for the ensuing solvency crisis for many banks and businesses, and morphed into a generalized economic crisis that developed as a result of the AFC.

Although painful, recovery from the AFC was rapid, yet Korea did not return to its earlier growth trajectory. Though I concede that growth has slowed, I must point to Eichengreen's argument that growth actually began to slow in the 1990s, and was masked by market distortions. The shock from the AFC forced the government to make necessary reforms. In contrast, TFP has accelerated to levels not seen since the 1980s. Korea's R&D spending has increased steadily to 4.4% GDP, which ranks first among of OECD countries.¹¹

⁹ Eichengreen, *From Miracle to Maturity*, 65.

¹⁰ *Ibid.*, 66.

¹¹ Organization for Economic Co-operation and Development, *OECD Factbook* (OECD Publishing, 2012), http://www.oecd-ilibrary.org/economics/data/oecd-factbook-statistics/oecd-factbook_data-00590-en.

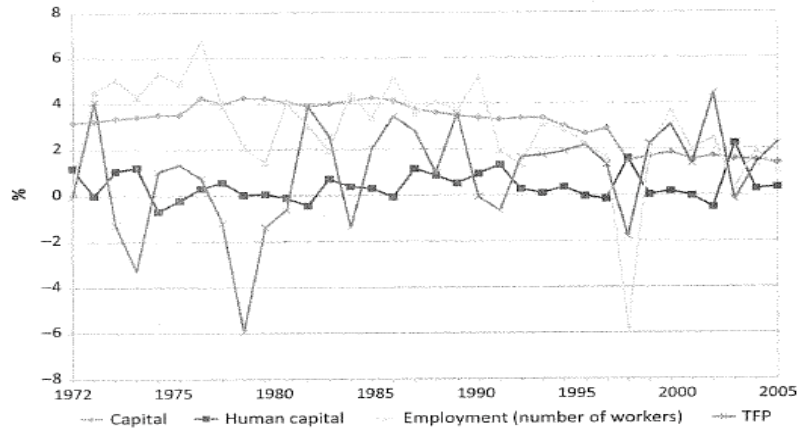


Figure 5. Korea's Growth Inputs from 1971–2005¹²

While I have only touched upon certain aspects of Korea's economic history to bring context to my argument, it is important to note there are many economic and political factors that have also helped shape Korea's later development—namely democratization. Exploring those factors would be well outside the scope of this thesis, and should not be discounted, but referenced for better understanding. The key point from this section, however, is the significance of governmental control of the industrialization period, and the dynamic between the chaebol and the political economy. The following sections will focus more deeply on how rule of law, demography, and education helped influence Korea's ability to achieve a successful transition through the middle-income trap.

B. ESCAPING THE MIDDLE-INCOME TRAP

Korea's climb to high-income status has not come easy, and it has been forced to face many problems head-on. Each of its financial crises (1970–1971, 1980–1982, 1997–1998, 2008–2009) forced the government to take measures to keep its economy growing. Korea is not alone in experiencing a series of economic setbacks, as many other middle-income countries have faced similar challenges. The question is what factors enabled

¹² Eichengreen, *From Miracle to Maturity*, 16.

Korea's graduation to high-income status? Using the economic factors framed in Chapter II, this section will examine how each factor played a part in the middle-income trap.

1. Institutions

Modern Korea is a product of a long history that can be traced to the Silla dynasty of the seventh century.¹³ Many elements have greatly shaped Korea's identity such as Confucianism, priority of family, education, and colonial legacies from the Japanese. These factors act as pillars that support many of Korea's modern day institutions.

Korea's social structure is focused on the priority of family and education, and its oligarchic families dominate political and policy realms. Many of Korea's institutions were setup and strengthened by the elite families. These elite families' actions often depend on their relations with other elite families. They know one another, attend many of the same schools together, and see each other on a regular basis.¹⁴ Although large chaebols such as Hyundai or Samsung are glowing success stories for Korean industry, they are also run by a legacy of families. This clannishness in elite society extends to politics and policy as well. David Kang notes, "Former prime ministers and foreign ministers are related to chaebol and back; they are so intertwined that, as the larger families send their offspring into politics and business, the drawing of a relational map quickly becomes confusing."¹⁵ It is this enmeshment that creates a zone of influence, which fosters the perception of a shadow legal system rigged to favor the elite.

Korean legal institutions can be traced back to Japanese and American influence. From 1910 to 1945, Japan colonized Korea, and after the occupation Korea adopted many aspects of the American legal system. Korea's constitution was adopted on July 17, 1948, and has three governmental branches: executive, legislative, and judicial. Its legal system is based on Civil Law, however many Supreme Court decisions have strong

¹³ David C Kang et al., *Crony Capitalism Corruption and Development in South Korea and the Philippines*. (Cambridge: Cambridge University Press, 2002), 22, <http://public.eblib.com/choice/publicfullrecord.aspx?p=202127>.

¹⁴ Ibid., 51.

¹⁵ Ibid., 55.

precedent value. Korea is considered by many to have a competent government bureaucracy. Despite Korea's well-structured legal system, the AFC caused many to label Korea as an example of crony capitalism. Korea's elite families, with their enmeshment into government bureaucracy, sometimes skirt the legal framework of the constitution.¹⁶ The following sections will analyze the rule of law in Korea as it pertains to corruption and property rights, which are important factors in forecasting high-income sustainability.

a. Corruption

Various forms of corruption have existed in Korea since its early history, ranging from petty corruption to more systemically pervasive forms such as special privileges for the elites, abuse of government contracting system, and cronyism. Cronyism is often the cornerstone of higher-level corruption in Korea. Elites tend to graduate from the same schools and work with each other at some point in their careers. For example Kang found 67% of all economic elites and 73% of higher civil servants in the economic ministries had attended one of three major universities in Korea (Seoul National, Korea, Yonsei). Moreover, "63% of bureaucrats in Korea's Ministry of Finance and almost 47% of its Economic Planning Board civil servants over the level of Samugwan (Grade III) had graduated from Seoul National University."¹⁷ Many of these individuals have family linkages to the powerful chaebols, which are the underpinning force in Korea.

Over much of Korea's development, the government controlled all commercial banks and adopted interest rate policies that were favorable to the chaebols. For example, under the Rhee regime, chaebols were supported by U.S. aid dollars and former Japanese enterprises only if they provided "kick-backs" to the regime in the form of unofficial political contributions. The "kick-back" apparatus quickly led to an unlevelled playing field favoring the chaebols, resulting in their rapid expansion. This left small and medium-sized enterprises with difficulty in securing financing, and therefore raised the

¹⁶ Ibid., 22.

¹⁷ Ibid., 56.

barrier to entry for these firms. Thus, the collusion between government and the chaebols set the norm for Korea's way forward.

It is difficult to measure the levels of corruption within a country, as corruption is inherently conducted in secret. Therefore, most empirical studies rely on perceived levels of corruption. Transparency International (TI) and the World Bank Governance Indicators (WBGI) provide aggregate indices based on the results of studies conducted from a variety of institutions such as banks, new media, and intelligence firms. Figure 6 shows Korea's control of corruption between 1996 and 2013. The line graph shows Korea's percentile rank compared with the world. Since 1996, Korea has strengthened its control over corruption, moving up roughly 5 percentiles to 70.3% in 2013. This means that Korea ranks higher than 70% of the world in controlling corruption. This measure correlates with TI's ranking of Korea's control of corruption at 69% (higher percentage indicates less corruption), and ranking of Korea at 46 of 177 countries in its Corruption Perceptions Index (CPI), which ranks countries on how corrupt a country's government is perceived to be. It is a composite index that indicates corruption-related data from expert and business surveys carried out by a variety of independent and reputable institutions.¹⁸ On the more negative side, TI ranks Korea's enforcement of corruption as moderate and in the lower percentile of OECD countries. Korea has been one of the few developed economies with a reputation for treating its biggest companies and their owners as if they were above the law.¹⁹

¹⁸ "Corruption by Country/Territory," *Transparency International*, 2014, accessed October 15, 2014, <http://www.transparency.org/country#KOR>.

¹⁹ *Ibid.*, 4.

Korea, Rep., 1996-2013
Aggregate Indicator: Control of Corruption

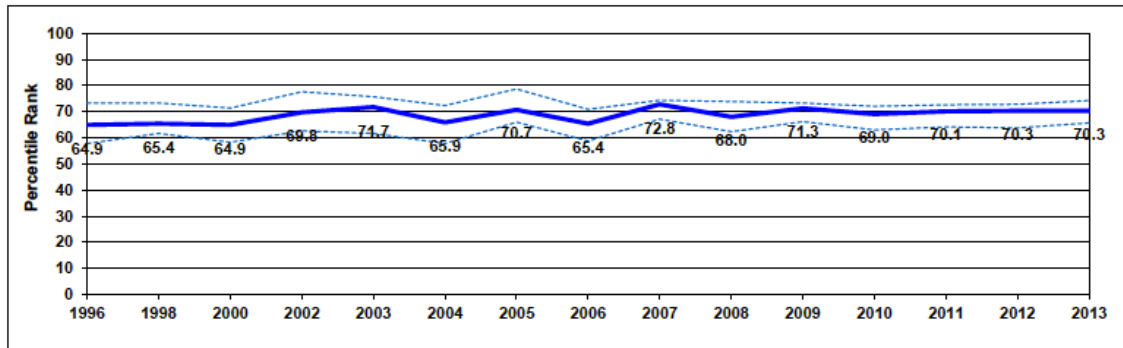


Figure 6. Perception of Korea’s Control of Corruption²⁰

The above data consistently shows that Korea has maintained a fairly steady level of corruption despite an independent legal system. Although the government works to combat petty corruption, much of Korea’s high-level corruption resides in the Korean elite structure as money, power, and influence are peddled into the political realm. Foreign investors they point to Korea’s opaque family connections, lack of transparency and unpredictability in the business market as key barriers to doing business in Korea.²¹ Despite Korea’s status as a modern high-income country, varying degrees of corruption still remain a problem in everyday life, resulting in an opportunity cost to future growth.

Despite an environment that fostered many types of corruption, Korea advanced to a high-income country. This runs contrary to the notion that corruption results in reduced economic growth. How can it be that Korea climbed the economic ladder and broke through the middle-income trap, but seemingly is controlled by an oligarchic elite? Evans (1995) argues that collaboration between the government and industry was very important for growth and development, because trust among the actors resulted in reduced transactions costs.²² Other scholars, such as Wedman (1997), argue that Korea’s

²⁰ *Worldwide Governance Indicators* (World Bank Group, 2014).

²¹ Eichengreen, *From Miracle to Maturity*, 5.

²² Peter B Evans, *Embedded Autonomy States and Industrial Transformation* (Princeton, N.J.: Princeton University Press, 1995), 5, <http://public.eblib.com/choice/publicfullrecord.aspx?p=574432>.

rampant and widespread corruption existed since 1945, but the type of corruption fostered economic development.²³ Though I concede that corruption has cost Korea much in untold business opportunities, which could have boosted the economy sooner, it never syphoned off enough rent to materially constrain the economy, and thus contribute to breaking through the middle-income trap. In addition to Wedman and Evans' argument, I believe land reforms also played an instrumental part by limiting the levels of early inequality, and thus diluting the concentration of wealth and power, which mitigated rampant corruption during critical early development.

b. Property Rights

Property rights in Korea have been steadily codified and strengthened since WWII. Soon after Korea's liberation from Japanese colonial rule, the Rhee administration redistributed the assets held by Japanese and the assets of pro-Japanese Korean landowners to farmers. The land reform program was designed to transform land capitalists to industrial capitalists, effectively abolishing the landlord class and creating a large farmer class.²⁴ By the early 1960s, the Park administration had instituted a variety of economic institutions designed to strengthen corporate property rights. In the 1980s, the Chun administration privatized public corporations to private investors. Since then, Korea has steadily implemented privatization policies, bringing significant change to institutions vis-à-vis corporate property rights.

Private property rights for non-chaebol firms, however, have been often times violated and weakened during Korea's developmental phase. For example, the Park Administration's August 3 Measure forced the conversion of debt held by non-chaebols to be converted to non-voting equity, and therefore made changes to individual property rights.²⁵ This is an early example of the "too big to fail" mentality that has plagued many

²³ Andrew Wedeman, "Looters, Rent-Scrapers, and Dividend-Collectors: Corruption and Growth in Zaire, South Korea, and the Philippines," *The Journal of Developing Areas*, 1997, 458.

²⁴ Jongryn Mo and David W Brady, *The Rule of Law in South Korea* (Stanford, Calif.: Hoover Institution Press, Stanford University, 2009), 168, <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=568818>.

²⁵ *Ibid.*, 169.

advanced countries during financial crises.²⁶ The chaebol, with its powerful political and economic power, oftentimes escapes the pressures of debt, while the property rights of individual creditors suffer. Furthermore, the government and chaebols often rely on political compromise and negotiate through non-institutional networks. If those networks prove to be unsuccessful, chaebols have a history of successfully winning lawsuits findings that allege the government liable for poor financial and competition policies.²⁷

Despite the unlevelled playing field afforded to the chaebols at times of crisis, Korea has an effective legal system that supports private property laws. Specifically, Korea has carried out a number of programs designed to strengthen intellectual property rights, increasing the incentive for innovation through patent protection. Additionally, contracts and regulation enforcement on the sale of real property has been strong.²⁸ Research firms such as the Heritage Foundation publish an annual index on economic freedom. In Figure 7, the reader can see that since 1995, Korea's property rights have ranked from free to mostly free. The dip in sentiment in 2002 can be attributed to chaebol debt restructuring that lagged from the AFC. Korea ranks above average worldwide, but compared to OECD high-income countries, Korea ranks in the lower echelons primarily due to favorable treatment of chaebols.²⁹ Given the chaebols' ability to influence the Korean government, it remains uncertain that Korea will become complete free with respect to property rights.

²⁶ Simon Johnson, *13 Bankers: The Wall Street Takeover and the next Financial Meltdown*, 1st ed (New York: Pantheon Books, 2010), 3.

²⁷ Mo and Brady, *The Rule of Law in South Korea*, 184.

²⁸ "Economic Freedom of the World," *Cato Institute*, accessed October 13, 2014, <http://www.cato.org/economic-freedom-world>.

²⁹ *Ibid.*

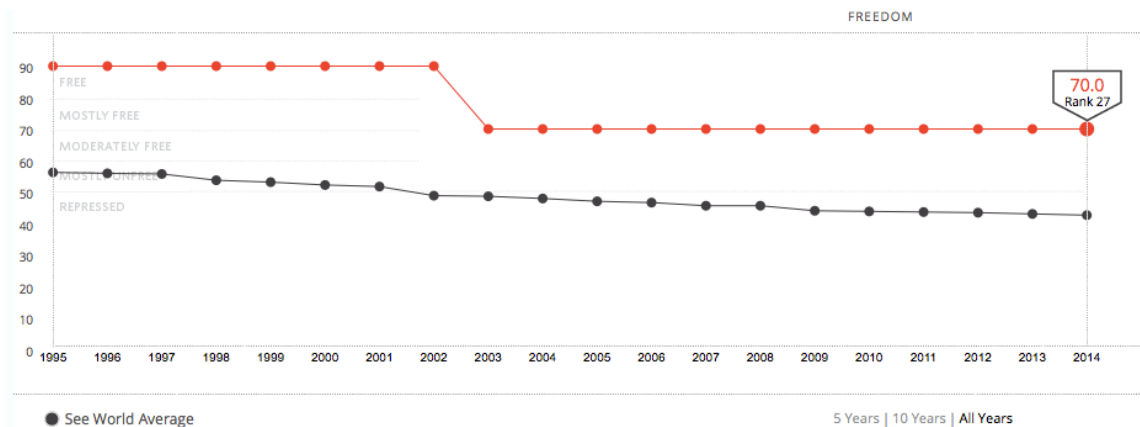


Figure 7. Korean Property Freedom³⁰

Although property rights may seem like a small factor when compared to the many forces of the middle-income trap, they proved to be one of the key pillars in Korea’s development. Because TFP growth is based on production efficiency, there has to be incentive to invest in capital and R&D. Without property rights, investments are not protected, thus there is great risk in losing the expected gain of the investment. Despite the spectrum of property rights protection afforded to Korean corporations and citizens, they have remained relatively strong throughout Korea’s development, which has ultimately resulted in sustained TFP growth and high-income status.

