Chapter 7

Development and Implications of the Asian NIEs —A trap for high-income countries as well; a diverse verification is necessary

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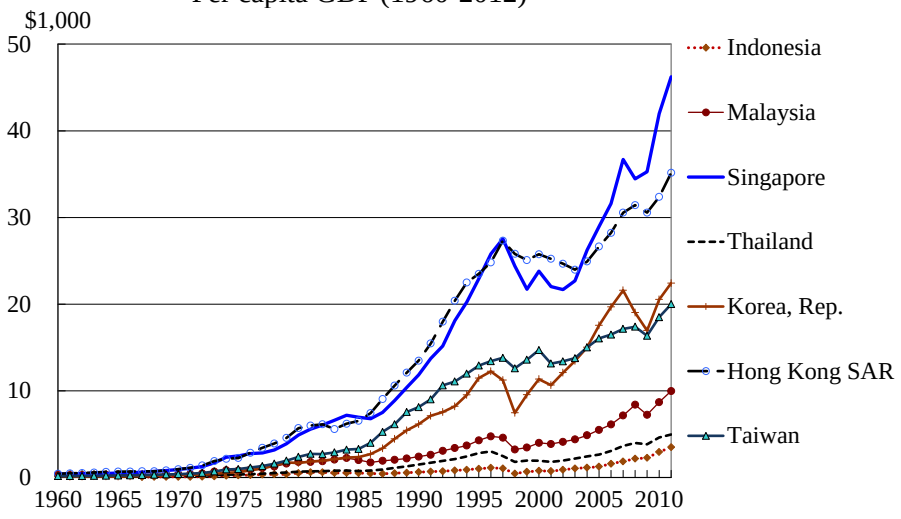
Key Points

- For ASEAN to achieve economic growth, the basic factors for economic growth (high savings rate, strong human capital, high trade freedom, superior institutions such as low corruption, and careful financial/monetary policy) are necessary. In particular, it is important to expand human capital through education and the like.
- There is the possibility that the middle-income trap is hidden in a number of developmental levels, and so avoiding only one trap does not constitute a final policy objective. On the contrary, it is more important to take heed of the likelihood of falling into a number of traps, and to develop policies that envision methods for dealing with them.
- Even if the transition is made from a middle-income country to a high-income country due to high growth in a short period of time like in the NIEs, there is the possibility that after the middle-income trap, there is another waiting trap of a sort faced by high-income countries. Even in the case that some time is needed for growth and the middle-income trap is experienced, it is possible during that period to develop social institutions and the like to provide against a high-income trap. In such a case, there is the possibility of leading to mid-/long-term growth strategies.

Per capita GDP (1960-2012)



Source: World Bank, World Development Indicators (2013)

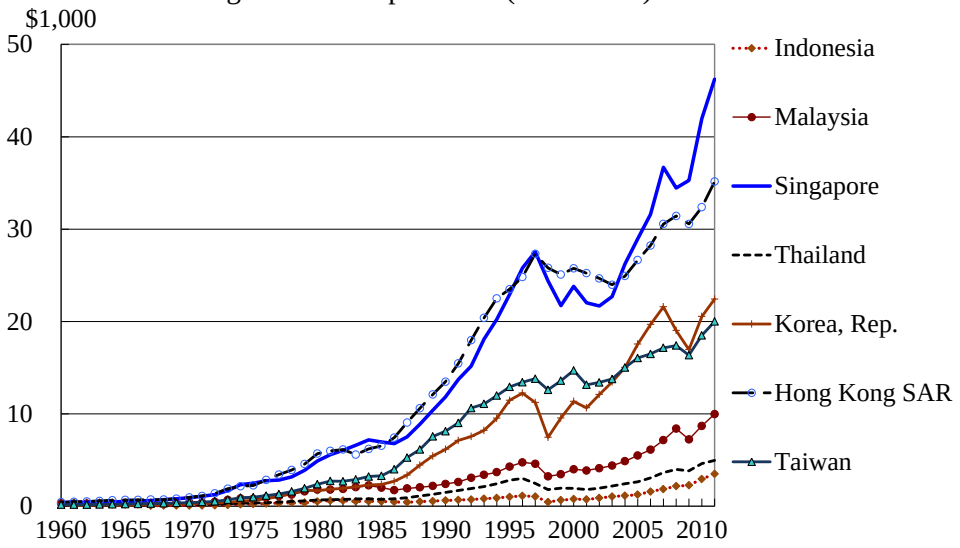
Introduction

South Korea, Taiwan, Hong Kong, and Singapore are referred as the Newly Industrialized Economies (NIEs), and are frequently noted for being examples of successful economic development by achieving eye-popping economic growth in the latter half of the 20th century. It is often heard that in order to avoid the middle-income trap, ASEAN should learn from the NIEs[1] such as South Korea. However, the following three points should be kept in mind:

First is whether the development process experienced by the NIEs is due to factors that can be applied in other countries. The second point is whether the NIEs were merely "star pupils" who avoided the middle-income trap. If the NIEs were able to transform into star pupils of economic development despite having experienced the middle-income trap, this would signify that a beneficial lesson could be learned by the ASEAN countries that are facing the risk of the middle-income trap. Then, third is whether the perspective from ASEAN of observing the NIEs such as South Korea and Taiwan as a future objective is the same as the perspective when looking back at history from those NIEs. If the landscape seen by the NIEs looking back differs from the landscape seen by ASEAN when gazing at the future, the amount that could be learned from the NIEs just by following in their footsteps could be limited. Indeed, even if the NIEs were able to avoid the middle-income trap, there is the possibility that they have faced different, new problems when reaching a higher development level due to improper countermeasures during the middle-income period. The question is how is ASEAN to appropriately respond to the middle-income trap while incorporating a viewpoint going past the transition to being high-income countries.

