

**EMPIRICAL STUDY ON THE IMPACT OF FOREIGN AID IN KOREA'S
ECONOMIC AND HUMAN CAPITAL DEVELOPMENT**

By

Jee Hee Yoon

THESIS

Submitted to

KDI School of Public Policy and Management

in partial fulfillment of the requirements

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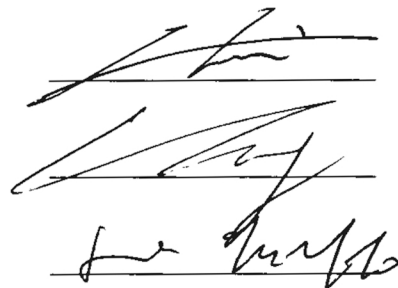
MASTER OF DEVELOPMENT POLICY

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Three handwritten signatures are stacked vertically on the right side of the page, each written over a horizontal line. The top signature is for Professor Changyong CHOI, the middle for Professor Yoon Cheong CHO, and the bottom for Professor Ju-Ho LEE.

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ABSTRACT

EMPIRICAL STUDY ON THE IMPACT OF FOREIGN AID IN KOREA'S ECONOMIC AND HUMAN CAPITAL DEVELOPMENT

By

Jee Hee Yoon

From the beginning of the twentieth century, there has been an ongoing debate about the effectiveness and the optimal delivery of aid in developing countries. However, sufficient studies have not yet been done about South Korea's aid-receiving model despite the fact that Korea is one of a few cases where a recipient country transformed into a donor country in a short period of time. This paper analyzes the direct impact of foreign aid in Korea's economic and human capital development from 1965 to 1990. Based on a time-series regression analysis, this paper finds that foreign aid had minor impact on Korea's economic and human capital development and instead other variables such as recipient government's strong leadership and policies could had more positive impact in its growth. This paper also implies that foreign aid cannot be a sole source of economic development and shows importance of recipient country's strong ownership in development.

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I. INTRODUCTION

In 2009 Korea became a member of the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) and its successful transition from an aid recipient to a donor country received significant attentions from international communities. In late 1940s, Korea was one of the poorest nation in the world; shortly after the independence from Japanese colonization, Korea's GDP per capita was \$616 and even after five years later, it only increased to \$770 due to lack of natural resources, physical and human capital (Maddison 2006, 533). However, Korea achieved what many call as the 'Miracle of the Han River' through its Five-Year Economic and Social Development Plans and large assistance from advanced countries. As a result, Korea's income per capita increased from \$82 (Constant US Dollar) in 1961 to \$20,000 in 2011 (Chang 2008, 3-4) and achieved remarkable economic growth.

There are many factors which contributed to the development of Korea; however, foreign assistance played a critical role in bringing the country's miraculous economic growth. From 1945 to 1999, foreign assistance to Korea amounted to \$36.7 billion and many bilateral and multilateral donors, including the United States and the World Bank, largely contributed to Korea's economic and human development (Lee 2010, 6: OECD DAC 2013,1). Especially, in the early years and immediately after the Korean War, foreign aid was a sole financial source in Korea, and the government heavily relied on foreign assistance for revenue and military defense. In fact, Korea is one of the very few recipient countries that produced sustainable economic development through foreign aid, and Korea's case proved that 'aid trap' is not an only reason that delays economic growth in developing countries. Though, we cannot definitely say that aid

is the only reason which affects economic growth, yet from Korea's experience, it is evident that aid worked as a bridgehead between the development and self-supporting economy.

Among development economists, there are three competing views on the impact of aid on economic growth of a country: (1) aid has positive impact on the economic growth (Hadjimichael et al., 1995; Durbarry, et al., 1998; Lensink and White, 1999; Dalgaard and Hansen, 2000; Hansen and Tarp, 2001), (2) aid has negative impact on the economic growth (Mosley, Hudson and Horrell, 1987; Boone, 1996; Ovaska, 2003; Rajan and Subramanian, 2005; Rajan and Subramanian, 2008), and (3) aid has positive impact on the economic growth under certain conditions (Burnside and Dollar, 2000; Collier and Dollar, 2002; Ram, 2003; Dalgaard, Hansen and Tarp, 2004; Ouattara and Strobl, 2004; Burnside and Dollar, 2004; Rahman, 2008; Dalaard and Hansen, 2011). However, majority of these studies are based on a cross-country analysis; thus, it is difficult to analyze the impact of aid on a single country.