2. Education

Many attribute Korea’s strong educational foundation as the primary factor for its success in transforming to a high-income industrial nation. Post-WWII industrialization would not have happened so quickly if not for an already relatively educated labor force. Much of this can be attributed to industrialization during the Japanese occupation, but the social fabric valuing education can be traced back to Korea’s historical roots many centuries ago. During the years of the Choson dynasty, which ruled from 1392 to 1910, Korean society coveted civil service for its status and prestige. Becoming a civil servant was very competitive, and one had to pass a series of difficult exams that required years

³⁰ “South Korea Economy: Population, GDP, Inflation, Business, Trade, FDI, Corruption,” accessed October 10, 2014, <http://www.heritage.org/index/country/southkorea>.

of studying. This could only be accomplished by strict academic rigor and family support. If successful, a passing exam would lead to a life of privilege and high social status for the entire family. Over centuries, a strong focus on education took roots and became part of Korea's social identity.

As Korea transformed to an industrialized nation after WWII, national education programs increased incrementally. Primary education increased in the 1950s, which supplied the workers with the skills necessary for the labor-intensive industries of the 1960s. Secondary education programs in the 1970s contributed to the advancement of capital-intensive industries in the 1980s. By the 1980s, almost all students were going on to secondary school, and in the 1990s, the focus further shifted to tertiary education, which laid the foundation for Korea's strong knowledge-based, high-income economy.³¹ Over the last decade, 70% to 80% of all secondary school graduates are now attending tertiary schools (see Figure 8). As Korea's economy slows, however, university graduates are finding it more difficult to find positions with salaries that breakeven with the opportunity cost of all the resources that went into university preparatory classes.³² Korea is not alone, however, and this trend is typical of high-income countries where growth is slower.

³¹ "The Other Arms Race," *The Economist*, October 26, 2013, <http://www.economist.com/news/special-report/21588204-south-koreas-education-fever-needs-cooling-other-arms-race>.

³² *Ibid.*

Rational response

South Korean high-school graduates entering university, % of total

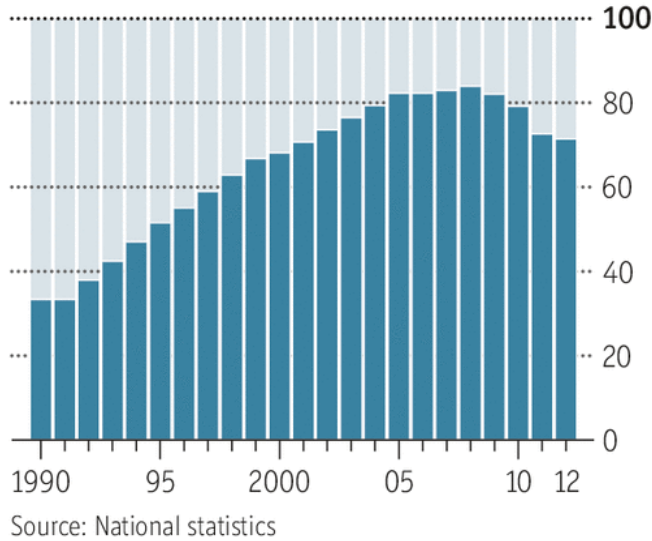


Figure 8. Korean High School Graduates Entering University³³

Currently, Korea is one of the most educated countries in the world, and leads the world in math and science, see Figure 8. Per OECD data, in 2012, Korea led the world in Math and was ranked in the top three for science. Korea's focus on math and science has effectively supported a technologically rich labor force, which is required for continued TFP growth. While strong abilities in math and science are prerequisites for competing in a high-tech world, TFP growth requires continued innovation as capital and labor inputs will taper with economic advancement. TFP growth will require not only a continued focus on technical studies, but also a shift in education that promotes collaboration and innovation.

There is no question education has also played a crucial element in Korea's ability to break the middle-income trap. TFP is driven by human capital development, and Korea has excelled in raising its collective education base to one of the highest in the world.

³³ Ibid.

Despite this fact, now that Korea is at the technological frontier, it must continue to innovate to remain competitive on the global market. While high standards in mathematics and sciences are crucial to producing products at the highest end of the value chain, creativity is also paramount to be a first mover. This is not to say Korea is not innovative or creative, but to suggest Korea's collective focus on the hard sciences may prove to be a handicap on the necessary unorthodox thinking that spawns new technologies. Although I grant that creativity may be a potential challenge, I still maintain that Korea's educational structure plays a crucial part in its ability to escape the middle-income trap.

3. Demography

Korea is a peninsular country that is predominately homogeneous with only 2% non-Koreans.³⁴ Korea's population has increased from about 19 million in 1950 to 49 million in 2014, an average rate of 1.49 percent per year. From 1950–1975, population grew at an average rate of 2.5 percent per year, significantly higher than the overall 1.1 percent average between 1975–2014. The working age segment of the population, those between the ages of 15–64 years, remained around 55 percent between 1950–1975, but began to rapidly increase to reach more than 70 percent in 2010.

Between 1950 and 1975, Korea's dependency ratio was high, consisting mostly of the youth dependence segment. During this period, the old-age dependency ratio was low because the population age 65 and over made up less than 4 per cent of the population. Figures 9 and 10 depict the demographic structure by age and sex in 1950 and 2014, respectively. In 1950, Korea had a very insignificant old age dependency, and in 2014, the sex and age structure shows a relatively low old age and child dependency ratio. Beginning in 2020, Korea's old age dependency ratio will rapidly increase for the next 30 years as the surge of baby boomers transition into this category; a transformation that will have serious implications for Korea.

³⁴ United Nations Population Fund, *Population Dynamics in the Least Developed Countries Challenges and Opportunities for Development and Poverty Reduction*. (New York, NY: United Nations Population Fund, 2011), <http://unfpa.org/public/home/publications/pid/7599>.

South Korea's Age and Sex Structure, 1950

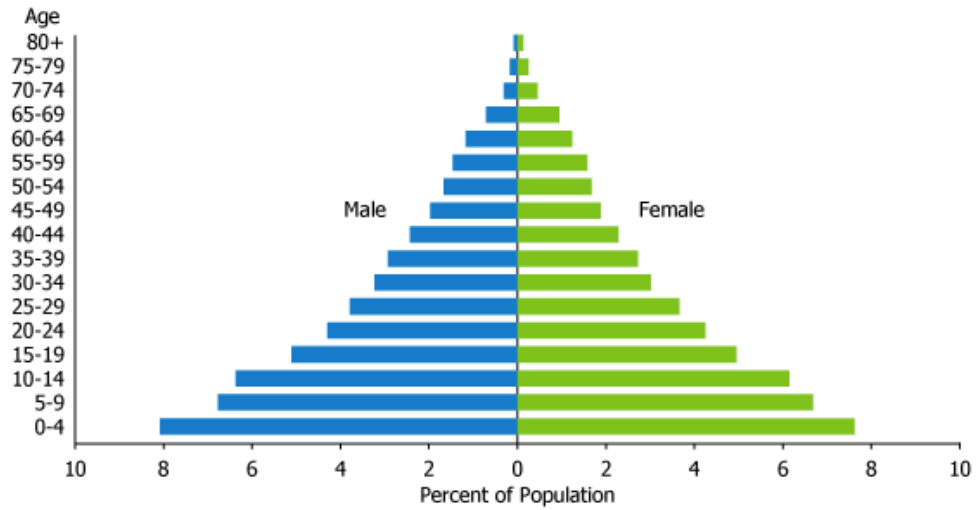


Figure 9. South Korea’s Demographic Structure 1950³⁵

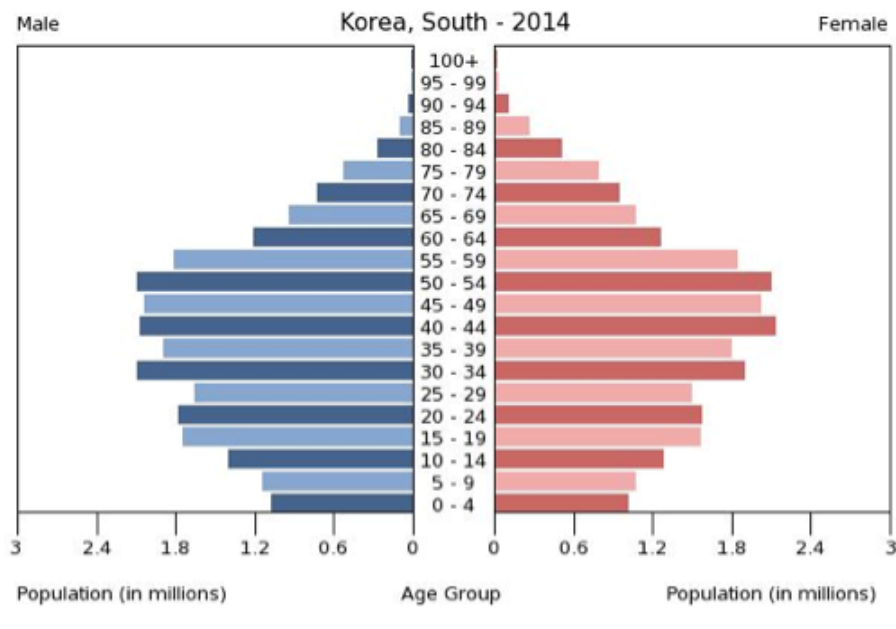


Figure 10. South Korea Demographic Structure 2014

³⁵ Ibid.

Korea’s population shift has produced a one-time demographic dividend that laid the foundation for its economic growth during the last half of the 20th century. Rapid industrialization policies pulled a large percentage of females into the workforce starting in the late 1960s and early 1970s. With more women working, and a planned family approach to contraception, the fertility rate dropped. With fewer children at home, Korea experienced several decades of a low dependence ratio. The workforce surge not only provided a large labor pool, but also provided the economy with added savings due to the majority of the population in the workforce. This led to an increase in human capital as parents now had money to provide for better health care and education. Over time, the labor force became more productive as it became more educated, which led to a better standard of living and with higher wages (see Figure 11).

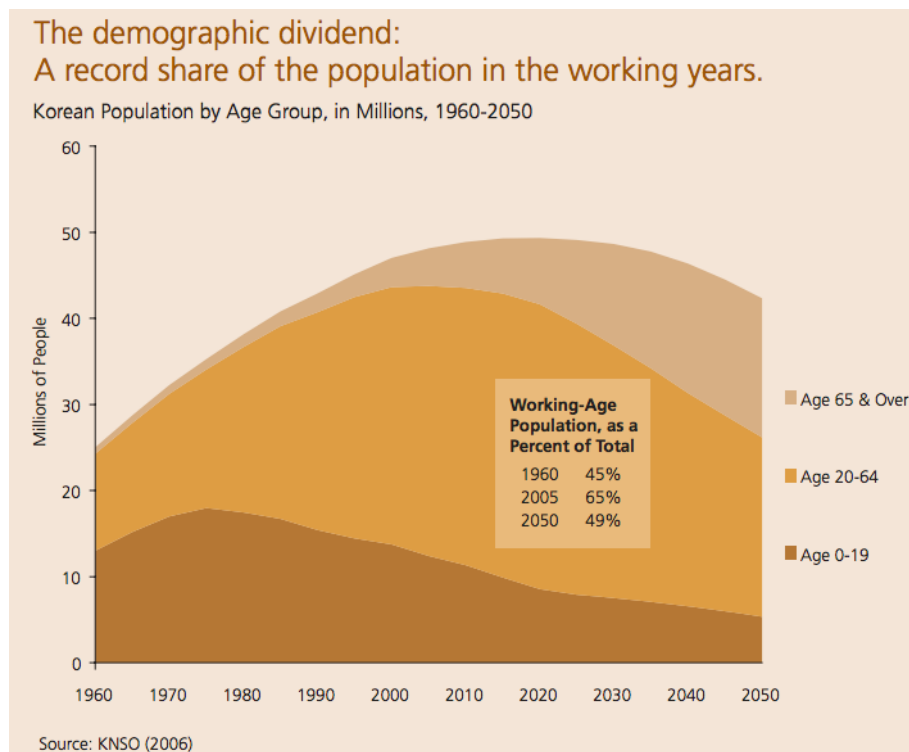


Figure 11. Korean Demographic Dividend³⁶

³⁶ “An Elderly Crisis and a Youth Crisis: South Korea’s Got It All,” *Quartz*, accessed October 15, 2014, <http://qz.com/76423/an-elderly-crisis-and-a-youth-crisis-south-koreas-got-it-all/>.

Favorable demographics have positively shaped Korea's economy, and thus played a significant part in its ability to escape the middle-income trap. The Korean people are a homogeneous society that shares a deep collective history, and growth-inhibiting factors such as racial and religious conflict have not been a decisive issue during Korea's development phase. Furthermore, Korea's demographic dividend enabled it to rapidly concentrate wealth for development, which also played a large part in building a strong economic foundation. Despite the fact that these demographic factors contributed to Korea breaking the middle-income trap, it now is facing a demographic penalty in the following decades as dependency ratios begin to climb. Continued TFP growth will be essential to offsetting the inevitable reality of the demographic penalty.

C. CURRENT POLICY IMPLICATIONS FOR COUNTRY'S FUTURE

Despite Korea's successful growth story, it can no longer sustain the growth rates that were enjoyed in the past, which is typical of developed countries.³⁷ While government and economic reform has elevated Korea to a high-income economy, the country is facing a series of structural challenges. Notwithstanding the many benefits that came with the demographic dividend, Korea is about to face a demographic penalty in the next few decades. As the surge of baby boomers that began working in the 1960s and 1970s reaches retirement, it will begin to pull from the economy. While it is difficult to forecast future fertility rates, it is helpful to consider Japan, as Korea has closely followed its demographic transition.³⁸ Since Japan's economic peak in the 1980s, its fertility rate has decreased to 1.25 as of 2014.³⁹ This is a telling example, because Korea is likely to follow the same path given its similar socioeconomic structure. The aging population will result in a large old-age dependency ratio. For example, in 2000, 16.7 percent of the

³⁷ "Sustaining Korea's Convergence to the Highest-Income Countries," *OECD Economic Surveys: Korea* 2012, no. 10 (April 2012): 1, <http://libproxy.nps.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=87050547&site=ehost-live&scope=site>.

³⁸ Hanam S. Phang, *Demographic Dividend and Labour Force Transformations in Asia: The Case of the Republic of Korea*, n.d., 128.

³⁹ "The World Factbook," Government, *Central Intelligence Agency*, accessed October 17, 2014, <https://www.cia.gov/library/publications/the-world-factbook/>.

population was over 60 years old. In 2050, if fertility rate remains relatively constant, 38.9 percent of the population will be above 60 years old.⁴⁰ Although the future is uncertain, this demographic shift will put pressure on the Korean economy and change the future of labor force participation and withdraw.

Given the impending demographic penalty and the climate of global and regional competition, Korea's future resides in its ability to increase TFP growth. While Korea is one of the most educated countries in the world in terms of math and science, it must break tradition and foster an educational system that promotes innovation and creativity. This will be the driving force that will keep Korea's place at the technological frontier, and out of the middle-income trap.

Finally, Korea has been very successful at crisis-induced reforms, as evidenced by the financial downturns it has faced each decade since the 1960s. The AFC brought about much needed reform for the Korean economy, giving the final boost needed to break the middle-income trap. Nevertheless, the chaebols continue to exist (albeit far fewer than pre-AFC), and their concentration of wealth and power still poses some risk to the future economy.

D. CONCLUDING REMARKS ON KOREA

Korea's journey to becoming a high-income economy is no short feat, and this chapter has sought to analyze how Korea escaped the middle-income trap based on rule of law, education, and demography. The findings of this chapter illustrate how the impact of rule of law, education, and demography is more complex than previously assumed. While no single factor is exclusively responsible, in aggregate they come together and provide a strong economic foundation that is essential to graduate to a high-income economy. If not for this strong foundation, Korea may not have been able to overcome some of the many challenges it faced during the last 60 years. Without favorable demographics and education, there would have been a shortage of quality human capital.