[1] Hong Kong and Singapore have characteristics of city economies, and so taking into account the comparisons with ASEAN, the analysis here will use South Korea and Taiwan as representative NIEs.

Figure 1: Per capita GDP (1960-2012)



Source: World Bank, World Development Indicators (2013)

1. The success factors of South Korea and Taiwan

1.1 The developmental path of South Korea and Taiwan

First, the kind of developmental path South Korea and Taiwan traveled along to achieve economic growth will be reflected upon, and whether that experience results from factors unique to South Korea and Taiwan or from factors that can be generalized will be discussed.

Regarding the reasons why South Korea was able to grow rapidly, Lee (2012) notes that it was due to having "'good fundamentals' such as a high saving rate, strong human capital, a high degree of trade openness, the maintenance of good institutions (less corruption), and prudent fiscal and monetary management," and argues that countries satisfying these basic requirements would also be able to grow in a similar manner to South Korea. According to Lee (2005), South Korea "started with a level of per capita output far below its own long-run potential levels", but during the process of chasing after the advanced countries, rapidly achieved capital accumulation and increased productivity, thus closing the income gap to those advanced countries. Investment in education also progressed rapidly, and the number of people who had received tertiary education at a university or the like rose sharply from 4.6% in 1970 to 26% in 2000.

In Taiwan as well, there was a virtuous cycle of high savings and high investment, which further led to an increase in exports, and an autonomous sustainable growth pathway led to high growth (Sakai and Noda 1988). Taiwan was also diligent in human investment, and in 1968, "carried out institutional reforms causing the required years of education to be 9 years,

and pursued improvement of the quality of the labor force as a policy issue" (Sumiya et al. 1992). The middle school enrollment rate went from 32% in 1950 to 79% in 1970 and 96% in 1980. The high school and related enrollment rates also exhibited an increasing trend from 51% in 1950 to 83% in 1970 and 85% in 1990 (Ministry of Education 2006). The above points are common to South Korea as well.

Looking at economic policy, many developing countries adopted import substituting policies in the 1960s, but South Korea had the driver of economic growth being a shift towards an export-oriented industrialization (Fukagawa 1999). Taiwan also promoted an export-oriented industrialization during the economic growth period starting in 1964 (Sumiya et al. 1992). Taiwan, which had a small domestic market similar to South Korea, was forced to orient towards export markets, and leveraged exports in a strategy aiming for economic growth.

Next, let us consider rapid growth from the perspective of international competition. What matters is "backwardness." Japan traversed the Lewis Turning Point in around 1960, followed by Taiwan in the late 1960s and South Korea in the beginning of the 1970s (Minami and Ma 2009). Asian countries, as latecomers, aimed for economic development through industrialization, but what is seen in common between South Korean and Taiwan is the rapid economic growth taking "advantage of backwardness" that turns backwardness on its head, although it looks disadvantageous at first glance. Watanabe (1982, 2001) pays attention to the fact that the speed of South Korean and Taiwanese economic growth and the change of industrial structure supporting it was greater than that of Japan and the other advanced countries, and notes that economic development was achieved by compressing the experience of Japan and the like.[2]

Up to here, the argument was that the growth factors applied to South Korea and Taiwan are common, basic factors. Although it can be said that they are required conditions for economic growth, there are different opinions over whether they are sufficient conditions. One of them is that incomes are relatively equal. Compared to the Latin American countries that stagnated while growth was expected in the latter half of the 20th century, Taiwan and South Korea were characterized by having a low income disparity between landowners/capitalists and the unskilled workers, tenant farmers, and agricultural workers. While having various political problems, Taiwan maintained a significant stability as income disparities were low from the beginning stage of development. In the backdrop to this,

[2] The advantage backwardness is: 1) being able to reduce time and cost by introducing capital and technology from countries that are ahead, 2) the latecomer country having the advantage in catching up by introducing technology all at once from the heavy and chemical industrial sector involving a large amount of fixed equipment capital, 3) as a result, during the initial industrializing period, the country that is behind needing a large business operation scale, and 4) rather than resource mobilization and industrial organization being self-starting, being formed from above (Gerschenkron 1962, Watanabe 1982).

Sumiya et al. (1992) argues that the implementation of agricultural reforms after WWII and the industrialization focused on small and medium enterprises progressing in the form of a rural industry drew agricultural workers into the employment market, thus causing a reduction in income disparities.