Despite the importance of the subject, there has been only one empirical study conducted by Lee Jaewoo (2006) on the impact of foreign aid in Korea's economic growth. Based on the short-term economic growth model, Lee estimated the effect of concessional loan and grant aid before and after the economic development by using Ordinary Least Squares (OLS) method. The result of his study showed that concessional loan had significant impact on the economic growth, whereas grant aid had no significance. However, he further notes that before the economic development, grant aid had positive impact on the economic growth. Also, when the impact of aid is observed by variables such as consumption, investment, and government expenditure, concessional loan had impact on increasing the capital investment, while the grant aid contributed to increase in

national consumption. Thus, Lee concluded that the differences in the effect come from the differences in aid characteristics.

Based on the study by Lee, this paper empirically assesses the impact of foreign aid in Korea's economic and human capital development from 1965 to 1990, the period where Korea had substantial socioeconomic development. To be specific, this research examines the direct impact of foreign aid in Korea's economic and human capital development, and if the result is significant, then it concludes that growth in Korea's total factor productivity was positively influenced by foreign aid.

The rest of the paper is organized as follows. In the second section, I will briefly introduce the role of foreign aid in Korea's economic and human capital development with significant reference to the aid from the United States and the World Bank. The third section will present key literatures and past evidences on the impact of foreign aid in recipient countries' economic growth. In the fourth section, this study's econometric specifications, hypothesis, and data characteristics will be introduced. The fifth section will be provided with empirical findings of the study and the last section will conclude with some concluding remarks, limitations, and recommendations for the future research.

II. ROLE OF FOREIGN AID IN KOREA'S ECONOMIC AND HUMAN CAPITAL DEVELOPMENT

Many economists and experts praise the miraculous growth that Korea achieved in a short-period of time and factors behind its successful economic development are often presented as government's vast investment in primary education, strong government leadership, and remarkable industrialization through the abundant human resource. However, without the assistance from foreign countries, Korea would not have been able to realize what it has achieved in the past fifty years. From 1945 to 1999, Korea received assistance from 39 bilateral and multilateral donors (OECD 2012); however, the role of United States and World Bank are significant in the history of Korea's development as the former contributed in promoting economic development while the latter provided assistance in infrastructure and human capital development. Thus, the following parts will examine the role of foreign assistance by the United States and the World Bank in the course of Korea's economic and human capital development from 1945 to late 1980s.

2.1. Role of Foreign Aid from 1945 to late 1950s

From 1945 to late 1950s, two major events occurred in Korea that changed its fate forever; one is independence from Japanese colonial rule in 1945 and the other is the Korean War, which lasted from 1950 to 1953. During the colonization period, Japanese government completely took over Korean economy with Japanese, and many modern economic and social institutions and infrastructures such as schools, railroad and utilities were built. Although Korea's growth rate

was high during the colonization period, most of the growth was done through Japanese technologies and industries.¹ Thus, when Korea gained independence on August 1945, almost all Japanese companies departed Korea and this left the country with lack of managerial power, shortage of raw materials, and political and social instability. Shortly after the independence, on September 1945, the American aid program under the supervision of the United States Army Military Government in Korea (USAMGIK) began and its operation was supported by the Government Appropriations for Relief in Occupied Areas (GARIOA). The assistance program by USAMGIK had three main objectives: 1) prevent hunger and disease; 2) boost agricultural output; and 3) large production of consumer goods in order to overcome the shortage (Mason et al 1980, 168). As a part of these objectives, USAMGIK prioritized in raising agricultural production in rice, so that Korea could become a net exporter of foodstuffs and eventually increase its cash flow. However, the objectives established by USAMGIK were intended for a short-period of time since the U.S. government perceived that rehabilitation programs are not feasible due to unpredictable relationship between the North and South Korea.

Despite of these concerns, the land distribution program was implemented by the U.S. government in this period, which later played a critical role in Korea's economic, social, and human capital development. After the Japanese left, there was a need to restructure and organize the land, and through this program, the U.S. government established New Korea Company Ltd., to acquire information needed for a land distribution, and land distribution programs were carried out from 1948 and were accomplished before the beginning of the Korean War. The USAMGIK

¹ At the end of 1940, in terms of percentage share in total authorized capital and ownership of businesses, Korea had 5.9 percent share in industries while Japanese acquired 94.1 percent of the industries (Kim and Roemer 1981, 17).

also contributed in the development of human capital by restructuring educational systems, expanding facilities, and providing qualified teachers and school administrators (Mason et al 1980, 171). Although enrollment in primary and secondary schools nearly doubled, programs such as teacher training, campaigns for the admission of women to schools, and introducing popularly elected school boards to increase local control of education were not successful in changing the educational atmosphere (Mason et al 1980, 171). Yet, the role of USAMGIK appeared to be positive and the U.S. government decided to extend its assistance to Korea. Thus, on December 1948, the ROK-U.S. Agreement on Aid was signed and the U.S. government requested the Korean government to abide by certain economic policies that aimed at strengthening and stabilizing its economy as the U.S. wanted to ensure that Korea would not misuse the aid money. Accordingly, in 1949, the U.S. State Department suggested that Korean aid program be included under the aegis of the Economic Cooperation Administration (ECA) and decreased Korea's reliance on foreign assistance by emphasizing production inputs.