⁴⁰ United Nations Population Fund, *Population Dynamics in the Least Developed Countries Challenges and Opportunities for Development and Poverty Reduction*, 168.

Rule of law played a significant part in enforcing property rights, which incentivized businesses to take risks. Later, rule of law played a substantial role in reforming the economy post-AFC, which provided the final push to break the middle-income trap. Despite Korea's challenges with corruption, it did not materially affect Korea's ability to break the middle-income trap.

Korea is now an established high-income country, and is facing many of the economic forces typical of its new economic status. Growth rates have slowed, as Korea must now compete at the technological frontier. Continued growth is not just a matter of copying cutting edge technology, but more importantly being an innovative first mover. Furthermore, in the following years, Korea's demographic dividend will become a penalty, as the aging population will begin to extract from the economy as old age dependency ratios increases. These challenges are not unique to Korea, and one can look to Japan as it presents a good example of how many of Korea's challenges may affect its economy.

Finally, this case has demonstrated that strong rule of law, education, and demography, can positively affect a country's ability to escape the middle-income trap. Applying this case to China, these factors will help provide useful insight when assessing China's future. In contrast, the next chapter will focus on Malaysia, which highlights how these common factors have limited Malaysia's ability to break the middle-income trap.

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IV. MALAYSIA CASE

Since the AFC, Malaysia's growth trajectory has declined, and many are questioning Malaysia's ability to graduate to a high-income economy. Prior to the AFC, many economists heralded Malaysia as the next up and coming "Asian Miracle" economy, and its growth rate had economists debating the conventional wisdom of western economies. The Petronas Towers in Kuala Lumpur, which opened in 1996, and held the title as the world's tallest skyscrapers, epitomized Malaysia's newfound prestige and future promise. The AFC, however, changed all this, and exposed fundamental weaknesses that caused many to reverse their growth forecast on the country. Despite Malaysia's array of reform measures post-AFC, the economy has not been able sustain the same growth it once experienced. Malaysia's economic performance now has many believing Malaysia is caught in the middle-income trap.

There are differing viewpoints among scholars on why Malaysia appears to be caught in the middle-income trap. This chapter will specifically draw on Woo's (2009) research where he argues Malaysia is indeed caught in the middle-income trap. Additionally, works from Perkins (2013) and Hill (2012) will bridge the literature gap, as both works provide qualitative and quantitative data on Malaysia's developmental journey. Finally, statistics on GDP are derived from the World Bank 2014 data bank. By analyzing these core studies, and supporting smaller studies, this chapter will dissect several key factors of Malaysia's development to determine what worked and what did not work.

The Malaysian developmental experience is different than Korea's, and this case will seek to understand some of the differences in hopes they will yield insight for China. Malaysia provides a good comparative case, as it will highlight how rule of law, education, and demographics can contribute to a weak economic foundation. With a weak foundation, even the best of intentions may still not be enough to escape the middle-income trap. This chapter will first focus on Malaysia's historical economic path for

context, and then assess how each common trait played a part in its entanglement in the middle-income trap.

A. ECONOMIC HISTORY

Since gaining independence from the British in 1957, Malaysia has transformed from a low-income economy to a middle-income economy. Per World Bank data, from 1961 to 2013 Malaysia's GDP per capita has grown from about \$1,000US to \$6,900US (see Figure 12), and Figure 13 depicts Malaysia has averaged 6.4 percent annual growth over the same period. Malaysia experienced impressive growth rates in excess of 9 percent in ten of the years from 1973 to 1997. The AFC hit Malaysia hard in 1998, and its growth rate contracted -7.4 percent, but in 1999 and 2000 the economy made up for the losses with growth of 6.1 and 8.6 percent, respectively. Despite these two years of resurgence, Malaysia's growth has declined to average 5.3 percent (discounting a -1.5 percent loss in 2008 as a result of the 2008 Global Financial Crisis). Certainly, a growth rate above 5 percent indicates Malaysia is moving in the right direction, but this growth rate is more typical of a country that is nearing its economic peak.¹

¹ World Bank, "Malaysia Data," *The World Bank*, 2014, <http://data.worldbank.org/country/malaysia>.

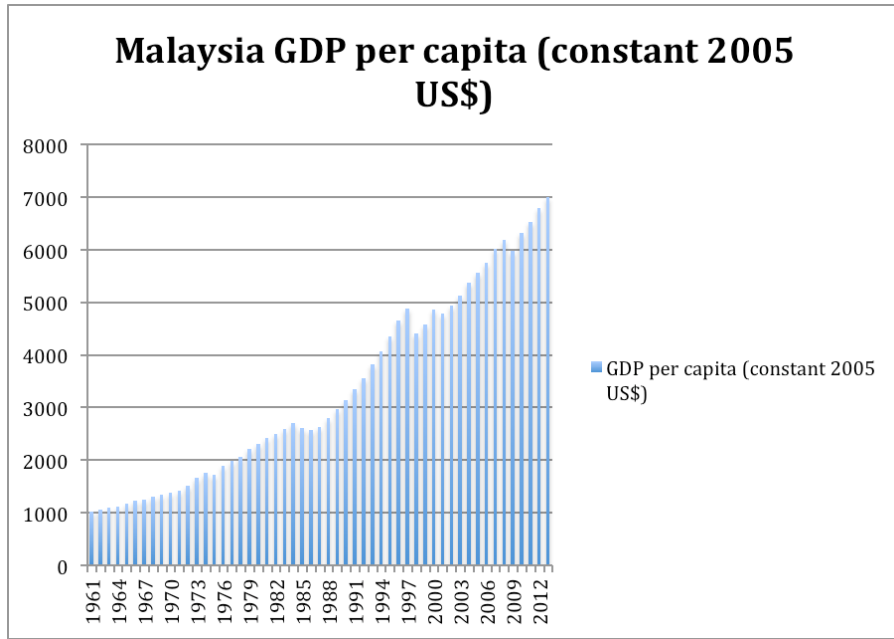


Figure 12. Malaysia GDP per Capita (constant 2005 U.S.\$)²

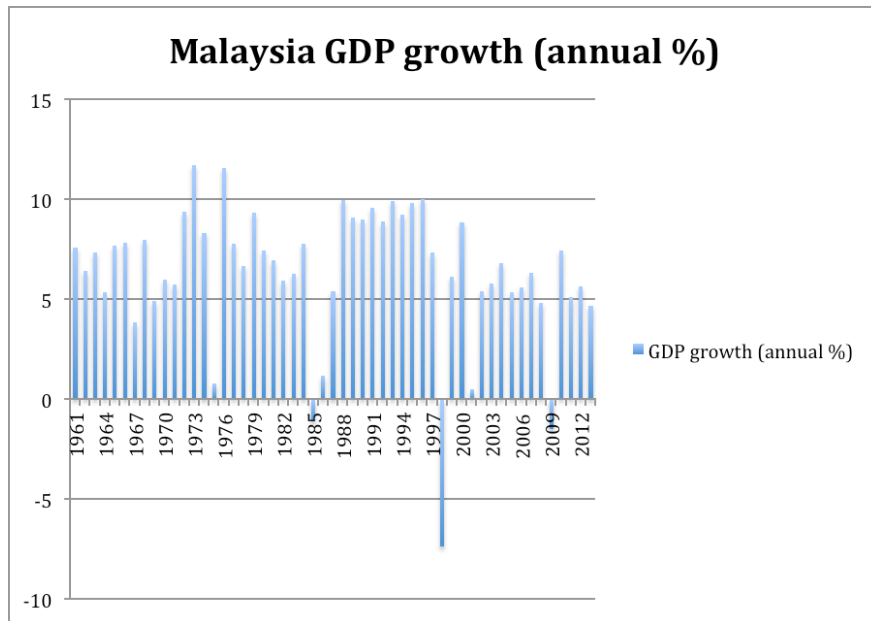


Figure 13. Malaysia GDP Growth (annual %)³

² Ibid.

³ Ibid.

In keeping with the income categories defined in Chapter II, Malaysia is considered an upper middle-income country. If Malaysia sustains its present a growth rate, it will take until year 2028 to break the middle-income trap.⁴ By contrast, in 1997 Malaysia would have been projected to reach high-income status by 2010 if it had maintained its average growth rate seen in the years leading up to the AFC.⁵ This data coincides with Figure 13 as it depicts a sideward growth trend from 2002 to present. While this data gives some insight to Malaysia's overall economic performance, the following will provide more insight and context to the data.

After gaining independence from the British, Malaysia has turned 180 degrees in transforming itself into a middle-income economy based on export-led growth. Malaysia has grown from exporting commodities such as tin, rubber, and oil, into being an exporter of modern day electronics.⁶ From a development perspective, Malaysia had three favorable conditions that enabled its rapid growth. First, its transition from the British brought with it an adequately functioning government. Second, it has not experienced any external or internal threat on a major scale (excluding the race riots of 1969). Third, Malaysia's economic policy settings have been relatively stable and void of U-turns many other Asian countries experienced during the 20th century.⁷ Despite these favorable conditions, independent Malaysia inherited entrenched patterns of inequality across ethnic groups and religions, which reflected the nature of extractive institutions at the time. Inequality grew through the 1960s, and ethnic Malaysians, known as Bumiputera (meaning "Son of the Soil") became disenfranchised, as the preponderance of the wealth concentrated in the ethnic Chinese segment of the population. In 1969, race riots ensued, which ultimately led the Bumiputera controlled Malaysian government to institute an

⁴ Future Value Based on 6,990 2013 GDP per Capita (Constant 2005US) and annual 5.4% growth rate and 15 periods.

⁵ Calculation based 1997 GDP per Capita (Constant 2005US) and annual 10.0% growth rate and 12 periods.

⁶ Kanitta Meesook and International Monetary Fund, *Malaysia: From Crisis to Recovery* (Washington, DC: International Monetary Fund, 2001), 1.

⁷ Hal Hill, Siew Yean Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges: Graduating from the Middle* (Milton Park, Abingdon, Oxon; New York, NY: Routledge, 2012), 2.

affirmative action initiative called the “New Economic Policy” (NEP) in 1970. In an effort to eradicate poverty and foster economic well being for the Bumiputera, the policy aimed at placing 30 percent of the nation’s resources in Bumiputera’s hands by 1990. Many conclude that this policy institutionalized discrimination, and promoted mediocrity under a culture of cronyism.⁸ Therefore, much of what happened in 1969 and the ensuing NEP, has shaped economic policies ever since.

During the 1970s, high growth came from strong commodity prices; particularly oil exports. The 1980s saw falling commodity prices, which necessitated major macroeconomic adjustments to bring the country’s rising debt and fiscal deficits under control. Then Prime Minister Mahathir, who was influenced by the Japanese and Korean industrial policy model, pushed for Malaysia to develop its own heavy industry. In an attempt to replicate this model, the government created a number of heavy industries, which were financed mostly from oil and other natural resource revenues. While this style of Gerchenskronean economics worked for Korea, none of the heavy industries, except cement, performed very well in Malaysia.⁹ Consequently, the government made the decision to privatize its enterprises, but more importantly, gave the majority of shares to the Bumiputera through financial instruments similar to mutual funds. Furthermore, government controlled banks lent individual Bumiputera investors large sums with the goal of creating a Bumiputera business class. These loans were issued without sound due diligence, contributing to market distortions in the economy. Perkins states, “The failures of some of these highly leveraged businesses outside the heavy industry sphere contributed to Malaysia becoming one of the victims of the 1997–98 financial crisis.”¹⁰

The AFC crushed Malaysia with a 15 percent drop in growth from peak to trough. Nevertheless, Malaysia quickly rebounded with swift government action the following two years, and emerged as the only crisis-affected economy not to enter the IMF recovery

⁸ Martin Brennan, “Class, Politics and Race in Modern Malaysia,” *Journal of Contemporary Asia* 12, no. 2 (1982): 194, doi:10.1080/00472338285390151.

⁹ Perkins, *East Asian Development*, 113.

¹⁰ Ibid.

program.¹¹ The 2000s resumed with moderate growth results, but were again set back by the GFC in 2008. Despite Malaysia's modest growth rate over the last 15 years, it still must wrestle with a number of domestic issues that pull on its economic foundation.

While I have only touched upon certain aspects of Malaysia's economic history to bring context to my argument, it is important to note there are many economic and political factors that have also helped shape Malaysia's development. The key point from this section, however, is that Malaysian's citizens did not begin on equal footing. Unlike Korea, there were no land reforms, which brought a degree of equality across the board. After Malaysia's independence, much wealth remained concentrated and intact, which reflected the extractive institutions of the British. Many of Malaysia's challenges today can be attributed to the early ethnic divide and extractive institutions from its colonial era.¹² Moreover, the race riots in 1969 and the NEP mark a watershed moment in Malaysia's history that has profoundly shaped Malaysia's economic and social structure.

The following sections will continue to examine these common themes as they pertain to Malaysia's growth and its entrapment in a middle-income economy.

B. ESCAPING THE MIDDLE-INCOME TRAP

Malaysia's failure to reach high-income status is no surprise to many observers. Despite fifty years of economic growth, Malaysia is bound by a number of structural issues that have severely hampered its ability to graduate to the next level of development. While the Malaysian government has effectively instituted necessary economic patches after each financial crisis, it has failed to take the necessary measures needed to establish a knowledge-based economy with a leveled playing field. Using the economic factors framed in Chapter II, this section will examine how each factor plays a part in Malaysia's entanglement in the middle-income trap.

¹¹ Hill, Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges*, 6.

¹² Acemoglu, "Root Causes," 40.

1. Institutions

Malaysia inherited vast patterns of inequality across its various ethnic groups and regions. Much of this can be traced back to the extractive institutions set in place by the British Empire. Under colonial rule, the institutional systems clearly established an environment that limited many aspects of social mobility. Despite Malaysia's independence in 1957, many of these institutions continued, creating even more inequality. Although UMNO has been in power for more than 50 years, there still remains significant inequality despite the party's pledge to control it.

The NEP, an affirmative action policy that favors the indigenous Bumiputera, first took hold in 1970 after the violent race riots of 1969. The government took over several major foreign owned companies, in the plantation and mining sectors, through stock purchases with the intention of transferring the assets to the Bumiputera. The redistributive policies quashed additional social unrest, but came under criticism for their unintended consequences—mostly corruption and cronyism.¹³

Compared to many middle-income countries, Malaysia has an effective rule of law, but much improvement is still needed. First, its judiciary lacks independence from political processes. Second, property rights remain weak for ethnic minorities and foreign immigrants. Third, police engage in unequal violence and have sweeping discretionary powers. Any effort to reform these institutions comes with great difficulty, as the status quo elite has sufficient power and influence to impede reforms that may not align with their interests. The power apparatus that the UMNO has engineered, particularly the election system through gerrymandering, all but ensures reform will come slowly.

The following sections will analyze the rule of law in Malaysia as it pertains to corruption and property rights, which are playing a large factor in keeping Malaysia in the middle-income trap.

¹³ Organization for Economic Co-operation and Development, *OECD Investment Policy Reviews: Malaysia 2013*, 2013, 3, <http://dx.doi.org/10.1787/9789264194588-en>.

a. Corruption

A large percentage of corruption can be traced back to Malaysia's NEP of 1970. Despite the good intentions set forth from the NEP, ethnic quotas put many rent seeking individuals in power such that bank loans, licenses, contracts, and employment become opportunities to extract rents throughout society. The long-term side effects have created a perpetual infant industry phenomenon. Furthermore, frequent rulings by the Malaysian courts on the protection of property rights often contradict gold standard practices elsewhere¹⁴. The NEP provides a social justice validation for corrupt practices, eroding investor confidence.

Corruption is widespread among the Malaysian political and business elite. "Money politics," close ties, or cronyism are dominant in many of its prosperous companies. Many of these companies owe their success to the preferential treatment they received from the government. Moreover, often these business elites outright "own" many of the political figures and, as a result, they are seldom targeted in anti-corruptions cases.¹⁵ In a study published in the Malaysian Business 2012, many small and medium sized enterprises (SMEs) see it as very important to have "close" connections to government officials and support from political parties as a mechanism for winning government contracts.¹⁶ According to business executives surveyed in the Global Competitive Report of 2013–2014, "The level of unethical behavior of companies in Malaysia constitutes a competitive disadvantage of doing business, as do both the diversion of public funds to companies, individuals or groups due to corruption and the likelihood of government officials to favor well-connected companies and individual when deciding on policies and contracts."¹⁷

¹⁴ Woo, *Getting Malaysia Out of the Middle-Income Trap*, 2.