Figure 2: International comparison of income distributions

Country	Year	Income disparity between top 20% and bottom 20%	Gini coefficient
Taiwan	1970	4.58	0.294
	1976	4.18	0.280
	1980	4.17	0.277
	1985	4.50	0.290
	1987	4.69	0.299
S. Korea	1976	7.95	0.362
	1980	7.95	0.39*
Mexico	1977	19.90	0.492
Brazil	1972	33.30	0.565
	1976		0.59*
Japan	1979	4.31	0.270
US	1980	5.00	0.329

Source: R.O.C., The Survey of Personal Income Distribution, 1987.
Numbers with asterisks are from ILO, Bridging The Gap, 1987.

South Korea achieved similar reforms, but Noland (2012) notes that in the 1950s, when South Korea was at an early stage of economic development, disparities in assets and income were resolved through land reforms, which "is probably irreproducible." South Korea accelerated growth by means of economic development while traversing the process of reducing income disparities by means of land reforms, and it is argued that by satisfying the condition of reduced income disparities at the initial period of the developmental stages, this led to the high growth called the miracle on the Han River.

Meanwhile, Cho (2005) indicates the view that without the international environment surrounding post-WWII South Korea—where there was economic aid from the US in the 1950s, a global free trade system, and large demand from the advanced countries with respect to labor-intensive goods—economic development of the later countries would have been impossible, and so the era context surrounding the country in question affects whether or not

high growth is possible. Ariff (2012) also argues that between the era in which South Korea grew and today, there furthermore has been a change in appearance in environment, and so "times have changed: what had worked for Korea in the past may not work in the future."

To summarize the above, the development of South Korea and Taiwan fundamentally were driven by factors that could be applied by other countries as well, but with respect to whether or not it is possible to reproduce the rapid development like those two countries, there is the possibility that other factors such as the international environment and the like at the time contributed to the realization of unusually high growth, and even if the ASEAN countries achieve economic growth, they will not necessarily realize the high growth of those two countries.

1.2 Shifts in industrial structure

Both Taiwan and South Korea shifted their industrial structures from light industry to higher-added-value heavy and chemical industries, and achieved economic development while strengthening their export orientation.

The Park Chung-hee Administration (1961-1979), which laid the rails for South Korean economic development, aimed for efficient capital accumulation and effected industrial vitalization by leveraging policy financing including the introduction of foreign capital. Also, based on the promotion of an export-driven industrialization focused on the assembly industry, considering both aspects of international politics keeping North Korea at the forefront, and domestic politics which face criticism against the administration, energy was put into the heavy and chemical industry starting from the 1970s (Ishizaki 1996, Kasai 1996, Nozoe 2009).

South Korea took a strategy of quickly pursuing a "full set" nurturing of industry based on the Japanese model. When doing so, the complicated relationship with North Korea, that is, of opposition with the possibility of unification in the future, drove industrial nurturing, and South Korea moved towards targets of nurturing assembly industries and raw materials industries. As a result, the important industries of assembly and raw materials were nurtured, but the component industry and the machine tool industry, which take time to form, were not nurtured as expected (Hattori and Sato 1996). South Korea promoted economic development in a government-led manner, and the government also looked after fundraising, and so the economic risks for industrialists during the economic development were low. Consequently, conglomerates and the like from an early stage had the extra strength to foray into the heavy and chemical industry which required a high risk and an accumulation of capital (Hattori and Sato 1996).

Meanwhile, under a policy of export-oriented industrialization, Taiwan grew in labor intensive manufacturing around 1960. Exports to the US, imports from Japan, and direct investment and technological transfers from Japan and the US, these all drove Taiwanese industrialization. Centered on small and medium enterprises, networked division of labor increased export competiveness, and steadily grew exports (Sumiya et al. 1992).

From the 1970s, in addition to the shift towards the heavy and chemical industry (steel and petrochemical) by public enterprises and the major private corporations, the spotlight was shined on technology-intensive industrial nurturing. Then from the 1980s onwards, the high-tech industries such as personal computers and semiconductors centered on contract manufacturing came to drive the economy (Sato 1996, 2009).

1.3 Technological development

One reason behind having the key to competitiveness in overseas markets was the technological strength from development to production. With respect to South Korean technological development, Park (1989) notes that until 1980, the adoption of overseas technologies was mainly performed by the government, which differed from the private-sector-led Japan. Thereafter, technological development was carried out by the major corporations centered on the conglomerates. Overall, the R&D orientation was stronger, and high-level technology could be efficiently absorbed in a short period of time. On the other hand, the state continued in which "the extent of having technology for application and serious improvements has not reached" (Park 1989).

According to Hattori (2005), Japan and South Korea traveled different development pathways as follows:

Japan: Mature/assembly technology ➔ Mature/processing technology
➔Processing/cutting-edge technology

South Korea: Mature/assembly technology ➔ Assembly/cutting-edge technology

This difference shows that South Korea had weak experience with processing because due to being behind Japan and the like, therefore South Korea was pressed with the need to grow quickly, and so did not have the spare time to produce components and machine tools themselves. An increase in exports inevitably causes the import of main parts to be unavoidable, and so the trade deficit with Japan ballooned. The task for technological development remained that, "the Korean economy will need to foster efficient small and medium sized enterprises" (Lee 2005). The low technological ability of the small and

medium sized enterprises was continually noted following the 1980s which saw high-level growth.

