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Negative Effect of Current Account Surplus on Long-term Growth; Focused on the Cases of Japan, S. Korea and China

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ABSTRACT

It is a teaching of current economics that the surplus of current account in international payment contributes to the increase of income. But it has got a negative effect on the long-term growth in the reality, which is easily proved by some instances. First, the Japanese growth rate has been very low despite its current account maintaining a huge surplus. Second, it is another instance that South Korea has suffered from its low growth rate even if its government has enforced the policy to defend its exchange rate from declining while its current account surplus has become large since 1998. Next, the growth rate of China has decreased from the time when its foreign reserve has begun to reduce despite its huge surplus of current account. This paper clarifies the reason why their growths are stagnant despite their huge surpluses in current account. If this paper changes the policies of above countries, it would resolve their economic difficulties and settle the imbalance of the world economy. And this paper would contribute to the evolution of economics.

Key Words; current-account, surplus, long-run-stagnation, Japan, Korea, China

INTRODUCTION

Almost all the textbooks of economics contain an income function as Y = C + (I-S) + (G-T) + (X-M) which means that income increases more as the current account surplus, that is export minus import, increases more. Does this income function fit with the real economy? If it is in line with the economic reality, what is the reason why the growth rates of Japan and Germany are very low despite their huge surpluses in current account, as opposed to USA and Britain of which current accounts are deficit? For example, the growth rate of USA recorded by 2.9 percent in 2006 while its current account deficit was 807 billion dollars or 5.8 percent of GDP. In contrast, the growth rate of Japan recorded only by 1.4 percent much lower than that of USA while Japanese current account surplus stood at 175 billion dollars or 3.8 percent of GDP in the year.

These phenomena did not happen only in 2006. The above phenomena occurred in that year are typical ones and similar cases have happened for a long period of time. For instance, GDP of USA has increased by 3.5 times during the period from 1991 to 2019 despite its huge deficit in

current account, while GDP of Japan has increased only by 1.4 times despite its large surplus in current account. How can the current economics explain these phenomena which are opposite to its macroeconomic theory? These phenomena which are contrary to the economic theory do not appear only in US and Japan. They are similar in Germany and Britain. GDP of UK has increased by 2.5 times over that period despite its massive deficit of current account, while that of Germany has increased by 2.1 times despite its huge surplus. The table below shows current accounts and growth rates in annual average of USA, Japan, Germany and UK during 1991-2019.

Table 1. Annual Average Volume of Current Account (billion dollars) and Growth Rate (%) of some Major Countries

Years	Current Account				Growth Rate			
	JAP	GER	USA	ENG	JAP	GER	USA	ENG
1991~2000	167.0	-15.9	-147.6	-8.7	1.3	1.9	3.5	2.5
2001~2010	158.2	134.9	-573.8	-66.4	0.7	0.9	1.8	1.7
2011~2019	130.0	271.8	-428.0	-112.5	1.0	2.1	2.2	1.8

Source: International Financial Statistics 2000, IMF and *http://ecos.bok.or.kr*, May 31, 2020, The Bank of Korea
*** Growth rate is a simple average, not a weighted average.**

Other countries do not have been much different from the above facts. South Korea and Taiwan also have recorded a large surplus in current account since the end of the 1990s, but their growth rates have been generally lower than those of other countries of which current accounts have been deficit. What are the reasons for those strange phenomena? Of course, China could be classified into an exception. Its growth rate continued to show high while its current account surplus increased since 1994, reaching 421 billion dollars in 2008 which was about 9 percent of GDP. Its growth rate recorded the range of 9~10 percent even in the years from 2008 to 2010 when most countries suffered from severe economic difficulties caused by the global financial crisis in 2008. However, the Chinese growth rate declined to 7.9 percent in 2012 and continued to fall since then, reaching 6.6 percent in 2018 despite its huge surplus of current account. What is the reason why Chinese growth rate has been declining in recent years? This problem will be inquired in detail later.

The income function of current economics cannot answer the above questions. Current economics is so weak. This issue will be approached on a different perspective from economics in this paper. The Japanese economy is a representative case of this issue, which is worth focusing on since its average growth rate per annum has been below 1 percent for a long period of time despite a large surplus of current account. This paper analyzes the cause of its severe economic hardships kept on for a quarter of a century, which would prove decisively the negative effect of the current account surplus on the economic growth in the long run. As the surplus of current account is not only one reason that has caused its long-term economic slump, multilateral approach and analysis are necessary and inevitable as will be seen soon.

It is also needed to look at other similar cases in addition to the Japanese case because only one case is not sufficient to assert that a large surplus of current account affects negatively on long-term economic growth. For the time being, the economy of South Korea is well worth examining

since its average growth rate per annum has declined to the lowest level since 2008 while its current account surplus has increased to the highest level in its recent history. In fact, the government of South Korea has set up the policy to raise its exchange rate in order to increase its export and growth rate. Contrary to its expectation, this policy results in not only a sharp fall of the growth rate but also a serious economic crisis as will be seen later. And the case of China is also worth to be examined since it proves its negative effect too. In brief, this paper is focused on the case of Japan, after then Korean case is discussed in a different way from the Japanese case, and Chinese case is checked too.

Why do the governments of Japan, South Korea, China and Germany have enforced the policy to maintain the surplus in current account despite the fact that it has caused their long-run stagnations? It is because they might worry about the fact that the deficit of current account would trigger the tragedy of a currency crisis they experienced already in their histories. Indeed, Japan suffered from the crisis in 1954, South Korea in 1998, China in 1994 and Germany in the years of early 1920s. Unfortunately, however, they do not acknowledge far enough yet that their current account surpluses provoke the chronic diseases of long-run stagnations.

To our thoughts, the contents of this paper are important for the nations which have suffered from their economic difficulties as well as for the world economy of which imbalance in international payment has been bulked up. So, we would like to raise this issue in the economics academia, which might raise active criticisms and supplements. And then the policy makers of the nations whose current accounts maintain big surpluses would response positively. If they change their policies to decrease the surpluses in current account, their growth rates would be increased as well as one of the most serious problem of the world economy would be solved by relieving the huge imbalance of international payment.

This paper is organized as follows; first section is the introduction as above; second section deals with the theoretical considerations on the long-run stagnation focused on the Japanese case which is representative; third section examines the case of Japan in detail; fourth section deals with the case of South Korea; fifth section covers the case of China; and last section concludes this paper, summarizing main achievements and proposing future works.

THEORETICAL CONSIDERATIONS

There are many researches about the long-run stagnation of Japanese economy. And there are numerous alternatives to explain the Japan's apparent stagnation, which would be divided into some groups as follows. First, some economists suggest the appreciation of Japanese currency as its main cause (Corbett and Ito, 2010; Hamada and Okada, 2009). However, its economy escaped hardly the long-run stagnation although the Japanese government raised its exchange rate several times. Even if the economy recovered, it was temporal.

Second, it was argued that a liquidity trap caused the stagnation (Krugman, 1998; McKinnon and Ohno, 2001; Nakatani and Skott, 2007). And it was also claimed that the stagnation was caused by the failure of monetary policy to response its deflation and liquidity trap (Hamao et. al., 2007; Hoshi and Kashyap, 2004; Bayoumi, 1999). But the stagnation lasted too long for the liquidity and deflation to cause it.

Third, it has been appealing even now that zombie firms have stagnated the Japanese economy because they have hurt the productivity of its national economy due to their low productivities (Fukuda and Nakamura, 2011; Kwon et.al., 2015; Lin et.al, 2014; Nakamura and Fukuda, 2013). However, they would not have appeared if the Japanese economy would not have stagnated for decades. So, it would be reasonable that they are the result of the long-run stagnation, not its cause.

Fourth, there were theoretical approaches based on the income theory of current economics, especially the total factors productivity was applied for it (Hayashi and Prescott, 2002; Motonishi and Yoshikawa, 1999). However, the decline of productivity caused by decreasing investment was not a cause but a phenomenon which was resulted from the stagnation. Other economist claimed that the Japanese economy suffered from a complex recession (Yoshikazu, pp. 124, 1992). This opinion was right as the cause of economic downturn, but it is weak to certify the cause of its long-run stagnation. The period of slump was too long even if the recession in the real economy was overlapped by the credit crunch in the financial sector. There were another analyses too that the external economic conditions, especially China's economic rise, caused the long-run stagnation (Tyers, 2011) along with a demographic approach (Aloy and Gente, 2009). However, they are weak in persuasiveness because some other countries grow faster than Japan in the same conditions. Above all, any theory of current economics clarifies hardly the reason why the countries which have recorded huge surpluses of current account have suffered from long-run stagnations.

On the other hand, the structural problems of Japanese economy are raised as the cause of long-run stagnation by some economists (Saito, 1999; Porter et al., 2000; Yoshino and Sakakibara, 2002; Sheth, 2007). They have tried to seek the cause in the institution and culture of its economy. Typically, Saito claimed that the real reason for the Japanese economy to fall into the void of history was that the national goal which had been taken for granted in the catch-up system was almost achieved in 1985 and Japan lost its goal as a whole after then (Saito, pp. 151, 1999). And he asserted that three economic structures had established themselves as the growth devices supporting strongly the catch-up system in the past as bellow. First, it was the establishment of a stable and firm finance system which was integrated into the myth that banks would not collapse after the world war. It was the so-called ‘Convoy System’ that drew small and large ships or speedy and slow ships all together. Second, it was the solid formation of company system which was referred to a myth of Japanese-style management. Third, it was the control-tower which was built by the corporative system between politics, bureaucrats and companies, based on the firm collaboration between the people and the government (Saito, pp. 152-153, 1999). In short, he argued that this old system lost its competitiveness at the end of the era of catching up with the developed countries. It should have been transformed into a market-driven economy, not a government-led economy. Japan should have pursued dynamism rather than stability and should have evolved into a system that allowed survival of the fittest from the coexistent system without dropout in the past. And it was also necessary for its economy to evolve into a flexible system from the convoy system.