¹⁵ "Malaysian Business Environment," *Business Anti-Corruption Portal*, accessed October 25, 2014, <http://www.business-anti-corruption.com/country-profiles/east-asia-the-pacific/malaysia/show-all.aspx>.

¹⁶ *Business Environment Index 2012: Challenges and Opportunities for Accelerating Local Business in Malaysia*, Business Index (San Francisco, Ca: Asia Foundation, 2012), 51.

¹⁷ Klaus Schwab, *The Global Competitiveness Report 2013–2014* (Cologny/Geneva: World Economic Forum, 2013), 13.

Although corruption is highly ingrained in Malaysia, there have been concerted efforts to combat it. The government, along with business organizations has instituted corporate codes of conduct in anti-corruption programs. For example, in 2011, the corporate Integrity Pledge was introduced in an effort to implement and strengthen internal controls designed to mitigate corruption.¹⁸ Figure 14 shows Malaysia's control of corruption between 1996 and 2013 as an aggregate of studies conducted by 22 independent organizations. The line graph shows Malaysia's percentile rank compared with the world. Since 1996, Malaysia has weakened its controls over corruption by roughly 3 percentiles to 68.4% in 2013. This means that Malaysia ranks ahead of 68 percent of countries globally on controlling corruption, and correlates with TI's ranking. TI ranks Malaysia's level of corruption at 69% (higher percentage indicates less corruption), and ranks Malaysia 44 of 177 countries in its CPI.¹⁹ Furthermore, TI ranks Malaysia's level of corruption between mostly unfree and repressed. Since 1995, Malaysia's perceived level of corruption has become worse, despite government programs to combat it. TI states, "Most notably, freedom from corruption has declined by over 25 points over the last 20 years, undermining the rule of law."²⁰

¹⁸ "Malaysian Business Environment."

¹⁹ Details about CPI can be found in the Korean chapter.

²⁰ "Index of Economic Freedom Data, Maps and Book Chapters," accessed October 10, 2014, <http://www.heritage.org/index/download>.

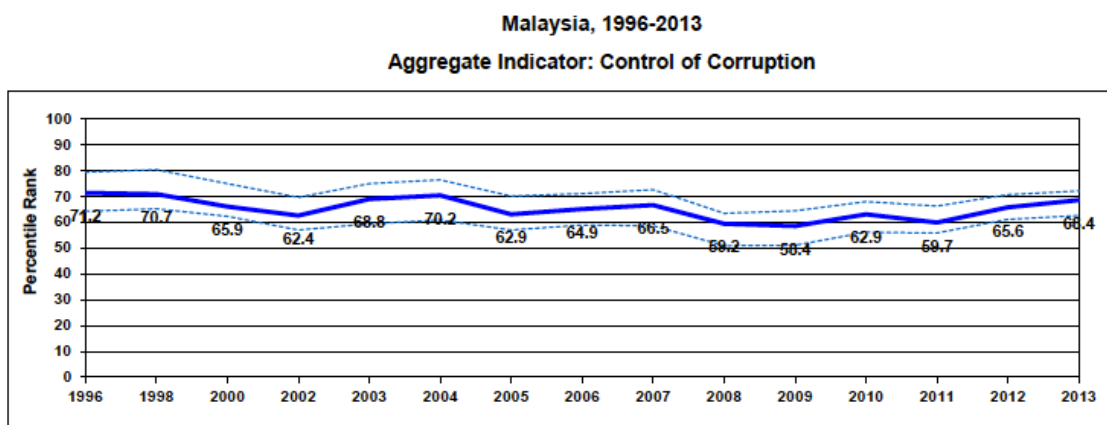


Figure 14. Perception of Malaysia's Control of Corruption²¹

The conclusions from TI and CPI have significant implications for rule of law in Malaysia, as well as its overall economy. The degree of rents being syphoned off the economy is hard to measure but, combined with negative sentiment from foreign firms, could have a material impact on attracting quality FDI. Even more troubling is the continued “pay to play” relationship with a government that seemingly has a lock on power. Because the exact measure of corruption is unknown, it is hard to determine the extent corruption has played in Malaysia's growth. Certainly, the more corruption, the larger market distortions become. This relationship increases the risk of large economic corrections anytime there is a systemic event. Therefore, the day of becoming a high-income economy is delayed with each correction, and thus contributes to entanglement in the middle-income trap.

b. Property Rights

Inherited from the British, Malaysia's legal system has effectively provided a sound framework for codifying law. The OECD praises Malaysia for its strong protection of land ownership and intellectual property, and dispute settlement mechanisms accessible to all investors.²² The government has acknowledged the importance of an

²¹ *Worldwide Governance Indicators*.

²² Organization for Economic Co-operation and Development, *OECD Investment Policy Reviews*, 77.

effective land registration system and has made significant improvements on the ease of registering property through an electronic stamping method. Many have praised Malaysia for dramatically cutting the time required to register property transfers, thus enabling buyers to use or mortgage their property earlier.

Over the last 15 years, the Malaysian government has also made a concerted effort to strengthen and protect intellectual property rights (IPR). Realizing IPRs are crucial for fostering domestic innovation, the government has instituted a number of programs to support and codify the legal framework needed to protect IPR. For example, IP is recognized (under the Economic Transformation Program) as a major pillar for transforming to a high-income economy. Furthermore, Malaysia is a signatory, or complies with, many treaties and conventions that relate to IPR.²³

On the other hand, Malaysia's property laws have strong limitations for foreigners. The law contains specific provisions on land ownership by foreigners, who must obtain special government approval for any purchase of residential, agricultural, or commercial lands.²⁴ In spite of these restrictions, the government is more accommodating towards industrial property rights. Moreover, the government has instituted long-term leases up to 90 years to attract FDI in specific industries. For this, the 2014 Economic Freedom Index ranks Malaysia as mostly un-free in their comparative index (see Figure 15).²⁵

²³ Ibid., 80.

²⁴ Ibid., 79.

²⁵ "Economic Freedom: Global and Regional Patterns | 2014 Index of Economic Freedom | 2014 Index of Economic Freedom Book," accessed October 10, 2014, <http://www.heritage.org/index/book/chapter-1>.

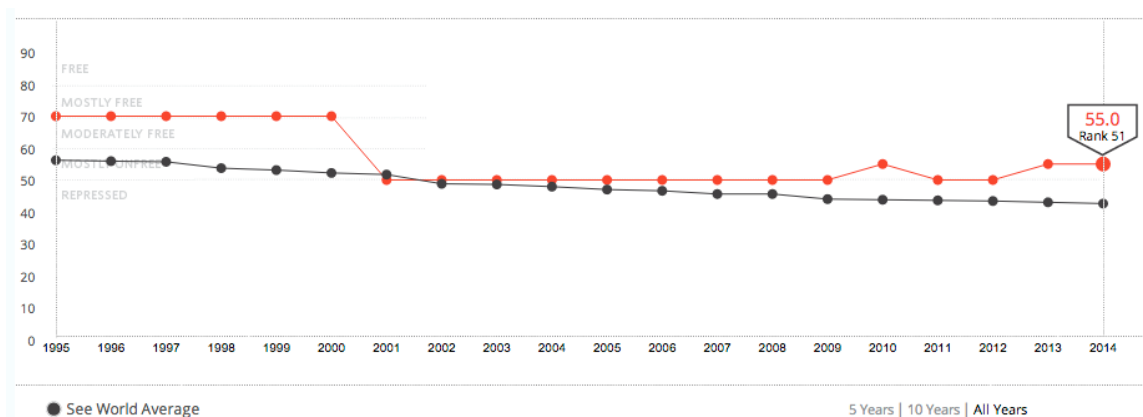


Figure 15. Perception of Property Rights in Malaysia 1995–2014²⁶

Property rights are one of the stronger pillars in enabling Malaysia’s growth. Despite Malaysia’s other challenges within the institution rule of law, property rights have enabled Malaysia to attract foreign investment, allowing for technology transfer over the years. Competing on the global market requires businesses to take risks by investing in new ideas, and without the protection of capital, there is no incentive for investment. While Malaysia is not without problems, maintaining a relatively high degree of property rights has certainly contributed to Malaysia’s relative economic success. Malaysia must now focus on strengthening legal protection for the entire spectrum of property owners in order to maximize investment. If successful, property rights will play an important part in breaking through the middle-income trap.

2. Education

Malaysia’s educational system can be traced back to the arrival of the British in 1786. In order to meet the colonial bureaucracy needs, English was the medium of instruction for urban non-Malays and Malay elite. Malay schools catered to the local population, and Chinese and Tamil schools were established to support their respective populations. This educational structure remained in place until the institution of the 1957 Education Ordinance. Under the Education Ordinance, all vernacular schools were

²⁶ “Malaysia Economy: Population, GDP, Inflation, Business, Trade, FDI, Corruption,” accessed October 10, 2014, <http://www.heritage.org/index/country/malaysia>.

brought into the national system of Bahasa Malay, Mandarin, Tamil, and English. Furthermore, the government made English a compulsory subject for all primary schools.²⁷ Although the educational system standardized schools according to vernacular, it created a structured ethnic divide. There are now two types of public education: national schools that use Bahasa Malaysia as the medium of instruction; and national-type, which use Mandarin and Tamil. Over 90 percent of Chinese students are enrolled in Chinese type schools and just under 50 percent of Indian students in Tamil schools.²⁸

After the race riots of 1969, the government restructured the way educational opportunities would be allocated as a means to restructure the society. Under the NEP, a system of racial quotas were assigned to force the number of Bumiputera into higher learning institutions, which has ultimately led to lower educational standards for the Bumiputera's due to lack of competition and entitlement. While the official number is lower, many believe 75 percent of seats were reserved for the Bumiputera, which severely limited access to non-Bumiputera.²⁹ This policy has created many unintended consequences that still holds true to today, and non-Bumiputera have responded by sending their children abroad or by enrolling them in private institutions. Many of who study abroad do not return.

While Malaysia ranks twenty overall on the 2014–2015 Global Competitiveness Index, it is quickly losing its competitive edge to other low wage countries in the region. Malaysia has decreased in rank from 40th in 2011 to 60th in 2014, in terms of technological readiness. Furthermore, in spite of Malaysia's New Development Plan, the quantity and quality of higher education has only increased in rank three points to 46 since 2011.³⁰ In a 2013 survey conducted by the World Bank, 45 percent of the respondents believe educational reform is the most essential priority in Malaysia.³¹

²⁷ Hill, Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges*, 221.

²⁸ Organization for Economic Co-operation and Development, *OECD Investment Policy Reviews*, 221.

²⁹ Hill, Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges*, 223.

³⁰ Schwab, *The Global Competitiveness Report 2013–2014*, 19.

³¹ *Malaysia - World Bank Country Survey 2013* (World Bank, 2013), 38.

These sobering trends in education run contrary to the government's ambition of Malaysia being a high-income country by year 2020. Strong human capital is essential in TFP growth, and Malaysia's sideways TFP growth rate is indicative of this downward trend in education. While Malaysia still maintains positive economic growth, it is still relying on labor and capital inputs as its source. As shown in Chapter II, economic growth can only go so far relying on labor and capital inputs. Malaysia's current trend in education is a prime indicator that it will be caught in the middle-income trap.

The Malaysian government is not blind to this fact, and in 2013 it invested 5.9 percent of GDP in education, which ranks 46 in the world for education expenditures.³² Additionally, gross enrollment ratios have steadily risen since 1970, with the greatest being at the tertiary level.³³ Despite the increasing number of schools and enrollment, the quality of education is slipping (see Figure 16). It is not just the number of years of education that can affect a nation's climb out of the middle, but the level of cognitive skills of students.

³² "The World Factbook."

³³ Hill, Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges*, 214.

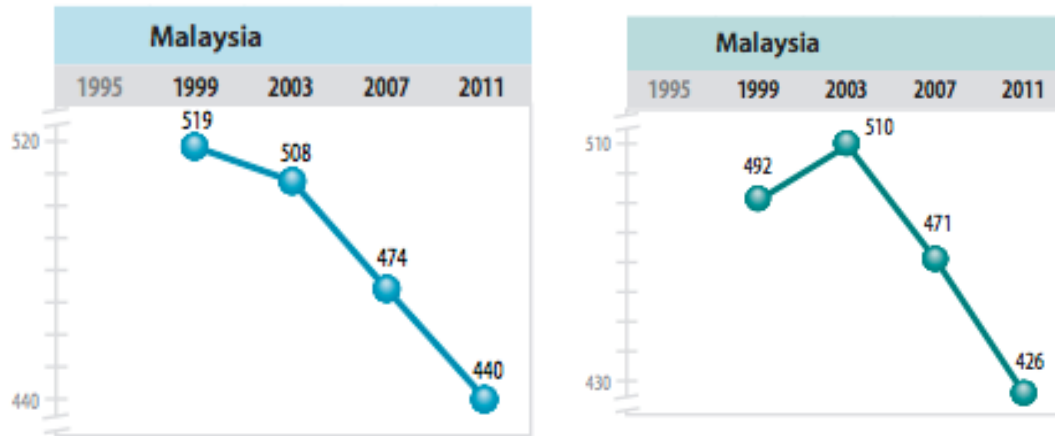


Figure 16. Trends in Math (left) and Science (right) from 1999–2011³⁴

While tertiary education is paramount to increased TFP, the government has a flawed strategy by placing too much emphasis on tertiary education, and must balance its approach. On one hand, reforming education from the foundation first is essential, as it is plagued with a number of structural issues. For instance, the transition rate in the secondary years is lacking. Promotion to the next grade is automatic in the primary years; however, the dropout rate begins to fall off a cliff starting in the secondary phase. Of the 481,200 students that entered primary school in 1993, only 75 percent entered secondary school at year 11 in 2004.³⁵ Moreover, Malaysia has a lower transition rate from primary to secondary school than countries such as China, the Philippines, Indonesia, and Vietnam.³⁶ On the other hand, while the country struggles with its secondary schools, most government investment is focused on the tertiary level. While tertiary education is important, a strong foundation at the primary and secondary level is essential for a sound for a post secondary education.

³⁴ Ina V. S. Mullis, *TIMSS 2011 International Results in Mathematics* (Chestnut Hill, MA: TIMSS & PIRLS International Study Center, 2012), 64; Ina V. S. Mullis, *Timss 2011 International Results in Science* (Chestnut Hill, MA: TIMSS & PIRLS International Study Center, 2012), 62.

³⁵ Jee-Peng Tan, *Education in Asia: A Comparative Study of Cost and Financing*, World Bank Regional and Sectoral Studies (Washington, D.C: The World Bank, 1992), 122.

³⁶ Hill, Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges*, 216.

To make matters worse, post-secondary and tertiary graduates are not being prepared properly. Hanapi and Nordin found that business leaders believe Malaysian graduates are weak in problem solving, creativity, critical thinking, and interaction skills.³⁷ Ramlee et al. found that graduates of tertiary institutions in Malaysia have minimal preparation in facing the increased globalized economy, as they are unable to compete and give full value to a position that can be easily filled by foreign workers.³⁸

With so much emphasis on education, one must ask why Malaysia is doing so poorly. The most obvious answer is that Malaysia's education system is based on ethnic lines. Without a common standard, many students reaching post-secondary education are not ready for that level of scholarship. Secondly, the method and curriculum is deficient in applying critical thinking skills among Malaysia's students, evidenced by test scores and employment rates. Finally, the leadership's myopic policies have only served to implement politically expedient national aims, but have left the children behind. Given all the challenges Malaysia faces regarding education, the prospects of growth based on increased TFP looks challenging at best. Human capital can only grow when education is built with a solid foundation that focuses on the individual child.