Meanwhile, in Taiwan, local small and medium enterprise groups with international competitiveness contributed to improving the acquisition of foreign capital, and contrasted with South Korea which consists of a few large businesses forming an oligopoly and an overwhelmingly large number of micro-businesses (Sakai and Noda 1988). In the export industries, labor-dividing networks had formed focused on the small and medium enterprises, but Sato (2009) notes that the fact that connections with overseas markets were as OEM (original equipment manufacturer) suppliers contributed to technological advancement. Within this, a specialty of Taiwan's major companies was the "foundry" method (as contract production). Foundry companies receive design data from semiconductor manufacturers who are making orders, and produce semiconductor chips.[3] Semiconductors, which are used in final goods such as household appliances, become more and more minute every year, and so contract producers must have high-level production technology to be able to meet the requests for increased minuteness from the ordering companies.[4] There are cases where there is involvement from the design stages for the final product, and as the final product increases in sophistication, the technological ability of the contracting manufacturer for the semiconductors also rises. This increases their voice and influence.

2. South Korea, Taiwan and the middle-income trap

Having overviewed the technological development pathway of the NIEs, in this section, whether or not the NIEs were the "star pupils" that were not caught in the trap will be confirmed. According to Eichengreen et al. (2013) also touched on in Chapter 2, the per capita GDP stagnation occurs in the two locations of the vicinity of a $15,000-$16,000 PPP (Purchasing Power Parity) and the vicinity of a $10,000-$11,000 PPP.[5] In other words, there

[3] Semiconductor chip production facilities require enormous costs, and moreover have a short development cycle. Thus, foundry companies produce semiconductor chips for various semiconductor manufacturers, and so it is possible for semiconductor manufacturer to concentrate product development. In terms of costs, since the manufacturing is all done by one foundry company, it is more efficient than if the semiconductor manufacturers each manufactured independently. The largest foundry is the Taiwan Semiconductor Manufacturing Company (TSMC), and the United Microelectronics Corporation (UMC) is also a major player.

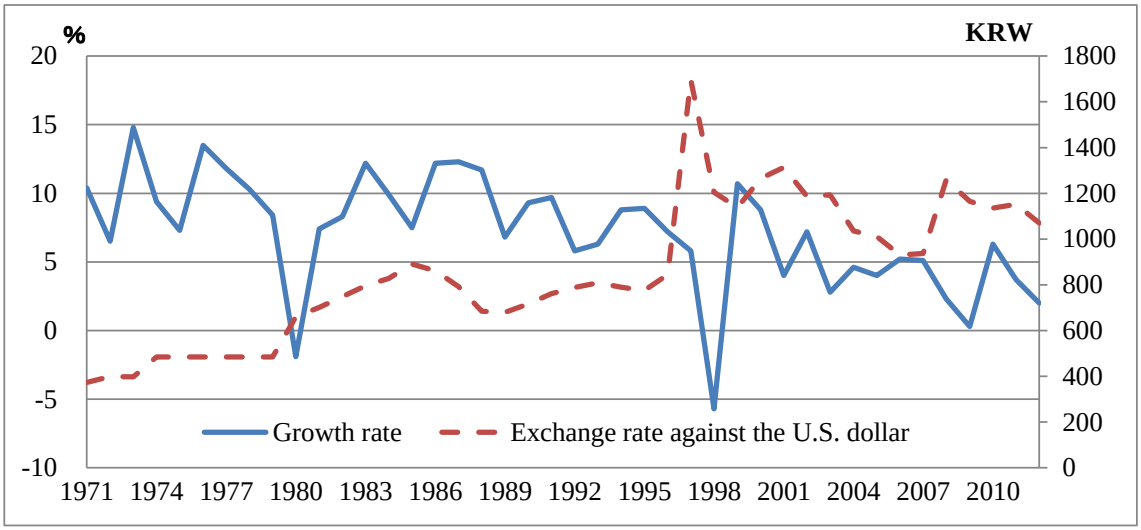
[4] For example, TSMC increased its production ability for cutting edge products used in smartphones by a factor of three year-over-year in 2013, and expanded its yearly capital investment to a new record high of $10 billion. High performance system LSI used in the communication and image processing of smartphones are required to be more compact and to have lower power consumption, and so the circuits need to be made more minutely. The production capacity for cutting-edge 28 nanometer line width products was tripled in 2013 (Nikkei Shimbun, April 23, 2013).

[5] Eichengreen et al. (2013) studied countries with a per capita GDP of over $10,000 (2005 $US PPP basis), and considered the trap to be when the average growth rate for a 7 year period was at least 3.5%, while in the next 7 year period the annual average growth rate fell by at least 2 percentage points.

are multiple stages for getting trapped in the middle-income trap and growth stagnating. South Korea fit this condition in 1989-1997 (with a per capita GDP in 1989 of $10,570) and Taiwan from 1993-1997 ($18,542 in 1995).

If the trap exists at multiple development stages, avoiding it becomes much more difficult, and even countries with a high income level like South Korea and Taiwan experience it. In that case, it is more important not to avoid the trap, but to take heed of the possibility of the trap and consider countermeasures on that basis.