Sheth also claimed that Japanese corporation system which was subject to excessive interference and regulation of its Ministry of International Trade and Industry was a decisive cause of the economic crisis (Sheth, pp. 138-140, pp. 2007). Furthermore, there has appeared

an extreme pessimism that the imitative economy of Japan is bound to show limits in the era of information and communication revolution. However, these opinions which accentuate structural problems of Japanese economy have fundamental limits as below; it is not convincing that the system or culture which had caused the miracle of its economy in the past invokes suddenly the long-run stagnation one day. If the system or culture that were prominent to make its miracle in the catch-up era is a decisive trouble to cause the difficulty, it should have done the same again with its power after the Japanese economy fell behind the US economy.

Michael Porter, a prominent scholar worldwide, also put structural problems of Japanese economy at the forefront as a root cause of its economic hardships. He clarified this viewpoint in the book titled 'Can Japan Compete?' which was collaborated with two Japanese scholars, Hirotaka Takeuchi and Mariko Sakakibara, published in 2000. Especially, they emphasized that the model of Japanese economy showed limitations to grow further since its government played negative role, its companies had no strategy to compete, and so on. This book is famous enough to be accepted as if it presents a correct answer to the cause of Japanese economic difficulties and suggests correct countermeasures, but it shows clear limit in persuasiveness as will be seen shortly. Porter and his colleagues pointed out the prime examples of structural problems which were the warning signals to economic crisis as follows; there is no new export industry emerging in Japan that had been so much admired as an exporting powerhouse (Porter et al., preface, 2000); even a successful company has been able to achieve only a very low return on its investment; considering the size of the economy, Japan's economic success is concentrated in limited fields and industries; and there has been little success in 1990s as he had heard in the past (Porter et al., pp 76-77, 2000). However, it is reasonable to see the above points as the results of long-run stagnation, not the causes of it. In fact, the return on investment has fallen and the investments in new and diverse industries have been difficult to be made because its economy has been in slump for a long period of time. And new products, new industries and success stories with competitive edge had appeared before its long-run slump.

In addition to the above structural problems, they indicated also the government model which dominated and distorted the financial market as well the Japanese policy that adopted various measures to protect excessively its domestic industries. And they pointed out that *"most of Japanese companies have problems with their approach to competition which make them lag behind* (Porter et al., pp. 82, 2000)*."* Even though it is certain that most of the structural problems they pointed out have to be resolved for the bright future of Japanese economy, it is hard to see them as the causes of long-run stagnation because the Japanese economy had grown fast despite of these problems when it had flourished in the past. So, it is not reasonable that the structural problems have caused serious harms after entering into the low growth orbit because they did not have influenced heavily on its high growth in the past. Above all, many of the measures proposed by them in order to solve the structural problems have been reflected in the Japanese policies but the economic recovery does not have taken place in earnest till now. Perhaps their proposals may not be successful since the Japanese economy does not recover in full swing. If so, it is the most urgent task for its government to revive the economy. Therefore, it is essential to find the correct cause of its long-run stagnation, which is inevitable to prepare a proper countermeasure.

In short, the structural problems may have a special relevance, but it is difficult to see them as having a general validity. Rather, Saito's view seems much more convincing as below. The Japanese economy in the 1990s could be likened to a patient treated sincerely by a doctor who was good but quackish. He devoted earnestly to diagnose the patient. However, he misdiagnosed since he was a quack doctor. His prescription and medication flowed into the wrong direction because his diagnosis was wrong. Therefore, the effect of his treatment was temporary, and its economy was hard to be cured (Saito, pp. 84-85, 1999). In other words, it should be said that the diagnosis error and the policy failure resulted in the long-run stagnation (Saito, pp. 113, 1999). To our thought, Saito's view expressed as above is valid even now. Indeed, the international competitiveness of Japanese economy has been strong till now despite its long-lasted economic stagnation for decades since 1991. The current account of international payment has recorded a large surplus even in the long-run stagnation. For instance, although it was reduced to 65.8 billion dollars in 1996 when the domestic economy showed a sign of recovery, it exceeded 100 billion dollars soon. The surplus fell back to 87.8 billion dollars in 2001 as the global economy slowed, but it started to increase again reaching over 100 billion dollars every year since 2003, especially recording by 210.5 billion dollars in 2007. Of course, it showed deficit temporarily for months in 2013, but it turned to a stable surplus in 2014 and reached 203.2 billion dollars in 2017.

Table 2. Current Account Surplus (billion dollars) of Japan

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Surplus	65.8	96.8	118.7	114.6	119.7	87.8	112.4	136.2	172.1	165.8	170.5	210.5	159.4	147.0	203.9	119.1

Source: http://ecos.bok.or.kr Nov. 15, 2012, The Bank of Korea

In short, a new approach is necessary for the Japanese economy to revive. This paper researches the real and fundamental cause of the long-run stagnation focused on the cases of Japan. In addition, the cases of the economies of South Korea and China are researched to enforce the above case. These two cases have an important meaning because the same reason why the Japanese economy has fallen into the long-run stagnation has resulted in their severe economic hardships as will be seen.

THE CASE OF JAPAN

The Japanese economy had kept on growing at a very high growth rate until 1990 after World War II as the world had been wondering about it. Its economy overcame successfully even two oil shocks which caused severe blows to most nations worldwide. The oil price had risen from 2~3 dollars per barrel in the first half of 1973 to more than 12 dollars at the time of first oil crisis. And it rose to the mid 30 dollars from 12~13 dollars at the second oil crisis. Particularly noteworthy is that Japan got over the sudden and sharp appreciation of Yen caused by the Plaza Agreement. Its export remained brisk, its current account surplus recorded still a large volume, and its growth rate was also relatively high even when its exchange rate lowered to half-full in a short period. Indeed, its exchange rate which had surpassed 240 yen per dollar in the mid-1985 fell to the range of 120 yen at the end of 1987 just for two years after the Plaza Agreement was enacted. So how did not the world be impressed and how did not other nations admire the Japanese economy!

However, unfortunately, the Japanese economy has been sluggish for over a quarter of a century since the 1990s. Why? Why does it have fallen despite its great growth potential and high international competitiveness as seen above? It is necessary to delve into various aspects of the Japanese economy through the historical progress that its long-run stagnation has been developed.

Japanese Economy, Overtaken by US Economy

The Japanese economy began its downturn since 1991. Its growth rate slowed to 3.3 percent in 1991 from 5.6 percent in 1990, and dropped consequently to 0.2 percent in 1993. Although its economy rose for a while in 1995 and 1996, it declined again in 1997. Its growth rate fell below 0 percent for two consecutive years since 1998. In 2000, it grew by 2.3 percent due to the reflection effect of sharp drop in the previous year, but it returned to 0 percent range of growth rate since 2001. Of course, it grew at an annual rate of 1∼2 percent range for five years since 2003 until 2007, but it was not satisfactory compared to the past glory. Regretfully, the economy fell rapidly again after then with the growth rate of minus 1.0 percent in 2008 and the worst of minus 5.5 percent in 2009. Its growth rate surged to 4.7 percent in 2010 due to the reflection effect of deep drop in the previous year. But it fell back to minus 0.5 percent in 2011. In 2012 and 2013, its growth rate recovered to 1.7 and 1.6 percent respectively but it downturned to 0.4 percent in 2014. After then it dwindled from 1 percent range to 0 percent range year by year, recording 0.8 percent in 2018.

As mentioned above, Japan has been suffering from the sluggish economy for more than a quarter of a century since 1991 and from the sharp fluctuations of business cycle. This prolonged and deep slump is so unusual that it is hard to find a similar case in the world history. When compared with the growth rate of USA, it becomes clear how serious the economic slump of Japan has been. Until the 1980s, the growth rate of Japan was significantly higher than that of USA except for the short period of mid-1970s and mid-1980s. However, since the 1990s, its growth rate has been much lower than that of USA except only two years of 2007 and 2010. Moreover, its growth rate in 2009 was minus 5.5 percent, lower than the minus 2.8 percent recorded by the US economy that was the epicenter of global financial crisis. This fact shows the serious state of Japanese economy. It is extremely weakened to such an extent that a deep swamp happens when an external shock is applied into it.

Table 3. Growth Rates (%) of Japan and USA

Year	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09
Japan	3.3	0.8	0.2	0.9	1.9	2.6	1.6	-2.0	-0.2	2.3	0.4	0.3	1.7	2.4	1.3	1.7	2.2	-1.0	-5.5
USA	-0.1	3.6	2.7	4.0	2.7	3.8	4.5	4.5	4.7	4.1	1.0	1.8	2.8	3.8	3.3	2.7	1.8	-0.3	-2.8

Source: http://ecos.bok.or.kr Aug. 17, 2015, The Bank of Korea

Its economic slump is more prominent if compared by the income per capita. That of Japan surpassed that of US already in the mid-1980s and reached 42 thousand dollars in 1995 when the value of Yen rose to the highest, which was 1.5 times more than that of USA. The gap narrowed since then becoming similar in 1998, and it was reversed in 2001. At last, it fell to 40 thousand dollars in 2018, 65 percent of US income. Why does such an embarrassed situation

for Japan have happen? Why does its economy, once caused a craze to learn Japan, have fallen so badly? It is a general analysis that the tragedy began to happen by the bubble collapse in 1990 which was caused by the madness of stock and property investment in the late 1980s.

Bubble Collapse in Stock and Property Markets

Nikkei Stock Index started to rise from the range of 6 thousand yen at the end of the 1970s, exceeding 39 thousand yen at the end of 1989 which was six times more expensive than 10 years ago. From 1987 to 1989, it was doubled in just two years. And the price of real estate rose by nine times in the 1980s. So the valuation of lands owned by companies rose, which increased their stock prices. Many companies issued bonds with warrant backed up by the rising prices of their lands and they bought more lands, which raised their stock prices in turn (Takahashi, pp. 152, 2002). What played an important role in forming the above bubbles was the policy that its Ministry of Treasury allowed companies to establish the account of investment and finance in 1984, named Toikin Account. This account let Japanese companies invest in stock and real estate without paying any taxes on their capital gains, which raised their prices so high.

At the height of peak, the value of Japanese real estate was twice that of USA. Its ratio to GDP was four times that of USA. The market capitalization of Japanese stocks was twice as large as that of USA (Kindleberger and Aliber, pp. 119, 2005). Seven of the 10 largest banks in the world were Japanese ones at that time. The capital of Nomura, the largest investment bank, was larger than the total capital of five US investment banks (Kindleberger and Aliber, pp. 146, 2005). It was a typical bubble at that time. In 2015, none of Japanese banks reaches the top 10 in the world. Only one in the top 20, Nomura is running around the bottom. This fact represents the fall of Japanese economy. Why did this bubble happen and collapse? It is necessary to examine the reason with its background.