Human capital development is one of the most challenging elements in TFP growth because it takes years, if not generations, to develop. While Malaysia's investment in education is laudable, its unbalanced approach is futile without addressing many of its structural deficiencies in education. There is not an easy answer in balancing Malaysia's racial divide, but placing large quotas on secondary and tertiary education opportunities has many unintended consequences such as students not being a ready for the academic rigor, and the risk of permanent flight of human capital. While there are many other unintended consequences, these are just two major examples why Malaysia is at risk of being caught in the middle-income trap for years to come.

³⁷ Zaliza Hanapi and Mohd Safarin Nordin, "Unemployment among Malaysia Graduates: Graduates' Attributes, Lecturers' Competency and Quality of Education," *Procedia - Social and Behavioral Sciences*, International Conference on Education & Educational Psychology 2013 (ICEEPSY 2013), 112 (February 7, 2014): 1056–63, doi:10.1016/j.sbspro.2014.01.1269.

³⁸ Mustapha Ramlee, Karim Faridah, and Mohd Y. Ruhizan, "K-Economy and Globalization--Are Our Students Ready?," *Journal Personalia Pelajar* 11 (June 2008): 21.

3. Demographics

With a population just over 30 million³⁹, Malaysia is a heterogeneous nation made up of 61.8 percent ethnic Malay (Bumiputera), 22.5 percent Chinese, and 6.7 percent Indians (see Figure 17). After Malaysia's independence in 1957, most business were owned and operated by Chinese Malaysia's, who comprised one-third of the population at the time. Bumiputera Malays made up 60 percent, and were mostly farmers, soldiers, or civil servants; there were virtually no Bumiputera businessmen. Indians represented just fewer than 10 percent, and mainly worked as laborers on plantations and railroads. Thus, from these early days, ethnicity defined occupation, and much of Malaysia's ethnic divide can be traced back to this apparatus.⁴⁰

Two distinctly different demographic trajectories have developed for Malaysia's ethnic groups over the last four decades (Indians are in the middle, but conform more to the Chinese Pattern). Prior to the 1970s, the gap in the fertility rate between Bumiputera and Chinese was just over one child per woman. In the 1980s the gap widened to over two children per woman, which has created a large shift in the demographic profile between the two ethnicities over the last three decades.⁴¹ As of 2010, the ethnic Chinese fertility rate was 1.5, while the Bumiputera was 3.3, which indicates the ethnic divergence is geared for Bumiputera growth.⁴² Based on these trends, Figure 17 indicates Bumiputera will grow by 9 percent in 2040, and ethnic Chinese will contract by 19 percent.

³⁹ "The World Factbook."

⁴⁰ Perkins, *East Asian Development*, 110.

⁴¹ Hill, Tham, and Ragayah Haji Mat Zin, *Malaysia's Development Challenges*, 256.

⁴² *Ibid.*, 261.

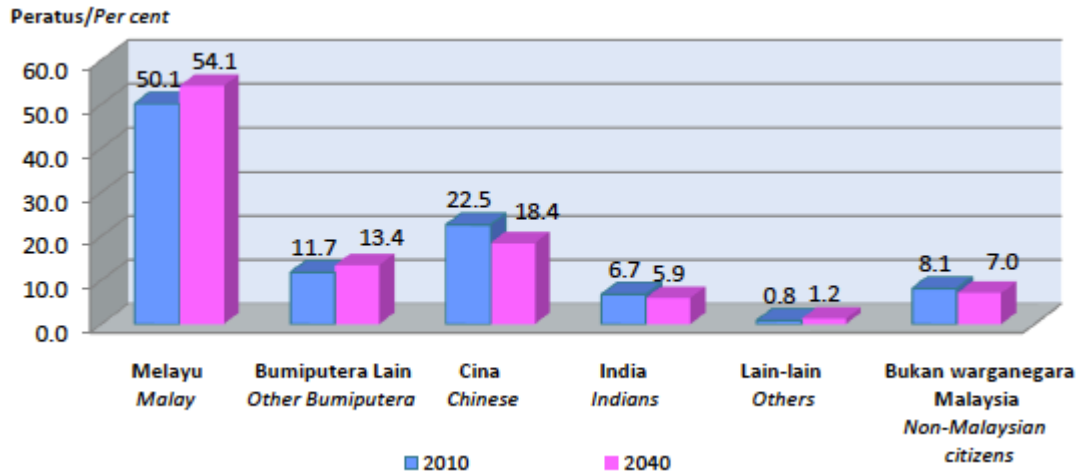


Figure 17. Percentage Distribution by Ethnic Group, Malaysia, 2010 and 2040⁴³

Overall, Malaysia's population has grown from 6.1 million in 1950 to 30 million in 2014. Malaysia's rapid boost in population over the years has resulted in a demographic shift. Malaysia's fertility rate has fallen from 6.0 in 1960 to 4.0 in 1980⁴⁴, and down to 2.58 in 2014.⁴⁵ This has contributed to a structural shift to an older population, as the share of population below age 14 has declined 10 percent from 1970 to 2010.⁴⁶ In terms of mortality, the death rate has declined from 9.5 percent in 1960 to 5 percent in 2014.⁴⁷ This has resulted in an increased life expectancy increasing from 10 years for men and woman to 71.6 and 78.8, respectively.⁴⁸

From the 1950s, Malaysia was poised for a rapid rise in population because of its high fertility rate. Industrial transformation that began in the 1980s and 1990s shifted

⁴³ *Population Projection, Malaysia 2010 - 2040* (Malaysia: Department of Statistics Malaysia, January 18, 2013), 6, http://statistics.gov.my/portal/index.php?option=com_content&view=article&id=1856%3Apopulation-projection-malaysia&catid=164%3Apopulation-projection-malaysia&Itemid=154&lang=en.

⁴⁴ Zariah Mahari, "Demographic Transition in Malaysia: The Changing Roles of Women" (presented at the 15th Conference of Commonwealth Statisticians, New Delhi, India, 2011), 3.

⁴⁵ "The World Factbook."

⁴⁶ Mahari, "Demographic Transition in Malaysia: The Changing Roles of Women," 3.

⁴⁷ "The World Factbook."

⁴⁸ Mahari, "Demographic Transition in Malaysia: The Changing Roles of Women," 3.

Malaysia to an export led growth society, thus creating demand for more labor. Furthermore, government policy in the early 1970s created compulsory education for all Malaysians, which provided more educational and employment opportunities for women. As a result, women began switching their roles from home to the workforce. These negative demographic shifts are more pronounced in the Chinese and Indian segments. Overall, however, Malaysia's demographic shift has resulted in a dividend over the years, which has helped advance it into the middle-income status.

Despite decreasing fertility rates, and the ensuing demographic dividend over the last two decades, Malaysia's aging population will challenge many of its institutions. By 2040, Malaysia's total dependency ratio will begin to rise sharply as the numbers of elderly dependents begin to extract from the economy in terms of retirement provisions (see Figure 18). The share of people 65 and older is expected to rise to 17.8 percent in 2050. This will challenge Malaysia's traditional models of retirement as retirees heavily depend on family support for survival, as little more than 25 percent of men and 10 percent of women receive pension incomes.⁴⁹ This added expense would act as a demographic penalty, which will exacerbate other future economic challenges. If not carefully managed in the near term, Malaysia could find itself in a domestic crisis fueled by its aging population.

⁴⁹ "Demographic Dividend Turns Burden | Project M," accessed November 1, 2014, <http://projectm-online.com/new-perspectives/markets/demographic-dividend-turns-burden>.

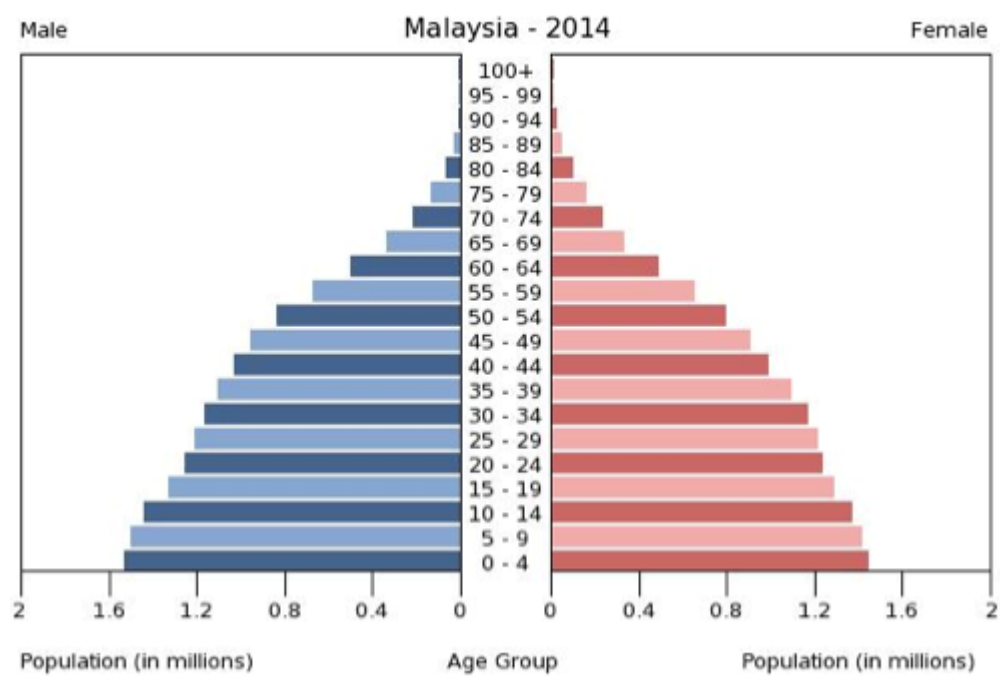


Figure 18. Malaysia Population per Age Group 2014⁵⁰

While Malaysia has enjoyed many benefits of the demographic dividend, which contributing to rapid development since independence, Malaysia will inevitably begin to experience a penalty in the coming decades. While this is not atypical of developing countries, however, the byproducts of ethnic division continue to plague the prospect for TFP growth needed to meet the added demands of an aging economy. Much of the ethnic division can be traced back to colonial times where ethnicity defined one’s role in society, and continue to the present. Unlike Korea, where there is a sense of national identity and collectiveness, Malaysia is fractured, and policies that were meant to bring the country together have actually brought out the opposite. The secondary consequences of ethnic based polices have created large market distortions over the years, and have cemented the ethnic divisions further. Malaysia’s demographics are changing as the Bumiputera segment is growing and the Chinese segment is falling. If Bumiputera grow

⁵⁰ “Malaysia Age Structure - Demographics,” accessed December 3, 2014, http://www.indexmundi.com/malaysia/age_structure.html.

in numbers, but continue to fall behind in terms of education and technical ability, Malaysia will find it even more difficult to break through the middle-income trap.

C. CURRENT POLICY IMPLICATIONS FOR MALAYSIA'S FUTURE

Malaysia represents one of the modern world's economic success stories, as it has moved from a resourced-based economy to a multinational and export-led economy. Despite this success, Malaysia remains caught in the middle-income trap. Although Malaysia has undertaken prudent macroeconomic management, including open markets, since its independence in 1957, its continued economic success is at risk due to poor TFP growth. According to the WTO, competition from efficient low wage countries in the region is increasing each year while Malaysia's TFP growth has slowed since 2008. According to Jarji:

Malaysia grew by putting more people to work (from 30.5 percent in 1970 to 39.8 percent of the population in 2000) and investing heavily by 'perspiration rather than inspiration'. Growth in TFP attributable to innovative technologies only accounts for a small fraction of GDP per labor growth. Malaysia's high growth may not be sustained on a long-term basis. Hence, a better option, as a long-term strategy for Malaysia, is to strive for a productivity-driven economic growth involving accumulation of labor and capital inputs and their qualitative improvement.⁵¹

While there are many factors that affect Malaysia's TFP growth, Malaysia's human capital development is a significant factor that has long-term implications. Furthermore, while Malaysia's NEP program may have given the Bumiputera a boost, the second order consequences of this program have created great opportunity costs.

In order for Malaysia to break out of the middle-income trap, it must make some tough decisions in terms of policy reform. With such a large and ethnically divided populace, there will certainly be winners and losers, which will directly affect the UMNO's political future. Malaysia cannot expect to advance in the 21st century with policies that are proven to inhibit growth and creativity. If the party does institute reform,

⁵¹ Idris Jajri, "Determinants of Total Factor Productivity Growth in Malaysia," *Journal of Economic Cooperation* 28, no. 3 (2007): 54.

which may not be politically popular to its constituents, Malaysia will remain caught in the middle-income trap.

D. CONCLUDING REMARKS ON MALAYSIA

Although Malaysia has experienced positive growth since 1970, it is caught in the middle-income trap because it is operating on two conflicting growth strategies. Many elements of the New Economic Policy of 1970 directly contradict knowledge-based growth.⁵² The most noticeable manifestation of the middle-income trap is Malaysia's secular decline in its high-tech export market, which it once dominated based on cheap labor and foreign technology. Malaysia has not been able to adjust to shifts in its comparative advantage due to one important barrier—ethnic-based affirmative action policies, which have stifled the evolutionary process middle-income countries must go through to become high-income countries.⁵³ Furthermore, Malaysia lacks sufficient human capital development, as illustrated by racial divide, a large pool of foreign labor, and a lack of collaboration between research institutions and its education system. Many scholars agree that Malaysia would have a much higher per capita income today if it focused more on human capital development.⁵⁴ Malaysia lacks high-quality universities, and many of its citizens that go abroad for higher learning never return.

Finally, this case has demonstrated how the factors of rule of law, education, and demography, can also impact a country's ability to escape the middle-income trap. While Malaysia has relatively strong property rights, its priorities in education are unbalanced, which ultimately erodes TFP growth. Demographics have certainly enabled “inspiration through perspiration” growth, but the country will begin to see a penalty and must rely on the other pillars of support to maintain its growth. When applying this case to China, these factors will help provide useful insight assessing China's future.

⁵² Woo, *Getting Malaysia Out of the Middle-Income Trap*, 1.

⁵³ Michael Manetta, “EconoMonitor,” accessed June 5, 2014, <http://www.economonitor.com/analysts/2011/01/12/rge-wednesday-note-malaysias-middle-income-malaise/>.

⁵⁴ Perkins, *East Asian Development*, 115.

V. CHINA CASE

A number of recent headlines suggest that China's economy is slowing faster than thought just a couple of years ago. For instance, The Wall Street Journal recently reported, "China's growth will slow sharply during the coming decade to 3.9% as its productivity nose dives and the country's leaders fail to push through tough measures to remake the economy."¹ Bloomberg reported, "China's economic growth will slow to about 4 percent annually after 2020 following decades of rapid expansion."² Beyond headlines, most economic literature suggests that China's investment-led GDP growth rate is not sustainable. A report on China by the IMF stated, "Now with investment to GDP already close to 50 percent, the current growth model may have run its course."³ An investment rate of almost fifty percent is staggering, but even more staggering is that a large percent of China's investment is not being utilized now or in the near future. We have all seen images of empty cities, airports, and train stations, and many argue these facilities will never be able to generate enough income to break even. Therefore, it seems only reasonable that China's true growth rate must be lower if these investments that make up so much of its GDP will never pay off. History has shown that investment-led growth can only go so far, and at some point, the economy must be rebalanced to a consumption-led economy. While this is just one example of how China's growth rate may not be as high as many people believe, it is important to highlight that China's growth is decelerating.

¹ Bob Davis, "China Growth Seen Slowing Sharply Over Decade," *Wall Street Journal*, October 20, 2014, sec. World, <http://online.wsj.com/articles/china-growth-seen-slowng-sharply-over-decade-1413778141>.

² Bonnie Cao, "China Growth May Slow Sharply From 2020: Conference Board," *Bloomberg*, October 20, 2014, <http://www.bloomberg.com/news/2014-10-20/china-growth-may-slow-sharply-from-2020-conference-board.html>.

³ Il Hounq Lee, Murtazaa Syed, and Liu Xueyan, *Is China Over-Investing and Does It Matter?* (Washington D.C.: International Monetary Fund, November 2012), 16, <https://www.imf.org/external/pubs/cat/longres.aspx?sk=40121.0>.