Figure 3: South Korea's growth rate and foreign exchange rate



Source: Bank of Korea

South Korea achieved high growth known as the "miracle on the Han river," but thereafter experienced the Asian currency crisis of 1997, and its economy tumbled. Although slightly different from the period cited by Eichengreen et al. (2013) for the trap (1989-1997), South Korea was thereafter pressed into structural reforms under the International Monetary Fund (IMF). Nozoe (2009) pointed out the structural reforms under the IMF signified the destruction of the government-led high-level growth strategy of direct government financing. In subsequent reforms, there was a conversion of business operation to the market economy through business structural reforms and financial reforms.[6] Then, South Korea returned to a growth track traveling along such a path.

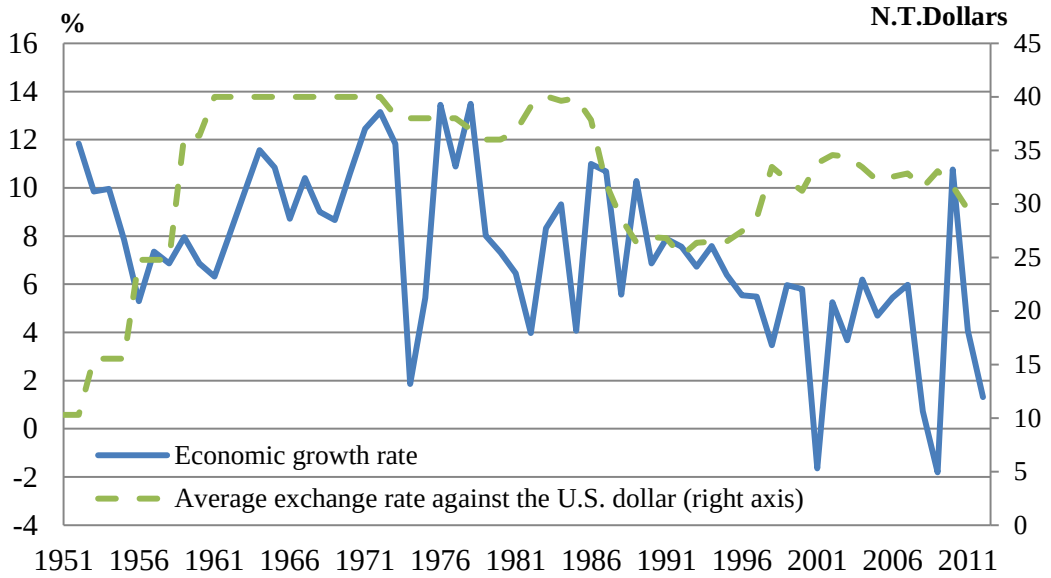
[6] In order to leverage policy financing to promote economic development, the South Korean government had placed banks under government influence through holding stock and the like. As a result, the South Korean banks were merely the organizations carrying out policy financing, and this situation was derogatorily referred to as direct government financing (Nozoe 2009).

Cho (2005) notes that in the process of South Korea attempting to catch up to the advanced countries, it came to have the characteristics of a lopsided relationship between the major corporations and the SMEs, capital/labor relations, and unbalanced structure in financial industry. This suggests that the compressive growth process during the period of economic growth caused structural problems in South Korea, bringing the distant cause of economic crisis. However, at the same time, the fact that the structural improvements accompanying the pain to Korean economy led to a foothold for further growth.

Meanwhile, Taiwan had achieved high growth by means of developing labor-intensive export industries until the mid-1980s. By developing the labor-division networks of small-scale businesses, which were Taiwan's specialty, flexibility was increased while absorbing costs (Sato 2009). However, in addition to rising wages in the mid-1980s, the sudden appreciation of the yen due to the Plaza Accords in 1985 also affected the New Taiwanese dollar (N.T. dollar), increasing the exchange rate against the U.S. dollar. From the 1960s onward, what had been 36-40 N.T. dollars to 1 U.S. dollar rose to 31 in 1987. In the first half of the 1990s, the rate shifted to 25-26 as the highest appreciation of the N.T. dollar. The small and medium businesses that had dealt with the labor-intensive exports moved production bases to Southeast Asia and China. As a result, the average growth rate in N.T. dollar which had maintained an upward trend from 8.2% in the 1950s to 9.0% in the 1960s, to 10.1% in the 1970s dropped to 7.7% in the 1980s with the experience of a rising exchange rate, and then to 6.3% in the 1990s. The trap period (1993-1997) as noted by Eichengreen et al. (2013) matches this period exactly.

Although maintaining a level of 6.4% in the 1990s and 3.4% in the 2000s, as new industries in the place of the labor-intensive industries, there came to the scene computers, semiconductors, liquid crystal panels, and the like.

Figure 4: Taiwan's growth rate and foreign exchange rate



Source: Directorate-General of Budget, Accounting, and Statistics; National Statistics, ROC

3. The pluses and minuses of compressiveness

To South Korea and Taiwan, even if having achieved efficient and compressed econmic growth would be a plus, did the compressed growth bring about side effects (minuses)? Two such minuses will be discussed here. The first minus as stated earlier appeared during the Asian currency financial crisis in 1997 in South Korea. This is the negative effect of the three-in-one economic development regime of government = conglomerates = finance. If the public sector and the for-profit private sector partner constantly, if a rational function of mutual checks does not take effect, a division of roles involving specialization in fields of particular skill becomes insufficient.[7] At the time of the Asian economic crisis, the need arose to acount for all the deferred costs of institutional reforms and structural reforms that had accumulated in the past, and the structural reforms accompanying the IMF intervention were forced.