After World War II, the US government maintained the policy of fiscal deficit for a long time, which in turn led decisively its economy to the stagflation in the 1970s. This stagflation weakened definitively its international competitiveness and growth potential. The US economy became the largest debtor in the world since the mid-1980s. As a result, the dollar value declined consistently and it faced the risk of losing the position of worldwide reserve currency. The US government believed that its balance of international payment should be improved shortly in order to alleviate the risk. So the Plaza Agreement was made among major economies of the world in September 1985. As a result, the value of Yen soared in a short period of time as seen above and the Japanese export seemed to be hit hard. Concerned about this economic downturn, the Bank of Japan lowered repeatedly its base interest rate in January, March, April, November 1986 and February 1987. At last, it dropped to 2.5 percent. It was the lowest interest rate ever although it is hard to believe now (Takahashi, pp. 145, 2002).

The policy to lower the interest rate was a medicine for its economic downturn caused by the increasing value of Yen, and it meant also the cooperation with the US government. It was only in 1986 that the Yen slump was serious. The Japanese economy turned to a recovery in the spring of 1987. Its growth rate climbed to 4.1 percent in 1987 from 2.8 percent in 1986, and this economic upward-trend continued to reach 7.1 percent in 1988. Despite this upward-trend of growth rate, the Bank of Japan maintained the low interest rate for a long period of time since 1987 because the value of dollar kept on weak.

In February 1987, the Louvre Agreement was made between major countries in order to stabilize their exchange rates at the present level because the value of dollar was weakened continuously after the Plaza Agreement. It was an inevitable choice since the confidence in dollar as an international reserve currency would collapse, and then a severe crisis would hit the world economy if the value of dollar would depreciate further. The Bank of Japan maintained the low interest rate to support the value of dollar. This policy was seen desirable for Japan to curb the appreciation of Yen further. However, the markets of property and stock which had kept on rising for a long time became more prosperous and the bubbles became more bloated as the low interest rate was maintained for a long period of time.

Japanese companies, which were afraid of the appreciation of Yen, reduced their facility investments. Some production facilities were transferred to foreign countries, so the topic of 'industrial hollowing' was appealed in Japan. As a result, the funding operation of banks decreased. As the deposits of banks continued to accumulate, new exits for their loans were needed, which were found in the markets of real estate and stock. In the meantime, its current account surplus kept on growing and the value of Yen continued to undergo the upward pressure. The Bank of Japan had to buy dollars in order to maintain the value of Yen, and a large amount of currency which was issued by it flowed into the markets of real estate and stock.

The Japanese economy enjoyed a big boom in the late 1980s due to the bubbles. The gain on real estate investment was increased by about 30 percent per annum. Japanese companies turned into real estate investors using bank loans when they realized that their profits of real estate investment were much bigger than their profits of steel, automobile or TV set production (Kindleberger and Aliber, pp. 336, 2005). The bubble of real estate swelled up to the peak in 1989, and then began to turn off in an instant. As a result, the economic principle of credit destruction, which is the reverse process of credit creation, worked and a serious finance crisis hit the real economy to decline badly.

Why did not its government prepare any countermeasure for their bubbles and crashes? In the latter half of the 1980s, its inflation rate was steady since import prices of major resources were lowered continuously owing mainly to the strong Yen. The wrong perception that ‘the economic growth is sustainable when the prices are stable’ dominated Japanese economists and policymakers in charge. So they did not feel any sense of crisis. Japanese policy makers in charge overlooked how dangerous were the bubbles in the markets of real estate and stock, which used to cause a severe financial crisis in the history.

In fact, any bubble of real estate or stock market has to be collapsed someday. In particular, the demand for real estate which will appear in the future with more savings for two or three years shifts to the present with an excessive loan when a big speculation happens in the real estate market since the savings for the years cannot cover the soaring price. This shifted future demand joins with the current demand, and this combined demand raises sharply the price of real estate. However, the demand will be hollowed out inevitably someday due to the time shift of demand. This process often occurs in the stock market too. The Japanese government overlooked the fact that the time shift of demand would cause the hollowing of demand someday and the price would plummet to collapse the bubbles, which would operate eventually the economic principle of credit destruction. The Japanese government did not know this

principle which meant that money, quasi-money, and credit in the economy would be decreased drastically by the credit multiplier.

What did the Japanese Government Respond?

The Japanese stock market turned to decline in 1990 after its volume valued 611 trillion yen in 1989. During the six years from 1990 to 1996, the loss of stock valuation amounted to 434 trillion yen. And the appraisal loss of real estate amounted to 616 trillion yen during the five years from 1991 to 1995 when its price continued to drop. In the first half of the 1990s, the values of stock and real estate were reduced by more than one thousand trillion yen. The assets corresponding to two years of its national income disappeared for the 5~6 years in 1990s as the Japanese GDP was about 500 trillion yen at that time (Saito, pp. 254, 1999). So, the asset effect reversed, and its economy fell sharply when the bubbles of stock and real estate turned off like above, which led the economy into a financial crisis.

Japanese banks which had lent money to the general construction companies and the other companies that had bought many lands suffered from huge bad debts since the real estate market went down. As buildings, houses, golf courses and resort, that the companies had built and developed were not sold well, their prices fell drastically, their losses increased more and more, and they became impossible to repay their loans borrowed from banks and financial companies. So the prices of stock and real estate fell more sharply. The redemption of debts became increasingly difficult and bad debts of banks grew like a snowball. The equity values of stock and real estate held by financial companies such as banks also fell rapidly. Naturally, the business accounts of financial companies deteriorate more and more. And then the economic principle of credit destruction began to work in earnest and decreased drastically the amount of money and credit in the economy. Eventually, a serious financial crisis was developed, and the Japanese economy fell into a deep slump.

Its government did not neglect to cope with this economic crisis. It had rather made tearful efforts to overcome the continuous economic fall-down. As seen from the table below, the policy measures of large-scale were enforced nine times from 1992 to 2000 in order to stimulate the economy. The budget volume for the policy measures was 132 trillion yen, estimated 1.2 trillion dollars. In 1998 alone, the fiscal spending to boost the economy surpassed 40 trillion yens, 8 percent of GDP. This budget was mainly used for the construction of social overhead capital. The length of highway had nearly doubled from 4,000km to 7,000km in the 1990s. There appeared a complaint among the bureaucrats that it was hard to find a bridge to build or a road to extend and pave.

Table 4. Japanese Stimulus Policy in 1990s (Unit; trillion yen)

Title	Date	Volume	Major Contents
Comprehensive Policy	Aug 1992	10.7	Public Investment 8.6
Comprehensive Policy	Apr 1993	13.2	Public Investment 11
Urgent Policy	Sep 1993	6.2	Restoration of Strong Yen
Urgent Policy for Strong Yen	Jun 1995	2.7	Earthquake Recovery
Stimulus Policy	Sep 1995	14.2	Public Investment 7
Comprehensive Policy	Apr 1998	16.7	Special Tax Cut 4
Urgent Policy	Nov 1998	23.9	Tax Cut 6.3
Policy for Newborn	Nov 1999	18.0	Social Capital 6.8
Newborn Policy for Development	Oct 2000	11.0	Social Capital 4.7
Total Volume		131.8	

Source: 'Disappeared Miracle in Japanese economy' pp. 181, Joshen Takahashi, translated into Korean by Gwak Haesun, Darakwon, Seoul, Korea, 2002

The Bank of Japan lowered the base interest rate from 6 percent to 5.5 percent on July 1991 in order to reverse the economic downturn. As the downturn did not stop, it cut repeatedly the interest rate to 0.5 percent which was an unprecedented level in the world history until then. The interest rate of 0.5 percent would appear in a great depression (Saito, pp. 83, 1999). However, the Japanese glory of the past was never revived, and the period of slump was getting longer and longer. Its government implemented also the policy measures of tax cut and deregulation but failed to recover the economy until 2003. The economic recovery since 2003 was even weaker than the past. Why does not its economy have escaped from the long-run slump despite the above various efforts? To clarify the reason, it is necessary to examine the process that its economy has fallen into long-run stagnation.

The Process Slipping into Long-run Stagnation

The bubble collapse of real estate and stock was the root cause of economic fall of the Japanese economy. However, it could not be the cause of long-run stagnation since the Japanese economy had risen for years in the mid-1990s. As mentioned above, policymakers had stimulated the economy aggressively and its growth rate which had been 0 percent range for three consecutive years in the early 1990s rose to 1.9 percent in 1995 and to 2.6 percent in 1996.

Table 5. Growth Rate (%) of Japan in 1990s

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Rate	3.3	0.8	0.2	0.9	1.9	2.6	1.6	-2.0	-0.2

Source: http://ecos.bok.or.kr Aug. 17, 2015, The Bank of Korea

The stock market also showed a recovery in the mid-1990s. Nikkei index recovered over 20,000 yen in 1996 from around 7,000 yen in 1995. The policy of its government played an important role to recover the stock market. Total amount of 8.5 trillion yen was invested from 1992 to 1998 by its government as a stimulus policy for the stock market. The recovery of its economy was added to the policy effect. The real estate market also stopped declining and showed a sign

of moving up. If so, it is reasonable to assume that the new slump in the mid-1990s appeared due to a new cause other than the bubble collapse.

Table 6. Nikkei Index (thousand Yen) since 1991

Year	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07
Index	24.2	18.1	19.1	19.9	17.4	21.1	18.4	15.4	16.8	13.8	10.5	8.6	10.7	11.5	16.1	17.2	15.3

Source: International Statistics Yearbook, each year, The Statistics Office of Korea

The Japanese economy which had upturned in 1995 and 1996 declined again with its growth rate dropping to 1.6 percent in 1997. At this time of economic downturn, its economy was hit hard by the currency crises occurred in Thailand and Indonesia. These crises of Southeast Asian countries were closely related to the economic slump of Japan. Rather, the financial crisis of Japan played a major role to cause the currency crises in the Southeast Asia. The bubbles of these countries had been enforced by the money influx from Tokyo after the bubble collapse in Japan. Its financial companies which felt limitation to grow in its domestic market invested in these countries and their bubbles became billowed. At last, the currency crises of Southeast Asian countries broke out when their bubbles turned off.