However, in June 1950, the Korean War erupted and it severely damaged Korea's economy, production facilities, and infrastructures. After the war was over, there were remarkable efforts to restore the country and the ECA changed its aid program from economic assistance to relief assistance. At this time, a military-run relief assistance program was organized under the United Nations (UN) and Civil Relief in Korea (CRIK)² program was initiated and provided \$429 million as relief assistance (Mason et al 1980, 175).³ Also, in 1950, the United Nations Korea

² CRIK was administered by a military unit known as the United Nations Civil Assistance Command Korea (UNCACK) which was renamed as the Korean Civil Assistance Command (KCAC) when it was taken over by the U.S. Army later.

³ Refer to Appendix B for more details on the support by CRIK program.

Reconstruction Agency (UNKRA) was established by the UN to deal with Korea's rehabilitation and reconstruction problems through various relief programs.⁴ Furthermore, after the Tasca Mission in 1952-1953, the U.S. government created a new aid agency, Foreign Operations Administration (FOA), to further deal with Korea's economic and defense effort. From 1945 to 1954, economic assistance by the U.S. to Korea amounted to roughly \$1.2 billion (Mason et al 1980, 182) and changes in its assistance structure occurred after 1953.

After the Korean War, aid from CRIK and UNKRA declined rapidly and major assistance was provided through the International Cooperation Administration (ICA), and from 1956, U.S. Public Law (PL) 480 program began to import agricultural products.⁵ From 1953 to 1962, foreign assistance played a critical role in the Korean economy as it financed nearly 70 percent of total imports, which is equivalent to 8 percent of Gross National Product (Mason et al 1980, 185). Along with significant changes in the amount of foreign assistance, there have been substantial shifts in the source and the type of assistance. In terms of the source of assistance, 95 percent of economic aid was supplied by the ICA and the other five percent came from the UNKRA; as for the type of assistance, grant aid was dominant until 1964. From 1957, the U.S. government requested Korean government to carry out series of stabilization programs as a condition for continued aid, and programs including setting macroeconomic ceilings on financial deficits and monetary expansion were carried out (Mason et al 1980, 195). Also in late 1950s, the U.S. government decreased the aid amount and pressured Korean government to carry out the projects that were granted in the early years of assistance. Furthermore, from 1958 to 1960, the

⁴ Refer to Appendix D for more details on the support provided by the UNKRA.

⁵ Details of ICA assistance and PL 480 programs are in Appendix C, E, and F.

amount of project aid declined to \$38 million where it was \$88 million in 1954-1957 (Mason et al 1980, 195). Although the aid policy by the U.S. did not change the amount of program aid, it shifted the programs to meet to the objectives of stabilization policy.

In terms of educational aid, U.S. government supported \$20,357 thousand to Korea through various technical assistance programs. Some of the major programs were ROK Merchant Marine Academy, teacher training program with Peabody College, improving teacher's ability to teach in English, assisting vocational high schools with their curriculums, constructing schools, and expansion of schools with the Seoul National University and faculty training in exchange with the University of Minnesota (Mechau 1961, 42). Especially, exchange programs with the University of Minnesota and Peabody College contributed in the later development of Korea's education as many Korean educators participated in the program ended up becoming prominent figures or leaders in Korean education (Kim and Kim 2012, 51). Since then, continuous efforts were made by the U.S. government to engage in Korea's human capital development through improvement in education. Thus, U.S. assistance policy from 1945 to late 1950s can be summarized that it focused on supporting Korea's rehabilitation efforts and pushed for economic stability while ensuring the effectiveness of aid.

2.2. Role of Foreign Aid in 1960s

In early 1960s, when the military government led by President Park Chung-Hee took power, Korea faced with economic and political instability. To escape from the vicious cycle of poverty, the new government began to emphasize Korea's long-term development and introduced export-

oriented growth policy along with new exchange rate system. Despite of the strong efforts made by the U.S. government, the previous Provisional Government led by Syngman Rhee had some disagreement with the U.S. aid policy and various programs and projects were not implemented on time. Thus, when the Kennedy administration drastically increased the aid allocation to Korea in late 1950s, it was inevitable for the country to emphasize the promotion of foreign exchange earning activities for resolving the balance of payment problem. Furthermore, President Park created a master plan for the country's economic development every five years from 1962, known as Five-Year Economic Development Plans, and executed and adjusted policies based on the nation's socioeconomic circumstances.⁶