The other minus is the negative effect resulting from compressive changes arising in social instituions and familes. The achievement of a high level for the per capita income on the one hand brought about the progression for women towards a higher

[7] Even when aiming to shift from light industry to the heavy and chemical industry, South Korea "was inclined towards carrying through with the heavy and chemical industry ignoring costs as a defense industry" (Fukagawa 1999) against the backdrop of military tensions with North Korea.

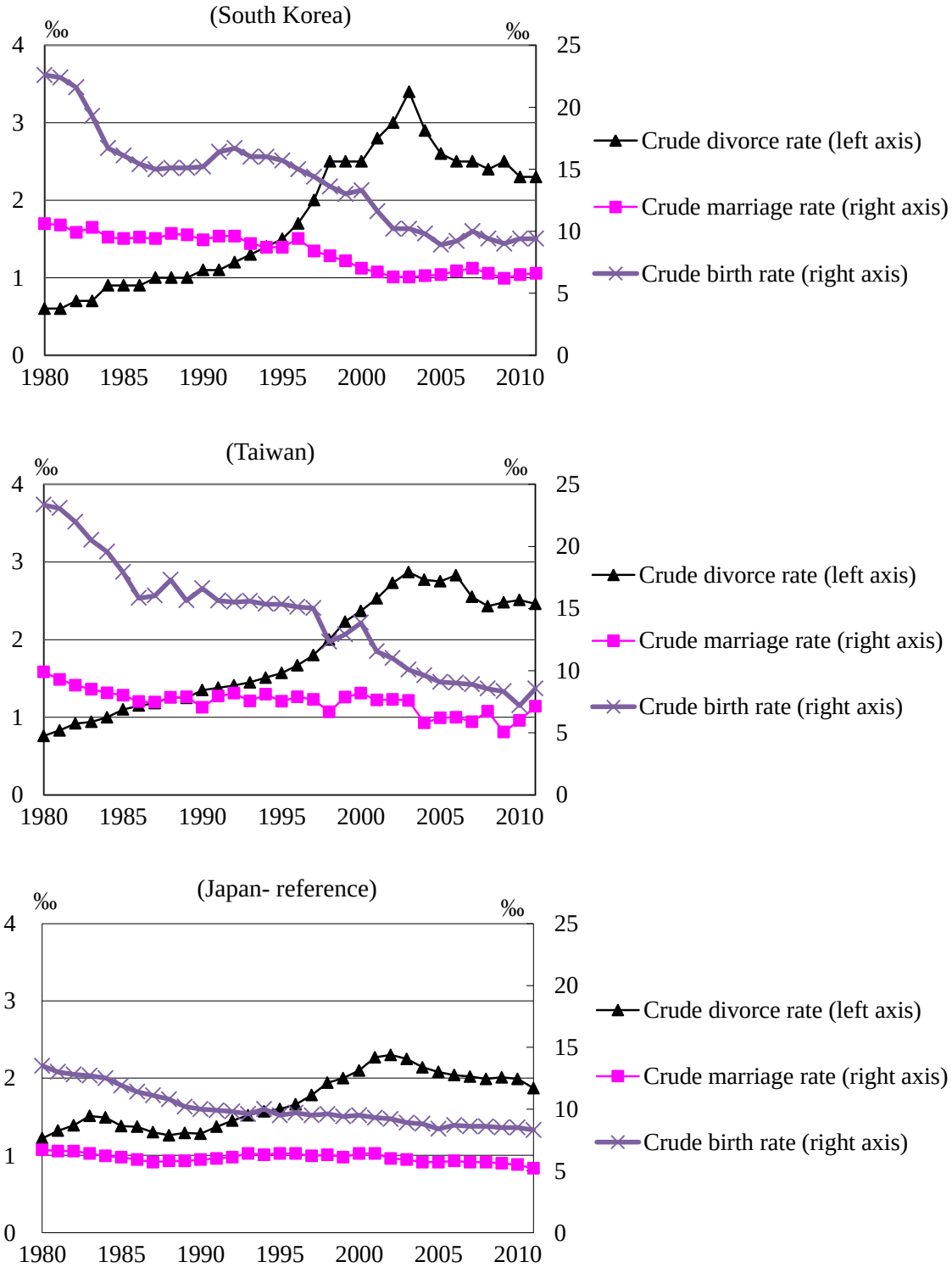
level of educational achievement and participation in the labor force. The enrollment by women in two- and four-year colleges increased, and the proportion of women in the labor force in South Korea and Taiwan rose sharply, particularly among 25-29-year-olds. These changes altered the thought process of people who would have chosen marriage previously. In other words, there was an increasing trend to still get married eventually but to postpone it and to focus on career progression. This change in judgment and behavior by individuals led to an increase in the average age of first marriage for women. The average age of first marriage for South Korean women rose from 26.5 (in 2000) to 29.4 (in 2012), and in Taiwan rose from 26.1 (in 2000) to 29.5 (in 2012), thus shifting later.