Just before the above crises, Japanese Prime Minister of Treasury decided to set up the '21st century Financial System' called as 'Big Bang Initiative' in November 1996. His declaration of ‘Big Bang’ prompted banks to stop supporting the companies of real estate and construction. As a result, some of construction companies began to go bankrupt in early 1997 such as Tokai Heavy Industries, Dada Construction, Taito Industrial and so on, which left serious aftereffects on the Japanese economy. These bankruptcies spread across some financial companies such as Nissan Life Insurance in April, Sanyo Securities in November 1997, and so on. The operation of credit destruction principle stemming from this financial crisis called eventually for the investment withdrawal from Southeast Asian nations, which triggered their financial crises to go worse. These crises spread to the whole Eastern Asia. The Japanese economy fell into a more serious recession in turn.

So, was this financial crisis of Asia a crucial factor that caused the long-run stagnation of Japanese economy? It is true that its economy was affected by it. Its growth rate recorded minus 2.0 percent in 1998 and the Asian crisis played an important role in this economic downturn. However, other Asian countries that had undergone the currency crisis turned fast to recover since 1999 after the severe economic downturns in 1998. On the contrary, the recovery of Japanese economy was late more than a year. Its growth rate in 1999 was minus 0.2 percent and 2.3 percent in 2000 while the other countries recorded outstanding growth rates in the same years. For instance, South Korea which had experienced a currency crisis at the time enjoyed high growth rates of 11.3 percent in 1999 and 8.9 percent in 2000.

Furthermore, a severe slump in the Japanese economy was followed again as its growth rate dropped back to the level of 0 percent in 2001 and 2002 respectively. This economic downturn was affected by the collapse of NASDAQ market and the 911 attacks in USA. But the average growth rate of Japan was lower than that of USA. After then, the Japanese economy recovered for a while as its growth rate in 2004 was 2.4 percent. However, it fell to the range of 1 percent in 2005. Even after the global finance crisis in 2008, its economic downturn was deeper and

longer than other developed countries. The Japanese economy recorded negative growth rates in 2008 and 2009 respectively. Although it posted a relatively high growth rate in 2010, it turned again negative in 2011.

Table 7. Growth Rate of Japan in the 2000s and 2010s

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Rate	2.3	0.4	0.3	1.7	2.4	1.3	1.7	2.2	-1.0	-5.5	4.7	-0.5	1.7	1.4	0.0

Source: http://ecos.bok.or.kr Aug. 17, 2015, The Bank of Korea

Accordingly, it is right that the root cause of long-term stagnation in Japan has to be found at the other place. What has got the Japanese economy plunge into a long-run stagnation? It is reasonable to consider that the reason why Japanese economy did not escape from the long-time stagnation is not in the structural trouble but in the other trouble. If not, its economy should have gone back to a high growth by the powers of exporting companies that have maintained high competitiveness until now. The only reason why the national economy has been stagnant for a long time despite its high competitiveness is because the economic policy of Japanese government has failed repeatedly. This policy failure used to lead its economy into slump every time after brief recovery. It is strange that the policy failure of its government has rarely been mentioned in Japan despite its obvious failure as will be seen. And its government accepts hardly the policy failure till now too, repeating the wrong policy.

If the economic policy failed repeatedly, it would be normal for the Japanese government to explore a variety of new policies and one of them would have been successful. Why could not it find a policy to succeed? The only reason would be the fact that the policy considered desirable in ideal does not operate in the real world as expected. Rather its result is worse. If not, some economists in Japan would have found a policy to revive the economy. Indeed, the policy which has believed firmly by its officials and economists in charge to be desirable for the economy has operated to recall the repeated slumps; the wall of thought has worked. What policy has failed repetitively?

Current Account Surplus Has Slowed Down the Japanese Economy

It is unreasonable to find the reason why Japanese economy has suffered from a long-term slump in the industrial competitiveness because its current account has recorded a large surplus which means the strong competitiveness of its industry. So, where is the reason to be found? What way is advisable to find the reason? The national economy is largely divided into the real sector and the financial sector. The reason has to be found in the financial sector if the economy suffers from slump despite the fact that the real sector is strong. To conclude in advance, it is the huge surplus of current account that has played the crucial role in putting its economy into a long-run slump. This paper reveals the process that has led the Japanese economy into the long-run slump as follows.

Some surplus of the current account was accumulated as the foreign exchange reserve and the rest was accumulated as the overseas asset. The foreign exchange reserve of Japan increased from 24.6 billion dollars in 1980 to 78.5 billion dollars in 1990. Its increasing speed was accelerated since then, exceeding one trillion dollars in 2008. The surge in foreign exchange reserve had a bad influence on its economic recovery due to hoarding up a precious resource

aside and calling rigidity of its monetary policy. However, it did not leave any severe aftereffect except the above adverse effect. It was the surge in overseas asset that caused the most serious trouble in the Japanese economy.

Table 8. Foreign Exchange Reserve of Japan (billion dollars)

Year	1990	1994	1996	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Reserve	78.5	126	218	356	396	462	665	835	836	881	954	1,031	1,049	1,096	1,296

Source: http://ecos.bok.or.kr Nov. 15, 2012, The Bank of Korea

The amount of net overseas asset was negative until 1992 since the investment of foreign capital into Japan increased much more than its current account surplus. However, its overseas investment has surged since 1993, increasing the net overseas asset. The asset which was 32 trillion yen in 1993 surpassed 100 trillion yen in 1998 and increased to 127 trillion yen at the end of 2001. It is an underlying matter that the overseas asset has to make money. There appears a serious problem in the financial sector if the return on the asset invested abroad does not exceed the cost of its funding. The following is an analogy for anyone to understand it easily.

Table 9. Net Foreign Assets (trillion Yen)

Year	1980	1990	1993	1998	1999	2000	2001
Assets	-2.7	-30.5	31.8	109.5	103.2	110.6	127.3

Source: http://kostat.go.kr, The Korean Statistical Office, June 21, 2002

When someone buys a building for rent, he gets the rental profit and earns more income at first. What happens if the repair and maintenance costs exceed the rental profit and the value of the building drops significantly? Naturally, his income reduces, and he may go bankrupt at last. This process has happened in the Japanese economy. For example, Sony recorded a deficit of 293 billion yen at the March settlement in 1995 for the first time in its history. The main cause of the deficit was the loss of goodwill of 265 billion yen from a US movie company it had bought. Matsushita Electric lost 160 billion yen, about 1.7 billion dollars, by selling MCA to Sigram while it had bought the company at 5.7 billion dollars. Pioneer also revalued two companies including Columbia Pictures at the March settlement in that year and posted a valuation loss of 90 million dollars. And Mitsubishi had bought Rockefeller Center at 1.3 billion dollars, but its value was less than 1 billion dollars in 1997 (Lee, pp. 38-40, 1997). As mentioned so far, the overseas assets purchased by Japanese companies had suffered from massive losses, which deepened a financial crisis by operating the principle of credit destruction in the Japanese economy.

The crisis of its economy has begun long time ago. The tragedy has already started to realize since the end of the 1980s when its economy reached its peak. Its volume of foreign exchange reserve surged to 96.7 billion dollars in 1988 from 42.2 billion dollars in 1986. And then the Bank of Japan accepted it as a serious symptom which would put a big pressure on the price inflation caused by monetary expansion. To reduce the pressure, its government encouraged companies and financial institutions to invest overseas. It might be the belief of its government that overseas investment was indispensable in order to prevent the Yen from appreciating caused by a huge surplus of current account. As a result, its volume of foreign exchange reserve

shrank at the beginning of 1990s despite a huge surplus of current account. For example, it fell to 78.5 billion dollars in 1990 and to 71.6 billion dollars in 1992.

Table 10. Foreign Reserve and Current Account in 1980~90s (billion dollar)

Year	1987	1988	1989	1990	1991	1992	1993
Reserve	809.8	967.3	839.6	785.0	720.6	716.2	985.2
Account	870.2	796.1	569.9	358.7	682.0	1,125.7	1,316.4

Source: International Statistics Yearbook 1995, The Korean Statistical Office

This policy of its government urged companies to hunt some properties overseas, pictures of famous painters, and so on. The volume of overseas investment could be roughly estimated by adding the current account surplus to the decrease of foreign exchange reserve. It reached about 300 billion dollars in just four years from 1989 to 1992. Such a large foreign investment resulted in a big loss as mentioned above since the US economy turned to a slump in the early 1990s. Naturally the financial indices of Japanese companies were deteriorated and most of the real estates, pictures and movie companies they had bought were forced to sell again.

In terms of sustainability, it is vital to review the economic function of current account surplus as follows. If the cumulative surplus of current account is left undone, it results inevitably in the increase of foreign reserve and the expansion of currency issuance subsequently. To avoid the expansion of currency issuance, foreign assets have to be acquired. However, as seen before, it made the economy worse. And the huge surplus of current account which increased foreign asset or foreign exchange reserve was calling for the appreciation of Yen, which resulted in the devaluation of foreign assets. For instance, the value of an overseas asset worth 100 million dollars is 13 billion yen when the exchange rate is 130 yen per dollar, but it is devaluated to 10 billion yen by 30 percent lower than before when the exchange rate drops to 100 yen. According to this logic, the financial indices of companies in Japan became worse and worse, and a financial crisis was accelerated due to the devaluation of overseas investment. Its annual average exchange rate which had surpassed 130 yen per dollar in the early 1990s dropped to 94 yen in 1995.

Most importantly, the overseas investment meant the flow-out abroad of domestic income. The leakage abroad of domestic income shortened the domestic demand, which caused the slowdown of domestic economy. As the domestic demand showed stagnant, Japanese companies were more eager to increase their exports than before. This increase in export increased the surplus of current account, adding pressure to appreciate Yen. And the appreciation pressure caused the fall of its exchange rate which reduced the price competitiveness of its export. To maintain the price competitiveness, its exchange rate had to be stabilized by its government and it was inevitable to promote the outflow of current account surplus and to increase the foreign exchange reserve. Eventually, a vicious circle has been operating repetitively. In short, this is the most fundamental and decisive cause that has obstructed the Japanese economy from getting out of the long-run stagnation.