From an economic standpoint, this slowdown has a number of implications because China's GDP per capita was almost 3,600 (Constant 2005US), in 2013.⁴ This tells us that China growth trajectory is beginning to lessen, but also its growth is slowing toward the bottom limit of middle-income countries, which can be interpreted in two different ways. On one hand, China is slowing prematurely, and could fall into the middle-income trap. On the other hand, the slowdown could represent a moment of pause where China is "feeling for stones" as it crosses the river. Structurally, China's economy is unique based on a number of different factors, but most important is its population. China is the world's most populous country with over 1.3 billion people, and this dynamic makes it challenging to forecast the country's future based on traditional metrics alone. For this reason, this thesis has analyzed several factors that are common to all countries, and applied these factors to two Asian countries that had different economic outcomes vis-à-vis the middle-income trap.

While it is difficult to predict the exact level of GDP per capita that represents China's middle income-trap threshold, the intent of this thesis is to provide insight, at a macro level, into how China is positioned to escape the middle-income trap. Chapter II has defined the middle-income trap and many of its causal factors. Chapters III and IV have analyzed how three common factors have played a part in Korea and Malaysia's ability to escape the middle-income trap. In this chapter, I aim to assess China's likelihood of being caught in the middle-income trap, and will use the analysis from the previous chapters to support my argument. I will continue to use the works of Eichengreen (2008, 2012) and Perkins (2013), but also Naughton (2007), which focuses on China's transition and growth, and Lieberthal (2004), which focuses on China's governance. This chapter will first start with a short review of China's post 1949 economic history, followed by an analysis of three common factors. Finally, Chapter VI will conclude with a discussion tying all three factors together to assess China's ability to escape the middle-income trap.

⁴ World Bank, "China Data," *The World Bank*, 2014, <http://data.worldbank.org/country/china>.

A. ECONOMIC HISTORY

Over the last 35 years, since marketization reforms were introduced by Deng Xiaoping in 1978, China has grown fifteen-fold, and raised average incomes for over 1.3 billion people. As of 2013, The World Bank reports China's GDP per Capita (constant 2005 U.S.\$) has reached almost 3,600 (see Figure 19). Furthermore, Figure 20 shows China has averaged a staggering 9.9 percent annual growth rate over the same period. From 1979–1989, China averaged 10.2 percent growth, and then decline to average 3.9 percent in the years 1990 and 1991, as the Chinese Communist Party (CCP) reevaluated its political course after the Tiananmen Square Massacre. From 1992 to 2010, growth picked up again and averaged 10.58 percent.⁵ Since then, growth has steadily decreased to 7.3 percent as of the 3rd quarter of 2014.⁶

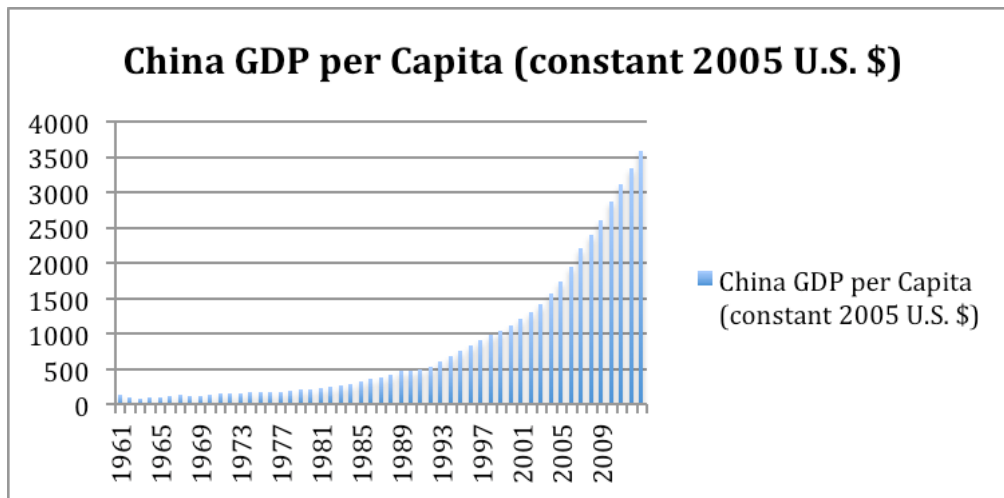


Figure 19. China GDP per Capita 1961 to 2013⁷

⁵ Ibid.

⁶ "China GDP Growth Rate Is Slowest in Five Years," *Wall Street Journal*, October 21, 2014, sec. Economy, <http://online.wsj.com/articles/china-third-quarter-gdp-slows-to-7-3-growth-1413857081>.

⁷ World Bank, "China Data."

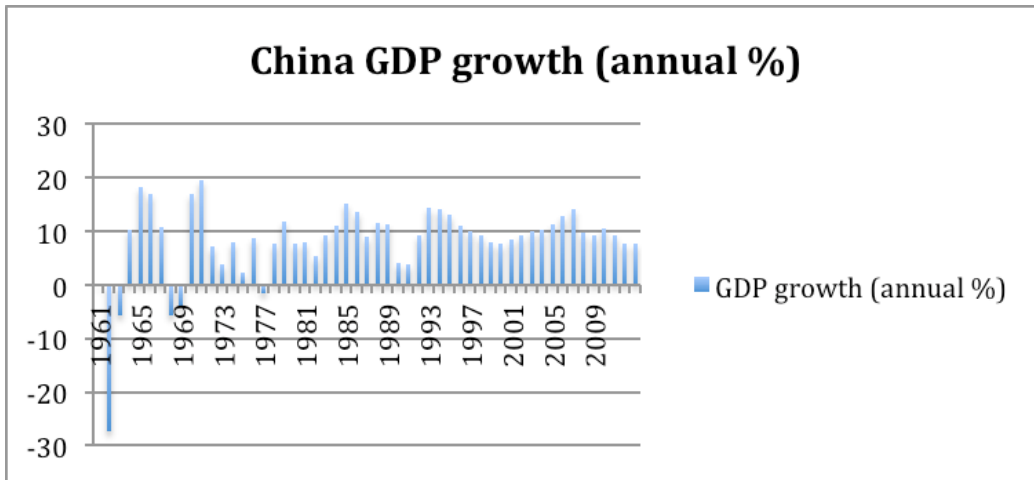


Figure 20. China GDP Growth from 1961 to 2013⁸

These numbers are even more impressive when one considers China’s history between 1949 and 1978. In 1949, the CCP won control of China after a long and bloody civil war, and placed a heavy blanket of Marxist ideology over the nation. The CCP, led by Mao Zedong, believed Marxism would be the fastest way of creating a strong and thriving China, given that it just emerged from what Mao phrased, “Century of Humiliation.” Modeled after the Soviets, the CCP sought to empower the working proletariat and take down the oppressive bourgeoisie. During the 1950s, land reforms converted all private farms into collectivized and distributed communes. The central government imposed impossible production demands upon the farmers, which later resulted in starvation of millions as a result of the disastrous Great Leap Forward policies 1958–61. Speaking against these policies, even in the face of their clear failure, was tantamount to suicide. To support rapid industrialization, the central government instituted massive investments in capital during the 1960s and 1970s, which resulted in centrally controlled state owned enterprises (SOEs).⁹ The goal was to make the Chinese economy self-sufficient, so private enterprise and foreign firms were prohibited. Foreign trade remained constrained to goods that could not be made in China; most of these

⁸ Ibid.

⁹ Kenneth Lieberthal, *Governing China: From Revolution Through Reform*, vol. 2nd, Book, Whole (New York: W. W. Norton & Company, Inc., 2004), 85.

goods came from the Soviet Union.¹⁰ Thus, China had to essentially reinvent the wheel since it could not take part in the global market. Consequently, the economy experienced volatile growth through much of these years.

The 1970s left many Chinese disillusioned from the fallout of the Great Leap Forward and Cultural Revolution, which posed a threat to the CCP.¹¹ Deng Xiaoping believed the CCP could only be strengthened by delivering material rewards to a country that was drastically trailing behind many of its Northeast Asia neighbors. Shortly after Mao's Zedong death in 1976, Deng Xiaoping reemerged in the political scene, and began to push his idea for the future, which involved the "four modernizations"—the modernization of agriculture, industry, science and technology, and national defense.¹² In 1978, the Chinese government made a break from Soviet-style Marxist policies, and began to adopt a policy that pushed towards gradual economic reform that was more in line with market principles—albeit still retaining tight control over the economy. Deng Xiaoping likened China's economic pursuit to a person crossing the river feeling for the stones—thus from the onset of this change in policy, there was no clear economic model to follow.¹³ Since the economic reforms instituted by Deng Xiaoping, China has shed much of its Marxist ideology and has moved incrementally towards a market economy.

The central government's first bold steps involved initiating price and ownership incentives for farmers that enabled them to sell a portion of their crops on the open market; however, the state still maintained overall title to the land. This move alone greatly improved the lives of many farmers, and became the catalyst for moving towards a market economy. In addition, the government realized it needed to open its economy to attract superior technologies from abroad, but needed the money to pay for them; it therefore established four special economic zones along the coast to import foreign high

¹⁰ Perkins, *East Asian Development*, 145.

¹¹ Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:293.

¹² *Ibid.*, 2nd:134.

¹³ Perkins, *East Asian Development*, 145.

technology products and distribute its exports. Similar to Korea, China did not have an abundance of natural resources, so its only alternative was to export manufactured goods.

China's reform did not come immediately, and many reform policies identified best and worst practices on a small scale, rather than a comprehensive approach. In keeping with this philosophy, the central government sought to decentralize policy-making in a number of sectors; particularly trade. The central government moved to shift economic control of various enterprises to the provincial and local levels, thus allowing these enterprises to be guided by market principles rather than by central direction. Furthermore, the government moved to encourage entrepreneurship outside of its state owned enterprises (SOEs), and also designated more cities as special economic zones (SEZs). These SEZs, offering lower tax rates and less bureaucratic procedures as a way to attract FDI, became the manner in which the government experimented with free market reforms and incentives for foreign investment.¹⁴ The government also instituted trade liberalization policies that removed trade barriers, which spawned FDI and greater competition.

As the years passed, gradual economic reform has steadily improved the economy. China simultaneously represents both the first and third worlds, as it is both urban and rural. It is a mix of industrialized and agrarian society, as the eastern seaboard contains many modern metropolises, and the west remains vastly rural. China has evolved from its former past and is now caught in a paradox between political communism and a western market economic structure.

While I have only touched upon the general theme of China's economic history, it is important to note there are many dynamics in China's modern history that have resulted in its growth to date. A comprehensive examination of this data would be well outside the scope of this thesis, and should not be discounted, but referenced for better understanding. The key point from this section, however, is the significance of governmental control of the economy to present. Moreover, the government never set out

¹⁴ Barry Naughton, *The Chinese Economy: Transitions and Growth* (Cambridge, Mass: MIT Press, 2007), 406.

with a clear model, but relied on incremental reform measures. While this may have worked well in the past, China has now grown to the point where a misstep when “feeling for stones” has the potential to threaten the future of the CCP and create waves on the global market. Despite China’s policies to navigate its way forward, it must also contend with a series of structural issues that have been shown to greatly influence a country’s ability for growth prospects, and consequently, the ability to break through the middle-income trap. The following sections will focus more deeply on how rule of law, demography, and education compare to Korea and Malaysia.

B. COMPARING THE FACTORS

China’s climb from poverty to the second largest economy in the world in just over forty years is astonishing by any measure. There is no doubt that the CCP’s slow and decisive reform measures worked to mobilize the country to where it stands today, but when focusing on the common factors analyzed in this thesis, China’s roots of success may not be as strong as many believe. Will the factors that enabled Korea’s graduation to high-income status do the same for China? Or do these factors show an inherent weakness that will yield results more like those seen in Malaysia? Using the economic factors framed in Chapter II, this section will examine how each factor could play a role in China’s ability to escape the middle-income trap.

1. Rule of Law

China has a deep and rich history dating back thousands of years. Beginning with the Qin dynasty in 221 B.C., China once epitomized political achievement, as it was the most advanced governing body in the world.¹⁵ Although the imperial Chinese system changed many times over the course of two thousand years, its fundamental features have remained relatively constant and are able to provide great insight into contemporary times. One such feature that resonates today is the rule of law. First, the imperial system ruled a vast country with only a modest number of government officials. At the height of

¹⁵ Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:5.

the last dynasty, the Qing dynasty, China employed only forty thousand officials, which governed over 425 million people—a ratio of about one official for every 10,500 citizens. How was it possible to govern a society that large with a state so small? The answer is the collaboration of the “gentry”—roughly 1–1.5 million people. The scholar-official gentry played a dual role in imperial governance: agents of imperial governance, both in the capital and also in their home districts; and buffers against imperial power, both as court bureaucrats, and as the social elite in local society.¹⁶ Second, the ideology of Confucianism galvanized law and order. Based on the philosopher Confucius who lived from 551–479 B.C., Confucianism primarily aimed at preserving order. Specifically, it emphasized hierarchy of ruler over ruled, elite over commoner, elder over younger, male over female.¹⁷ Many scholars agree that China’s bureaucratic apparatus and Confucian ideology allowed China to remain intact despite the many difficulties it’s faced over the last two centuries.

During Mao Zedong’s leadership from 1949 to his death in 1976, China in reality had no law, as Mao’s political decisions and policy lines defined the law.¹⁸ Chinese Citizens had no recourse against what seemed like ill-conceived decisions from above. Since Mao’s death, however, the CCP has taken incremental steps to shifting the direction of rule of law. It is important to highlight that rule of law in China has a different meaning from that in the U.S. The U.S. focus is on procedural justice: a system of values and assumption that coincide with democracy and capitalism. China, however, is influenced by its deep historical legacy that focuses on the government “providing” stability, prosperity, and security. The distinguishing difference is that China is an authoritarian government. The government decides what is best for the party and country, and the general populace must follow. Therefore, while China is moving in the direction

¹⁶ Alice Miller, “History and Cultures of Traditional East Asia” (presented at the NS3605, U.S. Naval Postgraduate School, 2009), 601.

¹⁷ Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:7.

¹⁸ *Ibid.*, 2nd:302.

of a western style legal framework, it is unlikely to ever have a legal system resembling that of the U.S. or Britain.¹⁹

In spite of China's ideological differences in rule of law, it has a very well structured legal system. Similar to many developed countries, China has an executive, legislative, and judicial branch of government. In China, there is no strict precedent for case law such as in the U.S., and each case stands as its own decision. In practice, however, lower courts will often attempt to follow the interpretations of the laws decided by the Supreme People's Courts.²⁰

The following section will look into the institution of rule of law more in more detail, and specifically look at corruption and property rights. Both of these subjects have been the source of headlines in China, and the government is well aware of the challenges these pose moving forward. Korea and Malaysia have shown us how each can play a role in moving the country forwards or retarding its progress.

a. Corruption

Both Korean and Malaysian cases have demonstrated that corruption is a real threat when government officials have the power to extract rents, and there is a lack of accountability for such actions. Due to the political apparatus and a large bureaucracy of China, corruption has been (and continues to be) a serious threat to its long-term economy. By the mid-1990s, decentralization granted more power over budgets, resources, and investment decision to local governments, which increased opportunities and incentives to engage in rent seeking activities, while simultaneously eroding the central government's ability to combat such activities.²¹ In essence, most early reform consisted of the offenders policing themselves. Corruption has become deeply rooted

¹⁹ Ibid.

²⁰ Nongji Zhang Carli Spina, "Research Guides. People's Republic of China Legal Research. Introduction to China's Legal System.," accessed November 26, 2014, <http://guides.library.harvard.edu/chineselegalresearch>.

²¹ C. Fred Bergsten, Peterson Institute for International Economics., and D.C.) Center for Strategic and International Studies (Washington, *China's Rise: Challenges and Opportunities* (Washington, D.C.; London: Institute for International Economics ; Eurospan [distributor], 2009), 98.

within the state and party, and many officials do not hesitate about to engage in corrupt behavior.²² In fact, they often pay large sums to obtain, or strategically jockey for, such positions hoping to be rewarded with the ability to extract rents on a large scale. It is common practice to pay bribes in order to get approvals or licenses in a timely manner. This behavior in itself erodes law and order by becoming the norm, which makes it even more difficult to reform because there is no incentive to change.