If a society as a whole becomes economically abundant in a rapid manner, and the manner of working for individual women changes greatly, it is easy for social institutions and the like to fall behind the pace of the changes. For example, for childbirth and childcare, as the number of working women increases, there is also an increase in women who wish to continue working after childbirth, or in other words to achieve both a child/home lifestyle and employment. Meanwhile, the provisions in the social environment to support that have not caught up. As individual ways of working and ways of living diversify, if the provisions of the institutions that support them do not follow suit, there could be cases where a person would be pressured to withdraw from the labor market or be overburdened with childcare in the cases when work is continued.

When comparing South Korea, Taiwan, and Japan in the crude marriage rate (number of marriages per 1000 people), the crude birth rate (number of births per 1000 people) and the crude divorce rate (number of divorces per 1000 people), all of which pertain to family formation, in each indicator the tendency of compressing Japan's experience can be seen in South Korea and Taiwan.[8]

[8] Soma (2010) notes that the changes in birth rate and diversification of family formation (more fluid, i.e. including divorce, and more global, i.e. including international marriage) are occurring 1) in a short period of time, and simultaneously 2) abruptly. Compared to Japan, it is argued that more compressive changes are occurring in families in South Korea.

Figure 5: Changes in family formation in South Korea and Taiwan

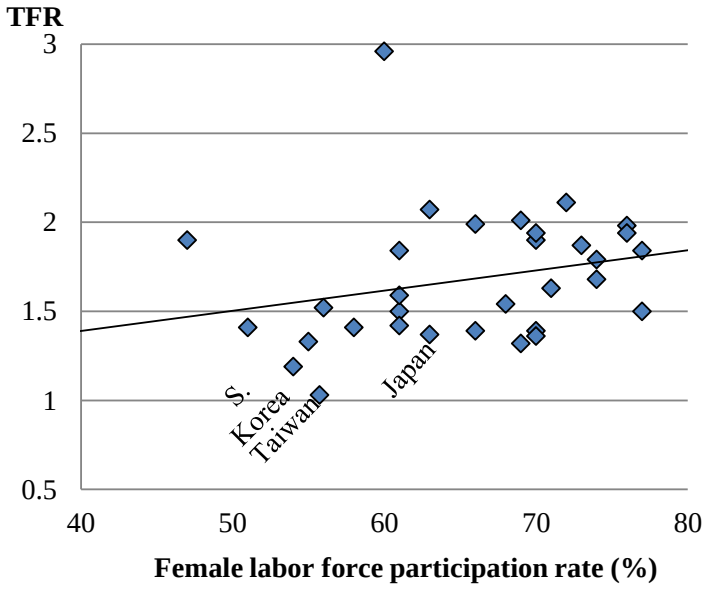


Source: Kabe (2013b)

Economic development is expected through formulating and engaging with policy goals on a macro basis. Meanwhile, improvements in social institutions pertaining to family and ways of working need to be handled on a micro-basis targeting individuals or households, and so success requires a complicated path of improvement as well as time. The more compressed the economic developments or family changes, the less social institutions can change fast enough, and the resulting gap often is borne by the individual or household on a micro-basis.

Figure 6 indicates the relationship between the female labor force participation rate and total fertility rate (TFR) in 2009. In it, not only Japan but also South Korea and Taiwan fall below the positive correlation line (the direction of a lower TFR). This suggests the possibility that in Taiwan and South Korea, the educational level of women rose and opportunities for women to work increased, whereas the environmental developments for balancing working and childcare are behind those in the other OECD countries. McDonald (2008) notes that "low fertility derives from social and economic institutions that are unfriendly to families with children," which may apply to South Korea and Taiwan.

Figure 6: Female labor force participation rate and TFR for OECD 31 and Taiwan (2009)



Source: Kabe (2013a)

This painful experience in Taiwan and South Korea signifies the possibility that even after escaping the middle-income trap during compressed economic growth, "unexpected traps" were waiting in the socioeconomic arena after reaching high-income status.

As an example of an unexpected trap, let us examine the TFR data. South Korea and Taiwan are low-birthrate societies, and the TFR is less than or equal to 1.3 for each.[9] Less than or equal to 1.3 is an extremely low birth rate. Once this low of a rate is reached, it has been noted that it may not be possible to escape from such a state. This is called the low-fertility trap hypothesis (Lutz et al., 2006).[10]

Even if other problems[11] that are faced by a society after it achieves high growth and reaches a high-income stage are called traps, they may qualitatively differ from the middle-income trap. However, if in order to avoid the middle-income trap, issues are postponed, and economic growth is concentrated in an attempt to achieve as much growth in a short period as possible, it must be noted that this is a short-sighted perspective focusing on the middle-income trap.[12] In other words, there is the question of whether it would have been evaluated poorly if growth took too much time and resluted in getting caught in the middle-income trap.