Its government has overlooked the fact that the water which turns a waterwheel already is no longer powered. This overlook is caused by the reason that the current economics remains at

statics. In fact, the general consensus of economists is that the surplus of current account is good for the economy even when it is flowed out immediately. This wrong awareness has formed a wall of thought, which has been operating the vicious circle. However, the excessive surplus of current account is not desirable in the long term because it invites a long-lasting stagnation as the Japanese economy has experienced. Metaphorically speaking, the accumulation of current account surplus causes a chronic disease calling a long-run stagnation, while the accumulation of its deficit causes an acute disease calling a currency crisis. The oriental proverb which says that overflowing is less than lacking is very useful in the national economy.

Failure of Fiscal Policy

The fiscal policy of Japanese government was an important cause of its sluggish economy too. Though its government has been stimulating its economy through massive fiscal spending, it has been reflected only in the growth rate of the relevant year. The increase rate of fiscal spending has to become bigger or at least as big as the previous year for the additional economic growth in the next year, but it cannot exceed GDP. Therefore, the effect of fiscal expansion is temporary. The reverse multiplier of fiscal spending operates to lower the growth rate when the increase rate of fiscal spending decreases. Furthermore, the fiscal expenditure is mainly applied to the field that private companies disregard to invest because of the very low productivity, which increases the pressure to lower the growth rate by hurting the average productivity of national economy. Furthermore, its marginal productivity becomes negative, which leads to decrease its growth rate.

Of course, when the vicious circle of the economy takes place to drive the national economy into a deep depression, it is essential to increase fiscal spending in order to stop it. Japan's fiscal policy might be evaluated in this sense. Its growth rate rose to 1.9 percent in 1995 and 2.6 percent in 1996 due to the aggressive measures such as increasing fiscal expenditure and lowering interest rate in the early 1990s. At that time, its government chose a good policy to stop the rapid slowdown of its economy and block the operation of vicious circle. The Japanese government also enforced 'Disposal of Jusen' on June 1996, that is, the policy of arranging bad debts of housing finance companies by the public fund. And the Bank of Japan reduced its base interest rate at that time to escape its economy from the vicious circle.

As the economy recovered temporarily due to the above policies, its government misjudged that the recovery was regular and would continue. On this misjudgement, the Japanese government enforced the policy to reduce national debts which had grown tremendously due to the fiscal expansion. Financial Restructuring Reform Act was enacted in September 1997 which prohibited the issuance of deficit bond and limited the fiscal deficit to 3 percent of GDP. Under this law, consumption tax was raised from 3 percent to 5 percent and income tax increased by 2 trillion yen to rebuild the fiscal soundness. This policy spilled cold water on the economic recovery. The Japanese government should have pursued the above policy more cautiously than ever as the US government has done since 2009. The US government has been reluctant to set back the quantitative easing policy after enforcing it to overcome the economic difficulty caused by the financial crisis in 2008. Thus the US economy did not fall down as Japan experienced.

From the macroscopic view, the household income of Japan declined by about 9 trillion yen since consumption tax increased according to the law mentioned above. In addition, special cut of income tax was abolished, and the burden of medical expense was increased. So, the Japanese economy was under pressure to retreat. At this situation, the failures of financial and monetary policy were joined to retreat the economy as below. Its Ministry of Treasury issued an order of business suspension to Hanwa Bank on November 1996 according to the Financial Restructuring Reform Act, and the bank went bankrupt. Its economy started to decline fast. Nikkei stock index which maintained over 20,000 yen declined again at the end of the year. In January 1997, 'Sell Japan' happened due to the rush of sell orders concentrated on banking stock. The 'Japanese Bond and Credit Bank' got a large risk premium, and the deposit withdrawal at 'Takushoku Bank of Hokkaido' happened.

As soon as the financial crisis began to progress in this way, the Bank of Japan worried about the spread of this crisis to the financial institution on the whole and rushed to rescue the banks in late March and early April 1997. However, the financial crisis that surpassed the 'Sell Japan' at the beginning of the year came to flood due to the mass selling of finance and construction stocks at Tokyo Stock Market in the fall of 1997. At this situation, Takushoku Bank of Hokkaido collapsed on November 1997 at last. It was the first case that a city bank, just like a US commercial bank, went bankrupt since World War II. Just before it, Sanyo Securities, a large-sized security company, went bankrupt. Yamaichi Securities, one of the four biggest security companies, closed at November 24. As the financial crisis spread, Japanese economy was cooled more rapidly.

Eventually, its government announced 'Emergency Economic Policy' focusing on the deregulation in November 1997. It executed also a comprehensive stimulus package of 16.7 trillion yen to boost the economy in April 1998. But the economy did not revive. The growth rate which recorded 1.6 percent in 1997 declined to minus 2.0 percent in 1998 and minus 0.2 percent in 1999 when the East Asian currency crisis occurred. In the meantime, stimulus policies such as expanding fiscal expenditure, lowering interest rate, and so on were repeated several times. For instance, the Japanese government implemented the emergency economic measure of 23.9 trillion yen in November 1998, economic start-up measure of 18 trillion yen in November 1999 and 11 trillion yen of footwear measure in October 2000. It carried out other emergency measures too such as the disposal of bad debts of its financial institution and the revitalization of security market in March 2001. Nonetheless the active responses as above, the Japanese economy did not recover.

As the economy slowed for a long period of time, various aftereffects appeared in some fields. The most serious was the worsening difficulties of financial companies, which would have caused the overall financial crisis and would have led the Japanese economy into a catastrophic disaster if left undone. Its long-term economic downturn worsened the management balances of most companies in Japan too. Bad debts of its financial institutions continued to increase. Its volume of non-performing loans increased to 29.8 trillion yen in 1998 and reached 32.5 trillion yen in 2001. The 'classified debts' so-called 'precautionary debts' which was likely to become a bad debt was twice of the bad debts. In the end, its economy developed into a situation that the recession of real economy was further fueled by the financial crisis. The long-run stagnation of real economy triggered bankruptcies in the financial industry, and the bankruptcies deepened

the recession of real economy. To break this vicious circle, it was necessary to inject boldly public funds carrying out a restructuring of the economy, but its large-scale national debt made it hard.

Table 11. Bank Bad Loans in the late 1990s and early 2000s (billion yen)

Date	Mar. 1998	Mar. 1999	Mar. 2000	Mar 2001
Bad Loans	29.8	29.6	30.4	32.5
Depreciation	13.3	13.6	6.9	6.1
Accumulation	45.1	58.8	65.7	71.8

Source: Lessons to Learn from the Decade Stagnation of Japan, KDI

Why and how did the Japanese economy which had been wondering the world until the 1980s fall as above? In short, its fall was caused by the repeated failures of economic policies as mentioned so far. If so, what economic policy could have prevented the fall? It is often said that there could be no supposition in the history, but this question needs to be answered for the future since the tragedy of its economy should not happen anywhere in the world. If the following policies had been adopted, its economic stagnation would not have lasted for such a long time.

First, it had been necessary for the government to adjust the boom in the late 1980s to a sustainable level. Even the excessive growth rate of 7.1 percent in 1988 should have been calmed down somewhat. Its slump would have been much less serious if its economy was calmed down. Even though this was the realm of God, its economic difficulties would have been eased much if it had not enforced the monetary easing policy that caused the soaring prices of stock and real estate in the late 1980s. This policy drove the economy to bubbles so deadly.

Above all, when the principle of credit destruction became inevitable to operate, the policies of fiscal tightening and high interest rate should have been adopted instantly in order for the insolvent companies to be restructured by the market. If its government should have adopted tightening policies, the total supply capacity of Japanese economy would have been reduced drastically, causing a more serious recession in short run. However, it would have made the aggregate supply decline faster than the aggregate demand although the latter would have declined too. Then, the supplier's market would have been formed and surviving companies would have made profits shortly despite a severe recession. Their productions would have been increased according to their increased profits. In sequence, their employments and facility investments would have been increased soon. By enforcing this policy, the Korean economy overcame successfully the currency crisis in 1998 (Choe and Kim, 2020). Thus, the bankruptcies in financial sector would have been restrained. However, these policies could not have achieved a great outcome in the long run if its current account surplus would not have been reduced because it is the most fundamental and decisive cause of its long-run stagnation.

After re-launching of the Abe regime in 2012, its government pursued policies of fiscal expanding and monetary easing again and achieved some economic fruits for a while. Its economy grew by 1.5 percent in 2012 and this upturn continued in 2013 reaching 2.0 percent

of growth rate. Many economists analysed that fiscal expanding and low Yen promoted its domestic demand and export, improving management performances of companies. But this analysis was wrong because its economy had suffered from a long-run stagnation even when the fiscal spending had been expanded and Japanese export had been sustained brisk due to low Yen in the past. Indeed, its economy declined after then, recording 0.4 percent of growth rate in 2014. From 2015 to 2018, its growth rate dwindled from 1percent range to 0 percent range. It was a temporal recovery owing to the recovery of world economy.

***Table 12*. Japanese Growth Rate in recent years**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rate	-1.1	-5.4	4.2	-0.1	1.5	2.0	0.4	1.2	0.6	1.9	0.8

Source: http://ecos.bok.or.kr Jun. 13, 2019, The Bank of Korea

What is the reason why its economy has shrunk seriously as above in 2014 amid the decrease of its current account surplus? In fact, its current account surplus, a decisive factor that drove its economy into a long-run slump, fell to 126 billion dollars in 2011 and further declines were followed. It decreased to 41 billion dollars in 2013 and 24 billion dollars in 2014. It was temporarily turned to deficit although the surplus surged again to 135.6 billion dollars in 2015. What is the reason of its downturn in 2014? First, the business balances of companies have deteriorated due to the sluggish economy for a long time. Second, the national debt exceeding 200 trillion yen is a heavy burden on the economy. Third, excessive intervention of its government has reduced its growth potential and international competitiveness. These reasons, however, have only indirect effects on its economy. Two following causes have played direct roles in its sluggish economy of the recent years.

One of them, as shown in the graph below, is the violent fluctuation of growth rate, which has got a negative impact on the business balances of companies and has attributed to a significant drop in its growth sustainability. For instance, its growth rate exceeded 7 percent in the second and third quarters of 2009 and reached 10.7 percent in the third quarter of 2011, but it dropped fast after then. Such a violent fluctuation happened repeatedly as seen in the below graph. In fact, if the economy soars and plunges repeatedly in a short period of time, companies cannot increase investments and employments with confidence because the increasing investment and employment in the booming period deteriorates their business balances when the economy plunges. Their productions, investments, and employments cannot help decline when their balances deteriorate.