Beyond “grease money” corruption, which has both positive and negative impacts on the economy, advanced corruption does have a more material effect. Lieberthal has found, “Officials siphon budgetary funds to invest in speculative projects and hope to pocket the resulting gains. Too often, of course, such projects fail, and as a result agencies lack the money allocated to them for their work.”²³ This behavior has systemic consequences as the lure of personal wealth causes officials to ignore policies and laws, but even more damaging to the economy is that they often misrepresent information to higher levels of government. These actions can result in very material consequences as the central government relies on such information in directing the economy. Consequently, China’s economic reports have led to a great deal of cynicism among economists.

I would be remiss, however, to conclude that China has devolved to a complete predatory state where self-interested political elites are obstructing future reform and perpetuating the existing order. The Chinese government is well aware of the challenges it is facing. Since 1989, the CCP has launched a series of high-profile anti-corruption campaigns. In 2005, it launched a campaign to address the “Moral Degeneration” of its members. In 2007, China established a National Bureau of Corruption Prevention (NBCP), which is designed to circumvent local governments and report directly to the state council. In 2008, the CCP announced another campaign labeled, “Be the Party’s

²² Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:203.

²³ Ibid.

loyal guards and the masses' close friends."²⁴ At the most recent Third Plenum in 2013, combating corruption remained a top priority.²⁵ The OECD recommends that China must focus on its "ethics infrastructure" by strengthening its accountability mechanisms, as one of the major ways to win the war on corruption.²⁶ The CCP is now in the middle of a conundrum, and one of the CCP's veteran leaders summed up the dilemma by saying, "Fight corruption too little and destroy the country; fight it too much and destroy the party."²⁷

While it is no secret China has a problem with corruption, it is often difficult to accurately measure the true extent. For consistency, I will use the same corruption indicators used with Korea and Malaysia. Figure 21 shows China's control of corruption between 1996 and 2013. The line graph shows China's percentile rank compared with the world. Since 1996, corruption in China has generally worsened, and only shows improvement in the last two years. Despite China's recent positive trend, it still ranks in the bottom half of the world in combating corruption. This measure gives more credit to China than Transparency International's ranking, which places China's control of corruption at 33% (a higher percentage indicates less corruption) and ranks China at 80 of 177 countries on its Corruption Perceptions Index.²⁸

²⁴ Bergsten, Peterson Institute for International Economics., and Center for Strategic and International Studies (Washington), *China's Rise*, 99.

²⁵ Nargiza Salidjanova and Iacob Koch-Weser, *Third Plenum Economic Reform Proposals: A Scorecard* (Washington, DC: U.S.-China Economic and Security Review Commission, 2013), 14, <http://www.uscc.gov/>.

²⁶ OECD. Publishing, *Governance in China* (Paris: OECD Publishing, 2013), <http://www.oecd.org/gov/governanceinchina.htm#Synthesis>.

²⁷ Bergsten, Peterson Institute for International Economics., and Center for Strategic and International Studies (Washington), *China's Rise*, 99.

²⁸ See Chapter III for detailed description of TI and CPI measures.

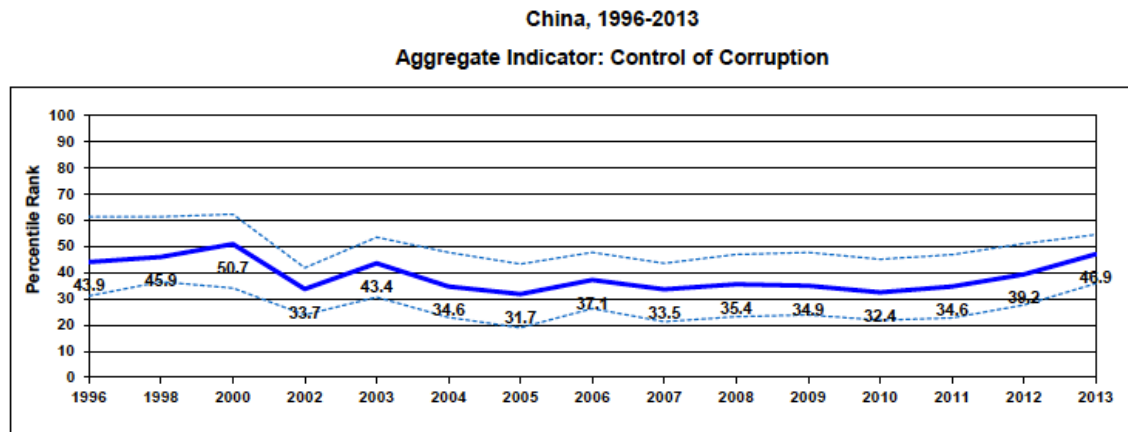


Figure 21. Perception of China’s Control of Corruption²⁹

Based on these studies, China ranks worse than Korea and Malaysia in controlling corruption. The World Bank’s World Governance Indicators 2013 ranked Malaysia 66.4 and Korea 70.3. Furthermore, TI ranked Malaysia at 61 percent and Korea at 69 percent.³⁰ These figures indicate that China has significant challenges in combating corruption in the future. The Heritage Foundation summarizes:

Many anti-corruption whistleblowers face physical violence or intimidation from those they expose and enjoy little protection from the police or the internal disciplinary investigators of the ruling Chinese Communist Party. Various forms of corruption severely affect banking, finance, government procurement, and construction. China’s weak judicial system is highly vulnerable to political influence and corruption. All land is state-owned.³¹

China’s level of corruption, and the apparent difficulty in preventing it, puts it at greater risk of being caught in the middle-income trap. Corruption-induced market distortions create enormous tension on the economy, and have been shown to result in large corrections during any major economic shocks, as seen in Malaysia in 1997–98. As

²⁹ *Worldwide Governance Indicators*, 7. Chart values are based on aggregate results from 22 separate organization’s studies. See Chapter 3 for more details.

³⁰ See Chapter III and IV for specific country ranking data.

³¹ “China Economy: Population, GDP, Facts, Trade, Business, Inflation, Corruption,” accessed October 10, 2014, <http://www.heritage.org/index/country/china>.

discussed in Chapter II, this relationship adversely affects long-term TFP growth and the ability to escape the middle-income trap.

The CCP central leadership faces tough decisions ahead: it could prove a slippery slope for the party if it cracks down too hard, as its legitimacy and ruling status over the long term could be jeopardized. As long as the party, specifically at the local level, is allowed to remain above the law and rule over itself, corruption will persist. On the other hand, if an independent judiciary agency reporting to the central leadership is instituted, corruption could be reduced. Regardless, there is certainly room for accountability and transparency, all of which could be accomplished with a greater role of the public and media.

b. Property Rights

Property rights are fuzzy in China. Since the inception of the CCP in 1949, the government officially owns all land, despite a series of reform measures that have taken place since 1978. Under Deng Xiaoping's leadership in the 1980s, the government began to encourage self-employment in cities and allow farmers to sell portions of their crops on the open market. Consequently, China's number of registered individual businesses rapidly increased from fewer than 1 million self-employed workers in 1980, to over 13 million by 1989.³² One major provision in the new policy disallowed businesses from hiring more than two workers and five apprentices—a stipulation that was not economically sustainable. In 1987, the Thirteenth Party Congress recognized this limitation adversely affected growth, and one year later the government amended the constitution, using the term “private economy” for the first time—thus initiating some level of state protection of property rights.³³ Later that year, the government removed employee caps on businesses, and also allowed entrepreneurs to register private firms as sole proprietorships, partnerships, limited liability companies, and joint-stock enterprise.

³² Regina M. Abrami, *Can China Lead?: Reaching the Limits of Power and Growth* (Boston, Massachusetts: Harvard Business Review Press, 2014), 38.

³³ *Ibid.*

As with many of the CCP's decisions, the second and third order of consequences began to appear as some of the private enterprises began to grow to significant size and ambition. The government soon began to discriminate against many of the enterprises that were deemed a threat, and, in turn, opened the door to corruption as local government officials became the gatekeeper to highly lucrative deals. To survive, private enterprises had to "pay to play" by cultivating social and economic ties with government officials. Private entrepreneurship therefore became a source of political legitimacy for the CCP, and as a result, ultimately one of the key areas of protest among the demonstrators at Tiananmen Square protests in 1989.³⁴

By the early 2000s, the government ultimately saw the benefit to property rights, and in 2004 amended the constitution to assert that "lawful private property rights" are inviolable. In 2007, China codified property law, which is grouped into three different categories: ownership rights, usufructuary rights, and security rights. Ownership rights allow the owner the right to possess, use, sell, and receive profits from real property. Usufructuary rights allow the owner of real property to rent property. Security rights allow lenders to hold real property as collateral for mortgages, pledges, and liens.³⁵ Despite these various forms of property rights, all land belongs to the government. A property owner obtains only the use of land, which is determined via a land grant contract. Land grants extend to 70 years for residential purposes, and 50 years for business and industrial purposes.³⁶

Despite the appearance of structured property rights, there still remains a significant amount of controversy surrounding them. Government officials determine many of the decisions regarding land and its uses, providing government officials the opportunity to extract rents out of every grant application—thus increasing the cost of investment. Furthermore, land seizures are a fairly regular occurrence as urban centers

³⁴ Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:143.

³⁵ "Chinese Law | China: Property Rights Law of the People's Republic of China," accessed November 29, 2014, <http://www.lehmanlaw.com/resource-centre/laws-and-regulations/general/property-rights-law-of-the-peoples-republic-of-china.html>.

³⁶ *Ibid.*

encroach into rural lands, registering as the number-one cause of rural protests, and demonstrating that land requisition and political trust appear inextricably linked.³⁷ . Figure 22 depicts the Heritage Foundations ranking on China vis-à-vis property rights. China ranks well below the world average at 20, and is labeled “significantly repressed.”

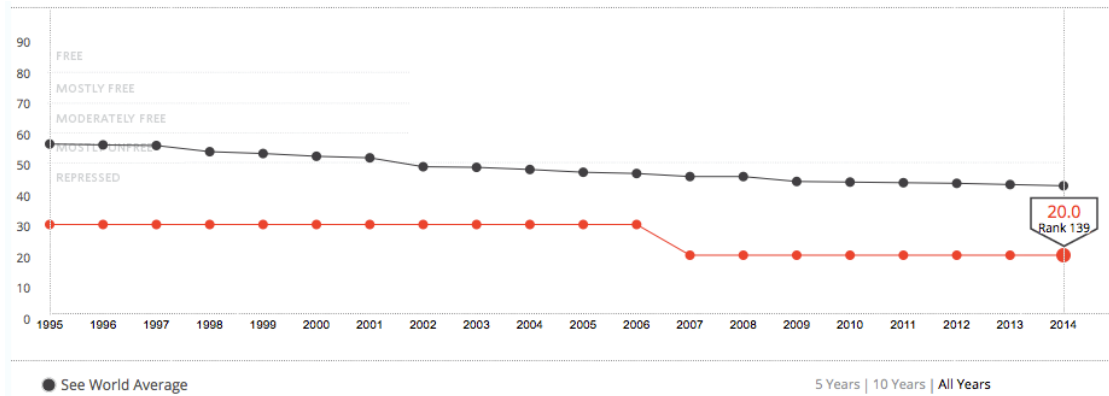


Figure 22. China Property Freedom³⁸

Along the same lines, intellectual property rights (IPR) also affect China’s potential for continued economic growth. The IPR issue became salient in the 1980s, with China becoming a member of the World Intellectual Property Organization, and a member of the Paris Convention for the Protection of Industrial Property.³⁹ The legal framework for IPC consists of Patent Law, Trademark Law, and Copyright Law.⁴⁰ Despite China’s apparent legal structure, enforcement of rule of law is controversial in China. For instance, Abrami summarizes PRC case 910–409:

Pfizer’s China team received disappointing news on July 5, 2004. China’s patent review board had just invalidated the company’s existing patent on one of its most successful drugs, Viagra. Making Matters worse, a Guangdong-based pharmaceutical company laid claim to Viagra’s street

³⁷ Thomas Bernstein, “Village Democracy and Its Limits,” *Asien* 99 (2006): 34.

³⁸ “China Economy.”

³⁹ Abrami, *Can China Lead?*, 151.

⁴⁰ “Chinese Law | China.”

name *Wei Ge* (Great Brother), arguing that the term was not a “well” known trademark in China.⁴¹

This case exemplifies many of the double standards within rule of law in China, and the ongoing burden corruption places on both foreign and domestic firms. With IPR, it is questionable as to whether trade politics or rule of law will prevail.

The overwhelming perception of irregularities of rule of law in both real property rights and IPR can resent lasting ramifications to the economy when relying on TFP growth as China approaches the technological frontier. In the meantime, it seems that the risk imposed by “fuzzy” property rights is offset by the lure of China’s enormous market share, and is considered an acceptable business expense. If an enterprise has the funds to “pay to play,” China’s current legal approach to rule of law strengthens the firm’s standing vis-à-vis competition, and further strengthens the personal wealth and status of the collaborating Chinese official. In a recent comprehensive joint study conducted by The World Bank and the PRC, government leaders recognized that corruption poses a major threat to China’s future economic wellbeing, and were committed to efforts to strengthen the rule of law.⁴² While there is some evidence that the government is taking action with the convictions of several high level officials, the overall perception of rule of law is very low.⁴³ The CCP must walk a fine line as it balances its own existence with the need to strengthen rule of law for economic advancement. Malaysia’s experience has shown us that despite government rhetoric, weak rule of law can have a lasting impact, which will significantly contribute to the middle-income trap.

2. Education

China shares much of the same educational historical legacies as Korea. During China’s dynastic past, the examination system was the primary mechanism for selecting

⁴¹ Abrami, *Can China Lead?*, 209.

⁴² *China 2030: Building a Modern, Harmonious, and Creative Society* (The World Bank, March 23, 2013), 102, <http://documents.worldbank.org/curated/en/2013/03/17494829/china-2030-building-modern-harmonious-creative-society>.

⁴³ “China Economy.”

government officials. One's status and position in life rested upon the results of a very strict and comprehensive examination system on Confucian traditions. Only a small percentage of men could become "gentry," therefore, to pass the multi-day examination took absolute perfection. Success meant great status and power for the individual and his family.⁴⁴ Confucian traditions defined more than just being a scholar, but also how to be powerful while also being moral. Over centuries, a strong focus on education took roots and became part of China's social identity.

Despite the strong focus on education in contemporary China, the disastrous Great Leap Forward and the Cultural Revolution destroyed much of China's knowledge base during the 1950s to mid-1970s. During the Cultural Revolution, Mao's "Little Red Book" replaced the great Confucian classics, and many scholars were silenced or killed. Maoists abolished examinations for university entry, substituting them with a system that admitted students based on recommendations by work unit leaders. This system rewarded those with political connections and disadvantaged backgrounds, as those from educated backgrounds were viewed as elitists and not worthy. These are just but a few actions that ultimately led to a substantial loss in the quality of human capital in China, and ultimately to the erosion of academic standards in the university system.⁴⁵ This was particularly worrisome to Deng Xiaoping, and led to reforms that began to again send the best students to the best schools—albeit with a strong government hand over all subjects.

Although the imperial examination system ended with the Qing dynasty in 1911, much of the emphasis and focus toward education remains alive, and is epitomized with the college entry examination, which is often called "China's Examination Hell." The examination tests students for political correctness, as well as other core competencies such as math, science, and composition.⁴⁶ The competition is immense, and those with the best scores will be admitted into China's most prestigious universities.

⁴⁴ Miller, "History and Cultures of Traditional East Asia," 645.

⁴⁵ Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:133.

⁴⁶ Abrami, *Can China Lead?*, 11.

In the years since China's reawakening in 1978, the number of students attending tertiary school has skyrocketed. According to the Ministry of Education's Tenth Five-Year Plan, tertiary education was scheduled to rise from 16 million in 2005 and 23 million in 2010, but has actually risen to 30 million as of 2013.⁴⁷ While this number is certainly impressive, there is an underlying weakness in the Chinese educational system—the significant lack of creativity and innovation. It is doubtful that creativity or innovation can be planned. Chinese leaders are well aware of this dilemma, and have made a turn to incorporate liberal arts and other programs modeled after some elite U.S. schools such as Harvard and Stanford.⁴⁸

The problem, however, is that despite this effort to promote programs that are found to foster creativity, the CCP continues to actively monitor and control the curriculum in the university system. The faculty in universities have little say as to how the university is administered, and must register new ideas through CCP party officials who oversee the university; many of whom are not adept in such concepts. Many credit U.S. universities with giving their faculty the freedom to pursue ideas wherever they may lead, which is a precondition for sustained innovation.⁴⁹ This has caused a lot of concern for many Chinese, and those wealthy enough to do so are sending their children abroad for a better education⁵⁰—a scenario represented best by Malaysia.