4. Implications for ASEAN

In this chapter, the following three questions are discussed: 1) Can the development process experienced by the NIEs be applied? 2) Were the NIEs star pupils that did not get caught in the middle-income trap? 3) Is the view from ASEAN at the NIEs as a future target the same as the view from the NIEs reflecting back at history?

Regarding 1), the basic factors of economic growth (high savings rate, strong human capital, high trade freedom, superior institutions such as low corruption, cautious fiscal and monetary policy) are believed to be a reference point for ASEAN. At the same time, technological

[9] The birthrate level necessary for the children's generation to have the same population as that of the parents is approximately 2.1, If this level is continuously not met over the long term, the future population decreases. There are many levels beneath the 2.1 level, among which a birthrate of 1.5 was considered the lowest. However, countries reaching a "lowest-low fertility" of less than or equal to 1.3 appeared in the 1990s. These countries are in South and East Europe, the former Soviet Union, and East Asia.

[10] In Lutz's hypothesis, the trap of not being able to escape from a low birth rate constitutes the factors that 1) the overall population declines, 2) when children who have experienced a low-child society become parents, the number of children they want to have decreases, 3) and at the same time as the birthrate declines, the population ages, resulting in a lower expected income by the younger generations compared to those prior, reducing the desire to have children.

[11] For example, Chang (2010) discusses the "compressed modernity" of South Korea in a multifaceted manner from political and economic aspects pertaining to families.

[12] There is the persistent argument that in order to avoid the trap, growth should be achieved while taking as little time as possible by concentrating economic resources in fields linked to economic growth. However, if the reason is to aim for the most efficient mode of economic development from the perspective of cost burden, this would remain a short-term perspective. History shows that problems such as pollution and environmental contamination have arisen as a result of advancing towards efficient economic development and industrial vitalization. It is true that designs and revising production processes for the environment and to prevent pollution are often avoided due to increased costs. However, ignoring environmental problems causes negative effect to become much greater, ultimately causing countermeasures to be unable to be adopted. As a result of putting off immediate costs, the costs borne by the society as a whole become yet greater. In the future, although it is nearly certain that particular problems will occur, considering countermeasures would ultimately be the most cost-effective path. Conversely, an attempt to delay costs will result in them swinging right back.

development differed greatly even between the NIEs of South Korea and Taiwan themselves. Therefore, even if the ASEAN countries emulate the successful experiences of South Korea or the like, they will not always succeed, and it is necessary to consider the process of promoting technological development to match the conditions in the country.

As to 2), if the middle-income trap itself is hiding at a number of different development levels, just avoiding one trap cannot be a final policy objective. On the contrary, it should be more important to change thought processes and to develop plans based on the possibility of being caught in multiple traps.

Finally, regarding 3), countermeasures kept in mind against traps found even after reaching high-income status should be considered. In other words, even after transitioning from being a middle-income country to a high-income country, there is the possibility of other traps that face high-income countries waiting beyond the middle-income trap. The experience of South Korea and Taiwan that achieving high growth in a short period of time could increase the risk of falling into the next trap (for high-income countries) suggests that compressed economic growth is not necessarily the best counterplan. If more time is required for development and the middle-income trap is experienced, if that time period is used to develop social institutions and the like to provide against the high-income trap, this could lead to a mid-/long-term growth strategy. When considering methods for handling traps currently being faced, even though it takes some time, if a careful response that includes preparing against the next trap is heeded, it is possible to face not only the middle-income trap but also the high-income trap in a manner superior to the NIEs.

Extending this thought process leads to that different middle-income countries may have different countermeasures for the traps depending on income level.

Finally, the positioning of South Korea and Taiwan is summarized for ASEAN as follows: the two counties potentially 1) are prior examples that give a hint for avoiding the middle-income trap as much as possible, 2) are references indicating ideas for measures against having fallen into the trap, and 3) are negative examples of unexpected burdens in the socioeconomic sphere resulting from the rapid economic development. The economic development miracle of these countries should not be one-dimensionally followed and referenced, but a multi-faceted verification of their development path is believed to be useful for ASEAN, which is facing the middle-income trap.

Learning the experienced of South Korea and Taiwan as negative examples, the ASEAN countries facing the problem of the middle-income trap must keep in mind the issues in the way of becoming abundant, and indicate a blueprint for the issues expected in the next

development stage. Although the predicted future issues differ by country, if the case of South Korea and Taiwan is considered, how to support working women becomes an important problem. As a society becomes wealthy and women become more educated and employed in the workforce, if women cannot balance childbearing/childcare with work, a drop in the birth rate and a labor shortage could become severe problems.

Also, alongside increases in standards of living, increases in public health, medical level, and nutrition tend to lead to longer average lifespans. As a result, although an increase in the proportion of elderly individuals as well as the absolute value of such individuals has been predicted, in such a case, it would also be necessary to promote the development of social welfare aspects such as medicine and pensions.[13]

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[13] Japan implemented a universal national pension system in 1961, which was soon after traversing the Lewis Turning Point. The working-age population (15-64) in 1960 in Japan was increasing at an average annual rate of 1.86%. If Japan had placed importance on the most immediate issues and prioritized other policies by postponing the introduction of the pension system, it is likely that the chances for implementing the system would have decreased until the growth in working-age population reversed (it declined by 0.20% in 2000).

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