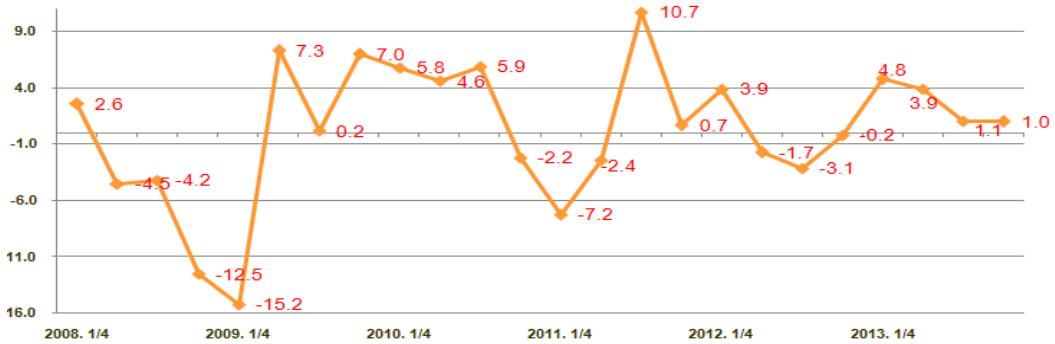


Figure 1. Quarterly Growth Rate of Japan in Recent Years
Source: http://www.boj.or.jp, Sep. 9, 2014, The Bank of Japan

The other cause is the inflation gap between the producer and consumer prices which has deteriorated the management balances of companies, resulting in their sluggish investments and employments. As shown in the table below, the inflation rate of consumer prices has been lower than that of producer prices since 2013. In this case, their business balances cannot help but worsen because selling prices are lower than producing costs. Then, their investments and employments increase hardly, and the economic slump cannot be escaped. This big gap between producer and consumer prices would not have happened if Japanese exchange rate would have declined gradually by the market power. Japanese government has hindered it.

Table 13. Monthly Inflation Rate of Consumers and Producers in 2013

Month	1	2	3	4	5	6	7	8	9	10	11	12
Consumer	-0.3	-0.6	-0.3	-0.7	-0.3	0.2	0.7	0.9	1.1	1.1	1.6	1.6
Producer	-0.4	-0.1	-0.5	0.1	0.6	1.2	2.2	2.3	2.2	2.5	2.6	2.5

Source: http://www.boj.or.jp, Sep. 9, 2014, The Bank of Japan

THE CASE OF SOUTH KOREA

South Korea has also suffered from its low growth rate for a long time in recent years, which is stalling to deteriorate its employment, investment, and the gap between the rich and the poor. So, the Korean economy needs to be checked since it is analysed that the surplus of current account has played a decisive role in causing its long-run stagnation just like the Japanese economy. The low growth rate of South Korea has begun to be structured since the administration of Myung-Bak Lee (February 2008 - January 2013). So, it is necessary to clarify what kind of economic policy was implemented at that time and what happened in the economy.

The Lee administration set out the vision of dreams such as 'annual growth rate of 7 percent, national income per capita of 40 thousand dollars, the world's seventh largest economy'. To realize these dreams, the first step was to increase the growth rate. The Lee's government believed that it was essential to raise its exchange rate in order to increase the export which would increase the growth rate. So its government bought about 5 billion dollars of foreign exchange in the market in the first quarter of the year. As a result, the exchange rate per dollar which was 937 won at the end of January reached 992 won at the end of March, rising by 5.9

percent for two months. This upward trend of exchange rate often persists for a quite some period since it has an inertia just like other economic variables. The annual rate of its increase would have surpassed 40 percent if the above trend would have continued for a year. In fact, the value of dollar surpassed the mark of 1,000 won at the end of May and reached 1,100 won on September.

Korean export increased temporarily since its exchange rate rose as above. Exporters expected for more profits, so they exported more than before. The increase rate of export which was 15 percent in January reached 18 percent in February and March respectively, exceeded 20 percent in April and 35 percent in July. It was another important reason of increasing export that the domestic economy was sluggish, and Korean companies tried to survive through their exports. What was the result of increasing export? It seemed natural that the economy would have revived and its growth rate would have gone up to 7 percent as promised since its export soared as above. In history, its growth rate exceeded 8 percent when the increasing rate of export exceeded 10 percent until the 1990s. Did the economy go up really? No, it did not.

Table 14. Exchange Rate (Won/Dollar) and Export Increase Rate (%) in 2008

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Exchange	942.4	944.7	979.9	986.7	1,036.7	1,029.3	1,019.1	1,041.5	1,130.4
Export	14.9	18.9	18.4	26.4	26.9	16.4	35.6	18.1	27.7

Source: Monthly Statistical Bulletin Jan. 2009, The Bank of Korea

Rather its economy turned down. Its growth rate which was 6.8 percent in the fourth quarter of 2007 just before Lee administration was launched fell to 3.9 percent in the first quarter and to 1.4 percent in the second quarter of 2008. At that time, the world economy was not so bad overall either. The growth rate of US in the first half of 2008 was higher than that in the fourth quarter of the previous year although sub-prime mortgages had become serious. Europe and Japan also recorded positive growth rates until early 2008.

Table 15. Quarterly Growth Rate in 2007 and 2008

Quarter	2007 2/4	2007 3/4	2007 4/4	2008 1/4	2008 2/4	2008 3/4	2008 4/4
Growth	5.9	4.7	6.8	3.9	1.4	0.7	-17.3

Source: The National Account 2007 & 2008, The Bank of Korea

Above all, the fact that the Korean export increased greatly as seen above proved that the impact of overseas economic conditions on its domestic economy was limited. Unfortunately, its economic decline did not stop there. Its growth rate fell to 0.7 percent in the third quarter and to an undetectable minus 17.3 percent in the fourth quarter of the year. A sudden downturn of its economy happened at that time as if a catastrophic crisis occurred. However, it was difficult to find any awakening about this serious situation in the society of economists as well as its policy officials in charge. Fortunately, the economy had suddenly turned up afterwards without their awakening.

What caused the economy to fall so fast as above? Policy officials in charge and economists in Korea have often cited the global financial crisis in 2008 as the cause of its downfall. But it was wrong because the economy had already fallen sharply since the first quarter of 2008. The

variable which happened after the economic downturn could not be its cause. The global finance crisis was heightened by the bankruptcy of Lehman Brothers in September 2008. So, the Korean economy should have declined since the fourth quarter of 2008 if the global crisis caused its downturn, but it had declined much earlier. Therefore, it is reasonable to assume that the cause of its economic downfall had to be sought in the other place.

And the main route through which the global finance crisis affects its domestic economy is the export. In particular, the export in terms of Korean currency has a direct impact on its domestic economy. The export in its currency increased significantly when the domestic economy declined sharply as above. It increased by 35 percent in the second quarter of 2008 when the growth rate dropped to 1.4 percent. The growth rate recorded only 0.7 percent in the third quarter while its export increased by 45.4 percent. Even in the fourth quarter, the growth rate dropped to minus 17.3 percent while its export increased by 33 percent.

Table 16. Export Increase Rate in Won and Growth Rate

Quarter	08 1/4	08 2/4	08 3/4	08 4/4	09 1/4	09 2/4	09 3/4	09 4/4
Export	19.6	34.9	45.4	33.1	10.9	0.5	-3.1	-3.9
Growth	3.9	1.4	0.7	-17.3	0.4	10.4	14.5	0.7

Source: The National Account 2008 and 2009, and Monthly Bulletin Mar. 2010, The Bank of Korea

Why did the Korean economy decline continuously despite its soaring export as above? This strange situation could not happen unless the force of other economic variable was much stronger than that of its export increase. What was the variable that drove the economy to decline drastically? It is needed to look at the progress of its situation at the time before answering this question which will be discussed soon. Something hard to understand by common sense happened after the above downturn. Its growth rate rose suddenly to 10.4 percent in the second quarter of 2009 when the increasing rate of export declined to 0.5 percent. And the former recorded 14.5 percent while the latter recorded minus 3.1 percent in the third quarter. These facts also proved that the global financial crisis got little impact on the economy. In short, not only the decline but also the rise in its economy did not have anything to do with the export or overseas economic condition. This strange phenomenon was caused by the fact that its domestic consumption was much larger than its export. For reference, its export accounts for only around 10 percent of GDP while its domestic demand accounts for around 90 percent when its export is converted into the added-value since the export represents total sales and GDP represents the value added.

Why did the economy turned suddenly upward after entering in 2009? Most economists analysed that its increase of fiscal spending boosted the economy, but this analysis was wrong too. If its expansion of fiscal spending had boosted the economy, its economic downturn since the second half of 2008 would not have occurred. Its increasing rate of fiscal spending was 23 percent in the third quarter and 16 percent in the fourth quarter of 2008, over double or almost triple of the previous year. In 2009, its increasing rate of fiscal spending slowed to 24 percent in the second quarter and 6.8 percent in the third quarter from 46 percent in the first quarter. Despite this decrease of fiscal increasing, its economy grew rapidly, and its growth rate was

surprisingly 14.5 percent in the third quarter. These facts proved that the correlation between fiscal spending and growth rate was not large enough.

Table 17. Expenditure Increase Rate and Growth Rate

Quarter	07 4/4	08 1/4	08 2/4	08 3/4	08 4/4	09 1/4	09 2/4	09 3/4
Expenditure	12.6	6.1	5.4	22.5	16.2	46.3	24.2	6.8
Growth	6.8	3.9	1.5	0.7	-17.3	0.4	10.4	14.5

Source: http://ecos.bok.or.kr, Nov. 16, 2010, The Bank of Korea

What was the cause of economic decline in 2008? To conclude in advance, it was due to the rise of its exchange rate. It is reasonable to assume that its exchange rate was the most crucial factor of the sudden decline of its economy because it showed the biggest change among economic variables at that time. In fact, the prices of imported raw materials rose sharply as its exchange rate rose since early 2008. The Korean economy has depended not only on the overseas energy resources such as petroleum and coal but also on the other overseas raw materials such as wheat, meat, feed, cotton, iron ore, and so on. Thus, its inflation rate of consumer prices rose to 5.9 percent in July 2008 from 3.6 percent in February. When the prices went up like this, the economy became sluggish eventually because it had to spend less on the same income than before.