In the previous chapters, I compared math and science scores using data from the TIMSS: however, China did not participate in these studies. China did, however, participate in the OECD's Program for International Student Assessment (PISA), and in 2012 scored top of all countries at 613; OECD average was 494.⁵¹ Despite this impressive score, China is not listed as a country like Japan or Australia, but instead the

⁴⁷ Ibid., 97.

⁴⁸ Ibid., 102.

⁴⁹ Ibid., 103.

⁵⁰ "Mish's Global Economic Trend Analysis: Brain Drain and Capital Flight: 64% of Wealthy Chinese Plan to Leave China," accessed December 1, 2014, <http://globaleconomicanalysis.blogspot.com/2014/08/brain-drain-and-capital-flight-64-of.html>.

⁵¹ "Program for International Student Assessment (PISA) - Mathematics Literacy: Average Scores," accessed December 1, 2014, http://nces.ed.gov/surveys/pisa/pisa2012/pisa2012highlights_3a.asp.

city of Shanghai's scores are depicted as a representation of the entire country.⁵² According to Tom Loveless, "at the high school level, the total expenses for tutoring and weekend activities in Shanghai exceed what the average Chinese worker makes in a year."⁵³ While it is clear that an environment of excellence exists in Shanghai, but one must wonder how the rest of China scores given its significant deficit of wealth.

There is no question education is a crucial element in China's ability to break the middle-income trap. The Chinese government is very aware that TFP is driven by human capital development, and China must excel at raising its education base to compete on the world stage⁵⁴, but can the Chinese educational system set the standard in the 21st century? If one were to read popular headlines, the answer would be yes, but upon deeper investigation the answer is not so clear. Much of China's data is opaque, and the data that is deemed to be authentic is often questionable. China's problems do not reside in inherent deficiencies in the innovative or intellectual capability of its people, but rather the limits the political environment places upon the education system. While students that successfully meet the rigorous entrance exams are highly intelligent, much opportunity is lost when these students are also forced to sit through courses on CCP ideology and simplified versions of history that teach next to nothing about the tragedies of the current party.⁵⁵ The irony is that many elite within China, including CCP officials, are sending their children abroad for their educations, only to see them not return (as is the case in Malaysia).

In terms of education, China has traits of both the Korean and Malaysian systems. On one hand, Confucianism shaped much of China and Korea's identities in terms of the importance of education. On the other hand, China's education system is similar to Malaysia in that they are both bounded. In Malaysia's case, racial division and strong governmental intervention have led to a fractured education system. In China's case, its

⁵² Tom Loveless, "PISA's China Problem," *The Brookings Institution*, accessed December 1, 2014, <http://www.brookings.edu/research/papers/2013/10/09-pisa-china-problem-loveless>.

⁵³ Ibid.

⁵⁴ *China 2030*, 9.

⁵⁵ Abrami, *Can China Lead?*, 103.

educational system is stifled by the CCP, which prevents academic freedom. China is approaching the technological frontier, and TFP growth is essential. The cases on Korean and Malaysian cases have shown us the importance human capital plays with regards to the middle-income trap—if China continues on its current path, it may find itself in the middle-income trap with Malaysia.

3. Demography

China is the world's most populous country with over 1.35 billion people. Overall, China officially recognizes 56 ethnic groups, with Han Chinese representing the majority (91.6 percent) of the population.⁵⁶ Since 1949, China's population growth rate has more than tripled from its historic norm of 0.4 percent to an average of roughly 1.4 percent annually. In 1953, China's first census registered 594 million people, growing to its current figure.⁵⁷ Similar to Korea and Malaysia, China saw a surge in population as it began to modernize. Much of this was brought on by increases in health care, nutrition and sanitation, which ultimately decreased infant mortality and death rates. Beyond a decrease in fertility, death, and birth rates, which are typical of a developing country, China also has faced two policy-induced changes to its population that are atypical of a developing country.

Figure 23 depicts China's vital rates from 1953 to 2003. From 2003 to present, birth and death rates have remained fairly constant at 12.1 and 7.6, respectively.⁵⁸ The Great Leap Forward catastrophe is represented at its peak during 1959 through 1961, where the death rate greatly outpaced the birth rate, and is indicative of the biggest population disaster in modern times. The following four years reflect a rebound in birth rates and the subsequent decline in the death rate. The next significant event is depicted by China's "One Child Policy," which came into law in 1980 due to CCP leader's

⁵⁶ "The World Factbook."

⁵⁷ Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:161.

⁵⁸ World Bank, "China Data."

concerns continued population growth would obstruct economic development.⁵⁹ After much controversy and policy adjustment, the One Child Policy took hold, and is indicative of the sharp decrease in the birth rate since 1987. The One Child Policy restricted urban couples from having more than one child. Rural couples are only able to have two children if the first is a girl.⁶⁰



Figure 23. China Vital Rates 1961–2012⁶¹

As with Korea and Malaysia, China has greatly benefited from its demographic dividend. Moreover, China’s One Child Policy has created an even greater dividend as its birthrate has been manipulated beyond the natural progression seen in developing countries. Despite the benefits of the demographic dividend, which has greatly enhanced

⁵⁹ W Zhu, “The One Child Family Policy,” *Archives of Disease in Childhood* 88, no. 6 (June 2003): 463, doi:10.1136/adc.88.6.463.

⁶⁰ Salidjanova and Koch-Weser, *Third Plenum Economic Reform Proposals: A Scorecard*, 14.

⁶¹ *Ibid.*, 2nd:165.

much of the growth in China's labor intense exports, China's One Child Policy has also created unintended consequence.

Over the last 20 years, China has enjoyed the advantage of a young population along with low dependency rates; however, this benefit is coming to an end. Figure 24 depicts that over the next 35 years, China will start to see a sharp increase in its elderly population. This dynamic strains the economy on two major fronts. First, the One Child Policy will cause the elderly dependent ratio to rapidly increase from 2015–2020, thus putting an extra strain on Chinese households. Second, China's rapidly aging population will put enormous strain on a system that is already beginning to slow. Urban workers are entitled to some kind of pension, but in rural areas, workers do not enjoy such programs, and are entirely dependent on their children.⁶² This poses a significant problem because many of the rural children have migrated to the cities, leaving fewer working age family members to support their aging relatives. While this is not atypical of other countries facing an aging population, the difference is that most other countries are developed before they experience this dilemma. China will grow older before it has a chance to fully develop.⁶³

⁶² Lieberthal, *Governing China: From Revolution Through Reform*, 2nd:176.

⁶³ Ibid.

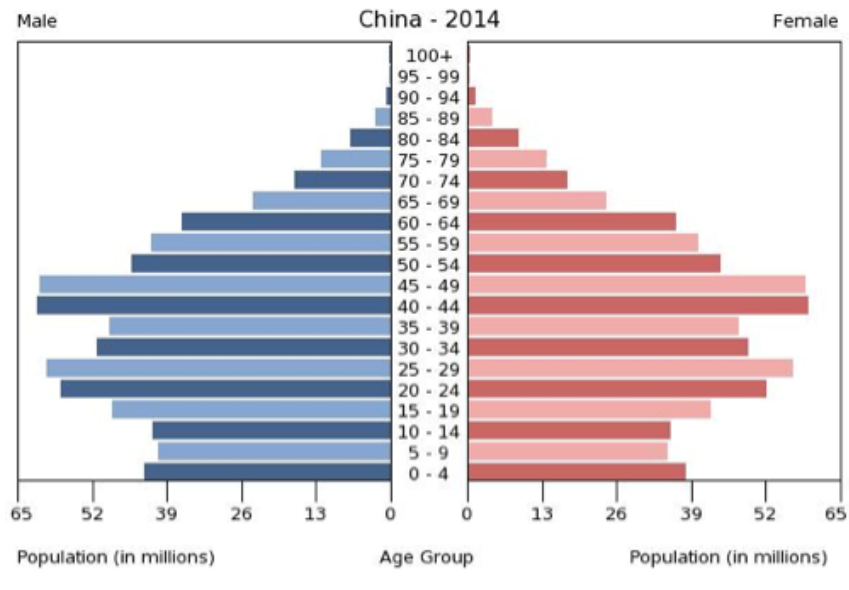


Figure 24. China's Population by Age 2014⁶⁴

The effects of China's aging population will soon begin to eclipse its need to make the transition from an Investment-led economy to a consumption-led economy. As the economy slows, China more than ever needs its population to start spending, but that prospect is far from certain as many must save for their retirement and care for their elderly parents. The CCP is not blind to this dilemma, reflected by reforms to the One Child Policy. At the most recent Third Plenum in 2013, CCP leaders agreed to allow urban parents to have two children if one of the parents is an only child (previous law required both parents to be only children).⁶⁵ While many are applauding this latest move, others are saying it is too little, too late. The Washington Post reports, "A majority of only-child parents are living in the cities, where the cost of raising a child is very high, and many young parents cannot afford to have a second child." Although this increase would most likely be modest, it could help improve the dependency ratio in another 20 years.

⁶⁴ "The World Factbook."

⁶⁵ Salidjanova and Koch-Weser, *Third Plenum Economic Reform Proposals: A Scorecard*, 11.

The data points China in the same direction as Korea in terms of an impending demographic penalty. The difference is that Korea has already developed and can absorb more of a penalty based on its ability to generate higher TFP. Given many challenges China faces, its aging population over the next 20 years will present a major stumbling block, as it must greatly increase its TFP to offset reduced savings and labor inputs. One can look at Japan and see how an aging population affects even the most developed of nations. Coupled with other factors, China has a real possibility of being caught in the middle-income trap.

VI. CHINA’S COMPARATIVE SCORECARD

Since 1978, China has tremendously grown from the previous 30 years of failed policies and mass famine, to a rising power that many think will become the world’s next superpower. Many Chinese entrepreneurs are now entering the ranks of the world’s richest people, and many foreign firms are competing to gain a chance to enter China’s markets. On the surface, China looks unstoppable, but, will China continue on its impressive growth trend, or is it destined to fall into the middle-income trap? Certainly, the U.S. government is taking notice with its “Pivot to the Pacific” strategy that began during President Obama’s second term. Is this prudent foreign policy, or is China’s threat premature? Has China begun to stall out, or is its economy temporarily slowing as it “feels for the next stone?”

To help provide insight into some of these concerns, this thesis has sought to analyze several fundamental factors that influence long-term growth. Korea and Malaysia were selected as comparative studies because they represent how these factors have influenced growth in the Asian context. Table 1 summarizes the findings:

Country	Corruption ¹ > = More control		Property Rights ² > = more rights		Education > = Higher Quality ³	Demographics > = larger impact to economic growth	
	1996	2013	1995	2014	Quality	Dividend	Penalty
Korea	64.9	70.3	90	70	8	9	7
Malaysia	71.2	66.4	70	55	4	6	4
China	43.9	46.9	30	20	5	10	>10

Table 1. Common Factor Scorecard between Korea, Malaysia, and China

¹ “Index of Economic Freedom Data, Maps and Book Chapters.”

² Data based on Heritage Foundation index of 22 independent surveys.

³ Education and Demographics are based upon author’s assessment.

The results found in each respective chapter are summarized in Table 1. In terms of corruption control, Korea scored the best, grouping it with developed countries that have good rule of law. Although Korea is not free from corruption, the evidence has shown that it did not materially affect Korea's climb to high-income status. In the case of Malaysia, corruption has worsened, and is indicative of its inability to escape the middle-income trap. China scores last among the three, but has a slight trend towards more control. While this may create some optimism, China's case analysis shows there are more structural issues that must be corrected before it can begin to approximate even Malaysia's control of corruption.

In terms of property rights, all three countries have slipped since 1995. In Korea's case, post-AFC reform created a one-time drop in property rights perception; however, property rights have reigned steady since, and have been shown to be a stalwart economic pillar. Malaysia's property rights have also dropped after the AFC, but still remain one its strongest supporting pillars of growth and possible escape from the middle-income trap. China again ranks worst in property rights despite drastic reform over the last ten years. China still owns all land, and many of its land grant policies have been controversial. While relatively lengthy land grants give some relief to incentivize large R&D investments, they are still finite, which ultimately diminishes incentive.

Korea scored on top again in terms of education, but this time Malaysia scored at the bottom. Perkins (2013) argues that Korea and China share many Northeast Asian educational principles derived from Confucianism and the imperial exam systems. Education is one of Korea's key pillars supporting its- high-income economy, and given the right opportunity, could be China's strongest foundation, too. Both countries emphasize education as a core competency, but China falls short due to the CCP's heavy-handed influence over much of the curriculum, which is an opportunity cost to the overall quality of its human capital. Malaysia's continued unbalanced educational approach to its fractured educational system is one of the main contributors to stagnant TFP growth, which has been a contributing factor to Malaysia being caught in the middle-income trap.

Finally, to varying degrees, all three countries have experienced the benefited from the demographic dividend. This is most profoundly seen in Korea and China, as the authoritarian governments have been able to direct their population into their desired industries. The dividend allowed all three countries to enjoy higher savings due to lower dependency ratios among their workers, which greatly contributed to rapid economic growth. In China's case, its "One Child Policy" has compounded the effect, resulting in its low fertility rate. Now, both Korea and China face a large demographic penalty as their dependency ratio will quickly climb over the next three decades. While Malaysia has benefited from the demographic dividend, its penalty will not be as severe because the Bumiputera segment of the population is increasing more rapidly, thus keeping the dependency ratio lower.

Based on the analysis of all three countries, I conclude China is in jeopardy of falling into the middle-income trap. In terms of rule of law, the CCP must continue to balance between two forces: losing the country or losing the party. While there is evidence the CCP is cracking down on corruption, there are many China watchers that suggest the current leadership is concentrating its power by weeding out political adversaries under the guise of corruption control. Regardless, as Chapter II points out, corruption on a grand scale has been shown to contribute to the middle-income trap. Secondly, China's education system is being severely repressed by the CCP's heavy-handed control of university curriculum. The Chinese have the aptitude to compete with Korea, but they are constrained by political ideology drag. Furthermore, the CCP cannot demand innovation, if it doesn't provide fertile ground for creativity. Lastly, China is about to confront a severe demographic penalty before it reaches high-income status (unlike Korea, Japan, and Taiwan, which all secured high-income status and high levels of TFP before the demographic penalty set in). China therefore has many tough decisions ahead, and as the economy grows, each decision will result in complex consequences.

On November 12, 2013, China released its Third Plenum Communiqué, outlining the path for China's economy over the next six years. Third plenums traditionally focus on economic issues, but this Communiqué stressed a comprehensive approach to reform

that encompasses the economy, politics, culture, society, and the environment.⁴ The CCP also released a 60-point reform blueprint entitled “Decision on Certain Major Issues Concerning the Comprehensive Deepening Reform (“Decision”). The Decision comprises of 60 objectives, and the highlights point to opening the financial sector, improving the lives of rural residents, and relaxing the one-child policy in certain circumstances.⁵ Although the Communiqué and Decision indicate the CCP’s desire to head in the right direction, many analysts inside and outside China were disappointed by the amount of Party jargon and vague wording included in the documents.

Despite the Communiqué and Decision’s moves in the right direction, many observers feel proposed reforms do not address many of the core structural issues. Although there are many more structural issues such as environmental and political challenges, this thesis has argued that poor governance in rule of law, education, and demography have the potential to put China into the middle-income trap. As I have said many times throughout this chapter, the CCP is aware of these problems, but the party’s survival is at odds with the survival of the nation.

⁴ Nargiza Salidjanova and Jacob Koch-Weser, *Third Plenum Economic Reform Proposals: A Scorecard* (Washington, DC: U.S.-China Economic and Security Review Commission,[2013]).

⁵ Ibid.

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