The worst was the inflation of producer prices. It started to rise vertically from 4.2 percent in January to 12.5 percent in July. What would happen when the producer prices rose faster than the consumer prices? The business balances of firms deteriorated severely because the producing costs rose faster than the selling prices. Indeed, the gap between producer prices and consumer prices reached 5~6 percent in mid-2008. What else happened? The Korean companies reduced their productions, employments, and investments as their business balances deteriorated. And the vicious circle of lowering income and consumption began to operate. Naturally, the economy fell down quickly. This economic principle worked importantly in the background of the rapid decline in 2008.

Table 18. Rates of Consumer and Producer Prices in 2008 (%)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Consumer	3.9	3.6	3.9	4.1	4.9	5.5	5.9	5.6
Producer	4.2	5.1	6.0	7.6	9.0	10.5	12.5	12.3

Source: Monthly Statistical Bulletin Dec. 2009, The Bank of Korea

The most serious event occurred in the financial sector. The demand for foreign exchange which would appear in the future shifted to that current time since the exchange rate continued to rise. Its rate soared sharply as the future demand joined to the current demand. At the same time, the rumour that a currency crisis might happen in September began to drift in the market. Some foreign financial companies began speculating on the exchange rate in South Korea. Its exchange rate surpassed 1,200 won per dollar in October and continued to rise. Once it exceeded 1,500 won in October. What happened when the exchange rate soared so high? Would it affect only on the prices as seen above? No, it hurt the financial sector even more seriously

than the other sector. Financial companies in Korea which had borrowed money from foreign countries could not help but suffer the loss of foreign exchange as much as the exchange rate rose. For example, if a financial company borrows 100 million dollars, it has to pay extra 50 billion won of foreign exchange loss except the principal and interest when the exchange rate per dollar goes up to 1,500 won from 1,000 won.

By the end of 2007, the foreign debts borrowed by Korean domestic banks and firms was amounted about 100 billion dollars respectively, summing 200 billion dollars, so they had to pay more than extra 100 trillion won because its exchange rate soared so high. The general firms were relatively inexcusable because they could not get enough money to pay off their debts right away. On the contrast, its domestic banks had enough money to rush out the foreign debt. The net foreign debt was repaid by 3.8 billion dollars in the third quarter of 2008, and net repayment of 24.1 billion dollars were made in the fourth quarter when its exchange rate began to rise in earnest. The sum was about 33 trillion won in Korean currency, which amounted to 85 percent of the monetary base and almost 10 percent of the narrow money (M1). As a result, the financial sector suffered from a severe credit crunch. So, the former president Lee said in hurry over his duty at the time, "The banks have to lend to companies, and I will not ask for the responsibility." The Korean economy fell quickly as its financial sector caused credit crunch like above. Accordingly, its growth rate was recorded by minus 17.3 percent in the fourth quarter 2008.

Table 19. Foreign Debt Increase (Billion Dollars) and Average Exchange Rate

Year	2006	2007	2008 1/4	2008 2/4	2008 3/4	2008 4/4
Debt	237.3	268.5	129.9	53.6	-38.3	-240.8
Exchange	956	929	956	1,018	1,064	1,364

Source: Monthly Statistical Bulletin Dec. 2009, The Bank of Korea

By the way, what was the reason for the rapid rise in 2009? It was also due to its exchange rate. As its exchange rate declined in 2009, the introduction of foreign capital was able to enjoy the foreign exchange gain, which induced the foreign capital to flow into its economy. The inflow of foreign capital meant the transfer of foreign income into its domestic economy, which increased the domestic demand, raised its purchasing power, and boosted its economy.

As shown in the table below, its growth rate was 0.7 percent in the third quarter of 2008 when the capital account of international trade recorded a deficit of 6.3 billion dollars. And the capital account recorded a large deficit of 42.6 billion dollars in the fourth quarter of the year, which lowered its growth rate to minus 17.3 percent. Fortunately, the deficit of capital account declined sharply in the first quarter of 2009 and its economic downturn stopped, recording the growth rate of 0.4 percent. In the second quarter and third quarter of 2009, the surplus of capital account reached a large-scale of 8.7 billion dollars and 14.4 billion dollars respectively and its growth rate increased greatly while the increasing rates of export and fiscal spending declined fast.

In the fourth quarter of 2009, the growth rate dropped to 0.7 percent, which was not related to the exchange rate. What was the reason of this decline? The growth rate of 10.3 percent and

14.5 percent recorded in the second and third quarter respectively was much higher than the growth potential of its economy. If an economy accelerated its growth so fast in such a short period, its growth potential became to be exhausted and its growth rate fell soon. To analogize, a marathon runner who can run in 15 minutes for a 5km zone is likely to be exhausted soon after running in 13 minutes. The growth rate which fell from 14.5 percent in the third quarter to 0.7 percent in the fourth quarter is just like the phenomenon that a car driving by 145km per hour lowers suddenly the speed to 7km.

Table 20. Capital Balance (Billion Dollar) and Growth Rate

Quarter	08 3/4	08 4/4	09 1/4	09 2/4	09 3/4	09 4/4	10 1/4	10 2/4
Capital	-6.3	-42.6	-1.4	8.7	14.4	4.8	5.7	-4.1
Growth	0.7	-17.3	0.4	10.3	14.5	0.7	9.2	5.7

Source: Monthly Statistical Bulletin Dec. 2010, The Bank of Korea

Fortunately, its growth rate rose again by 9.2 percent in the first quarter of 2010 when the capital account surplus reached 5.7 billion dollars. However, it dropped to 5.7 percent in the second quarter of the year since the capital account recorded deficit of 4.1 billion dollars despite the current account surplus of 10.3 billion dollars. The reason why the growth rate became jagged since the entry in 2010 was due to the sharp fluctuation of its exchange rate. The economic uptrend would have continued in the second quarter if its exchange rate would have been stable, but its government defended aggressively its exchange rate and raised it again, which led to a large deficit in capital account. And then it was crucial for the economy to decline.

Table 21. Growth Rate (%) and Exchange Rate (won/dollar)

Quarter	09 1/4	09 2/4	09 3/4	09 4/4	10 1/4	10 2/4
Growth	0.4	10.4	14.5	0.7	9.2	5.7
Exchange	1,413	1,286	1,239	1,168	1,143	1,165

Source: Monthly Statistical Bulletin Dec. 2010, The Bank of Korea

In the regime of Geun-hye Park launched on February 2012, its policy on the exchange rate was not changed from that of Lee. It was firmly believed by its government that maintaining high exchange rate would increase the export, current account surplus, and growth rate. So, the policy to defend the exchange rate was carried out every time when it declined. For example, when the exchange rate which had been 1,153 won per dollar in the end of 2011 declined to 1,071 won in the end of 2012 since the current account recorded a massive surplus, its policy to defend it became fierce. So, the exchange rate rose to 1,150 won at the end of June 2013. However, the market power operated to fall the rate to 1,014 won at the end of June 2014, which caused a new and strong policy since 2015. It was the policy that most of the current account surplus was led to be leaked immediately abroad by the government, named overseas investment. This policy has maintained nowadays, and it has slowed down its economy furthermore.

As shown in the table below, the current account surplus recorded a large scale every year and its volume increased year by year. The current account surplus which was 18.7 billion dollars in 2011 exceeded 100 billion dollars in 2015. The more current account surplus needed the

more intensive policy for defending the exchange rate. For instance, the foreign reserve increased only by 3.2 billion dollars while the current account surplus was 84.4 billion dollars in 2014. And it increased only by 4.4 billion dollars in 2015 and 3.1 billion dollars in 2016 while the current account surplus was 105.9 billion dollars and 98.7 billion dollars respectively in the years. These facts mean that most of the current account surplus has flowed out abroad in the name of overseas investment.

Table 22. Exchange Rate (Won/$), Current Account & Foreign Reserve (Billion$)

Year	2011	2012	2013	2014	2015	2016
Exchange Rate	1,153	1,071	1,055	1,099	1,172	1,209
Current Account	18.7	50.8	81.2	84.4	105.9	98.7
Reserve	306.4	327.0	346.5	363.6	368.0	371.1

Source: Monthly Statistical Bulletin Jun. 2017, The Bank of Korea

What happens in the economy when most of the current account surplus is leaked overseas as above? The outflow of current account surplus means the leak out of the domestic income earned from the export. Therefore, the domestic demand shrinks, its growth rate declines inevitably, and the economy becomes more sluggish than ever. In other words, the policy which has spilled out most of the current-account surplus overseas has put pressure on the growth rate to drop. As its current account surplus in 2015 and 2016 was 7.7 percent and 7.0 percent of GDP respectively, the average rate of growth per annum was decreased so much. In fact, it recorded only by 3 percent of average growth rate in the years of Park regime.

The governments of Lee and Park did not neglect to overcome the economic hardships. Rather, their policymakers in charge worked hard to stimulate the economy and enforced various policies. First, the Bank of Korea lowered incessantly the base interest rate to 1.25 percent at the beginning of 2016 from 5.0 percent at the end of 2007. And it issued the currency additionally to increase its amount by 3.3 times during the same years. Its average increasing rate per annum reached 14.2 percent which was a tremendous level, about five times of the current growth rate. But the economy did not revive despite the above massive quantitative easing policy.

Next, the Ministry of Economic Strategy and Finance has increased the fiscal expenditure to 385 trillion won in 2016 from 207 trillion won in 2007. It grew at an annual average rate of 7.2 percent in the Lee administration which was higher than the current growth rate of 5.7 percent. Its expansion was continued in the Park administration too. Especially, it was increased by 8.6 percent in 2015 and 13.4 percent in 2016. However, the economy did not turn to rise as ever. Unfortunately, the national debt amounted to 679 trillion won at the end of 2015, raising the risk of fiscal crisis.

Table 23. Expenditure, Currency Issue (Trillion Won) & Growth Rate (%)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Expend.	206.6	234.9	268.4	254.2	273.7	293.0	300.2	312.4	339.4	384.9
Currency	29.3	30.8	37.3	43.3	48.7	54.3	63.4	74.9	86.8	97.4
Growth	5.5	2.8	0.7	6.5	3.7	2.3	2.9	3.3	2.8	2.8

Source: *http://ecos.bok.or.kr*, Nov. 21, 2017, The Bank of Korea

Third, the governments of Lee and Park had increased the investment on science and technology in order to raise the growth potential. They continued to expand the R&D investment by introducing the terms of 'green science and technology', 'creative economy' and 'new growth engine industry'. As a result, the R&D investment has risen to the world's highest level, reaching 4.9 percent of total fiscal spending in 2016. Though the growth rate seemed to be at the highest level in the world, its growth rate was less than the world average in the reality. This fact proves that it is not possible to save the economy by investing in science and technology when the economy keeps on stagnating. Rather the increasing investment of science and technology intensifies the likelihood of bankruptcy when the economy is in a long and deep slump. It is no matter how well the investment is made.

Fourth, as seen above, the defending policy on exchange rate from declining has been fostered fiercely and constantly by the policy officials in charge who have believed that it is inevitable to increase the export and to activate the economy. Fifth, the Korean government has executed various policies to create jobs as the economy became sluggish for a long period of time. But getting job has become hard more and more. Only the casual and daily jobs have slightly increased. Nowadays the rate of youth unemployment has risen to 12.5 percent.

As seen above, the Korean government has not saved the economy despite the various economic policies. Since its current account was very big, the slowdown of Korean economy could not happen without a very powerful economic variable which pressed the economy to decline. The variable is the failures of economic policies. Above all, the policy failure of defending exchange rate from declining has played a decisive role to bring down the economy. The growth rate of South Korea would have been around 6 percent if the exchange rate policy does not have failed, because the outflow of current account surplus abroad, over 7 percent of GDP in recent years, has pressed to decrease the national income.

THE CASE OF CHINA

The growth rate of China was 9.6 percent in 2008 and 9.2 percent in 2009 even while most of countries in the world hit negative marks due to the global financial crisis in 2008. However, its growth rate has slowed down to just 6~7 percent range in recent years. Many experts of Chinese economy have analysed that its economic downturn has been caused by structural troubles. It is their claim that China will hardly escape from the economic downturn due to its structural troubles. If its economic downturn is due to the structural troubles, its economic downturn will become more serious and prolonged in the future. Is it real? No, it is not.

If structural troubles have caused the economic slowdown, its growth rate would have slowed gradually for a long period of time, but it was more than 9 percent a few years ago. Therefore, it is reasonable to assume that its economic downturn in recent years is not caused by structural troubles, but it is caused by the failure of economic policy. The Chinese economy could recover at least 8 percent of growth rate in near future if its policy is freed from the failure. What policy has failed to bring about the economic downturn? Since the Chinese economy confronts the difficulty suddenly in recent years, it is reasonable to judge that something strange and big has happened earlier than it. The variable that has caused the sudden change of its economic downturn can be easily identified when some important indicators are looked into closely. It is the foreign exchange reserve.

It is natural that its foreign exchange reserve is expected to increase as much as its current account surplus which has recorded hundreds billion dollars every year. But its foreign exchange reserve has increased much less than its current account surplus. The reserve has rather decreased since 2012 when its growth rate began falling to the range of 7 percent. In particular, the reserve has decreased since the second half of 2014. So it is inevitable that its growth rate has been lowered after the year. Is it correct that the Chinese economy is getting more difficult due to the relationship between the foreign reserve and the economic growth rate? Yes, it is. As mentioned already, the decrease of foreign reserve implies that most of its current account surplus has flowed out abroad, which means that the domestic income earned from its export has flowed out abroad. Its domestic demand was shrinking, and its growth rate was lowered naturally as its domestic income flowed out overseas. In short, the growth rate has fallen because its government has led the current account surplus to be flowed out in the name of overseas investment.

Meanwhile, the exchange rate of China has risen sharply since the second half of 2015. Its exchange rate which had fluctuated around 6.1 yuan per dollar for a long time reached 6.4 yuan in the second half of 2015. Why did it rise despite the huge surplus of current account? It would be the intention of Chinese government to increase its export by raising its exchange rate since its domestic economy became sluggish. But this policy brought about even a worse result. Its current account surplus increased temporarily as its exchange rate was raised so much. However, the foreign investment was encouraged more actively to defend its exchange rate from declining than before. So its economy became more sluggish and the Chinese companies were eager to export. Eventually, this process caused a vicious circle and its growth rate declined to the range of 6 percent since 2016.

By the way, its ratio of the current account surplus compared to GDP accounts for less than that of South Korea. Its current account surplus reached 304 billion dollars in 2015 and 196 billion dollars in 2016, accounting for 2.7 percent and 1.8 percent of GDP respectively. And its volume of infrastructure development such as constructing highways and other social overhead capitals in China is very large. So, its growth rate would not decline below 3 or 4 percent in near future, except the case that the Covid-19 hurt the economy. Nevertheless, it is certain that the current account surplus has played a role to lower its growth rate.

Table 24. Growth Rate (%), Current Account ($ billion) and Foreign Exchange Reserve ($ billion) of China

Year	2011	2012	2013	2014	2015	2016	2017	2018
Growth Rate	9.6	7.9	7.8	7.3	6.9	6.7	6.8	6.6
Current Account	136.0	215.3	148.2	236.0	304.2	202.2	195.1	141.3
Exchange Reserve	3,213	3,341	3,849	3,868	3,330	3,011	3,140	3,073

Source: *http://ecos.bok.or.kr*, Nov. 21, 2017, The Bank of Korea

Moreover, China's foreign exchange reserve fell by 46.4 billion dollars in 2015 and 30.8 billion dollars in 2016, which meant that its domestic income was leaked overseas so much. Why did its government pursue the policy that caused such a vicious circle? Its government officials in charge turned their face away from the real world. In the reality, all of the countries which record excessive surpluses of current account are suffering from low growth rates. Just like Japan, Germany has also recorded a large surplus of the current account while its average growth rate has been lower than other European developed countries. Although its economy grew stably in short period after the global financial crisis, reaching at 3~4 percent of growth rate temporarily as the liquidity funds of other European countries flew into Germany, its growth rate has returned to 2 percent range in recent years. The same is true for the Taiwan's economy. Nonetheless the above facts, policymakers, economists and presses relevant have believed still now that the current account surplus is favourable for the economic growth. But it is true that all the desirable economic variables are not good if they are too much. Nothing excessive is good.

CONCLUSION AND ADDITIONAL CONSIDERATIONS

The growth rates of the countries with a large surplus of current account have been very low for a long period of time as seen above. Is there any way for the countries to overcome their economic difficulties caused by their low growth rates? Particularly, is there any way to revive the Japanese economy that has suffered seriously from the long-run stagnation for more than a quarter of a century? It is a bit complicated since its slump has lasted for a long time, which has left many negative aftereffects and problems to be resolved. However, it is simple at all if its economic slump is approached by the core reason and if its problems are resolved step by step. First, it is urgent to stabilize the rapid and frequent fluctuations of its economy, which will ensure its sustainable economic growth. This policy measure to stabilize the surge and fall of its economy requires a correct and precise diagnosis of its economic fluctuation in advance, which is inevitable to carry out proper policies in time such as lowering or raising the interest rate and increasing or decreasing the fiscal expenditure. Second, it is necessary for the Japanese government to minimize its market intervention such as the reckless defending of exchange rate and massive fiscal expanding which restricts the operation of market function. Third, it is necessary for the Bank of Japan to take over gradually the financial burden of its government since its excessive debt has hindered the economy from recovering. In this case, its issuance of currency will increase, which will improve business balances of companies by causing the rise of consumer prices to exceed slightly the rise of producer prices. In this case, a tightening policy in advance will have to be carried out in time in order to prevent a vicious circle of prices inflation when the economy will recover in earnest.

Fourth, it is necessary to induce a gradual decline of its exchange rate to the level that its current account records a small deficit. This deficit will bring back the Japanese capital which has flowed out abroad. And then its domestic demand will be increased by the capital return, which will raise its growth rate. The increases of domestic demand and growth rate will increase its current account deficit. As a result, the excessive reserve of foreign exchange will decrease while it will reduce the strain of the Bank of Japan caused by the take-over of national debt. Then its anxiety of prices inflation will be relieved. This is the most important policy because its current account surplus is the root and decisive cause of its long-run stagnation. In this case, it is essential for the Japanese government to prevent its economy from skyrocketing of the exchange rate and happening of a currency crisis because they will worsen even more seriously the economy.

What is the way to revive the Korean economy? At first, its current account surplus has to be reduced and the gradual decline of its exchange rate has to be tolerated, provided that the sharp drop of its exchange rate has to be blocked in any case. If its exchange rate falls sharply in a short time, bankruptcies of its export companies may take place. The business balances of exporters deteriorate severely if its exchange rate falls by more than 10 percent per annum because the profit margin ratios of their exports are around 4∼5 percent except some special companies. Accordingly, it is advisable to stabilize the exchange rate by about 5 percent down every year until its current account is balanced.

Will its export decrease to lower the growth rate if its exchange rate will decline every year? No, it will not. Companies are strong because they can be perished. In other words, exporting companies are expected to exert their desperate efforts to avoid being perished when the exchange rate declines gradually. For instance, a company that has exported a product of 100 dollars will try to develop a new product of 150 or 200 dollars. Such an effort of the export companies will rather encourage its export, and this will increase the growth rate so that the people will enjoy economic prosperity. This process is proved by its economic history.

In fact, its export increased more than 2.5 times when its exchange rate which had been 1,326 won per dollar at the end of 2001 dropped to 899 won once in October 2007. Its exporters exerted such intensive efforts to overcome the appreciation of Korean currency and these efforts made them world-class competitive at that time, resulting in a large surplus of current account in recent years. In short, it is the time to change fundamentally its policy to defend the exchange rate from declining.

The same is desirable for Germany and Taiwan which have suffered from economic sluggishness for a long time as well as for China of which growth rate has declined recently. It is even more desirable if the other policy proposals for Japanese economy, as shown above, are adopted additionally. Meanwhile, it should be noted that this paper holds the following obvious limitation; the main point of this paper that the current account surplus has caused decisively a long-term economic stagnation would be a unilateral analysis or a false claim of the authors because there has been none of the scholars who has ever argued about it within the range we have checked.

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