During this period, the economic assistance by the U.S. was sustained around \$200 million per year, and main source of aid were in the form of concessional loans and PL 480 (Mason et al 1980, 198). Although the aid amount declined significantly compared to 1950s, its effectiveness was proliferated due to Korea's economic development policies. Moreover, the type of aid shifted from grant to loan as the Korean government had desire to induce private commercial loans and foreign direct investment. In order to bring more foreign capital, the government enacted the Foreign Capital Inducement Law in 1960 and made Korea to be more attractive for foreign investors and lenders. Since then, investments by Americans and Japanese to Korea significantly increased and the U.S. made large contribution in transferring modern technologies through technical experts, project financing and development loans (Mason et al 1980, 200). And in late 1960s, loans from the U.S. and Japan helped in building infrastructures such as power-generating plants and transportation facilities. Furthermore, technical assistance from the U.S.

⁶ Details of Korea's Five-Year Economic Development and Manpower policies are included in Appendix G.

aimed at supporting Korean government's decision making process through expert programs. The second Five-Year Economic Development Plan is a result of the assistance from the U.S economists and technicians. Thus, U.S. aid contributed positively in the process of Korea's development.

While the role of U.S. in Korea decreased, the relationship with the World Bank (hereinafter 'the Bank') turned out to be substantial as Korea became a member of the International Development Association (IDA) in 1961 and International Finance Corporation (IFC) in 1964. The first loan from the Bank to Korea was in 1962, and since then, the Bank not only helped Korea in terms of financing capitals for projects, but also contributed in the policymaking process through various missions and researchers at the Bank (Kim 1997, 18). In the beginning of its assistance, the Bank was less interested in Korea's macroeconomic issues, but in late 1960s, the issue of structural deepening drew their attention. In 1966, Korean government persuaded the Bank in establishing the International Economic Consultative Organization for Korea which played a critical role in facilitating foreign borrowings in Korea until 1984 (Kim 1997, 23). Along with several financial projects, the Bank also provided loans in building infrastructures and developing Korea's technical manpower.

As mentioned earlier, one of the factors that contributed to the successful economic development in Korea was government's vast investment in education. The effort to improve the quality and quantity of Korea's education began when Korean government started to establish a foundation for industrialization by promoting light industry. President Park realized that for Korea's successful transformation into an industrialized country, it needs to have abundant engineers and

technical manpower. Consequently, the government created first Manpower Development Plan in 1962 as a part of Five-Year Economic Development Plans and increased its investment in secondary and vocational education. To support this plan, the Korean government and the IDA signed the first educational loan agreement named 'Development Credit Agreement (Educational Project) between the Republic of Korea and International Development Association' in June 1969 to foster middle-level skilled and technical workers by expanding workshops and laboratories in technical colleges and vocational high schools, securing teacher training facilities, and bringing international technical experts to schools. For this project, Korean government received \$14.80 million from the Bank and 36 vocational high schools, technical colleges, and national universities were either reorganized or established by 1972.

There are many infrastructure and industry development projects supported by the U.S. and the World Bank during this period, and the characteristics of their aid was mainly focused on enabling Korea to have a self-sustaining economy by helping to establish their own economic and manpower development plans. Specially, technical assistances that were provided in this period contributed greatly in Korea's industrialization in 1970s.

2.3. Role of Foreign Aid in 1970s and 1980s

The export-oriented policy in 1960s was a success as it made possible for the manufacturing sector to grow. Also, the government promoted labor-intensive industries during this period and it increased school enrollment and employment rate. However, the government did not totally depend on the incentive system for resource allocation; instead, they made selected intervention

for promotion of major industries to substitute imports. Hence, in the second Five-Year Economic Development Plan, the government promoted import substitution industries and supported it by seven special industry promotional laws; machinery, shipbuilding, textiles, electronics, petrochemicals, iron, steel, and nonferrous metal. And these selected industries were represented by the ambitious plan for construction of heavy and chemical industry in the third and fourth economic development plans. In 1973, the government announced the plan to promote heavy and chemical industry and envisioned that approximately \$9.6 billion will be invested for the construction of six heavy and chemical industrial complexes (Kim and Kim 1997, 21). The plan enumerated all the projects to be undertaken during the plan period, together with the timetable for their construction. Moreover, the plan included programs for construction of large industrial complexes for collective accommodation of related heavy and chemical industry plants.

As Korea found its way to sustain the economy through foreign private capital and export earnings, foreign assistance in this period was a relatively minor factor in Korea's economic growth. The U.S. assistance was more concentrated in the surplus of agricultural commodities whereas the World Bank became more active in financing infrastructure projects. In 1970s and early 1980s, Korea borrowed almost half of the public loans from the World Bank and many of them were concentrated in building railways and highways. Also, significant share of the loans went to development finance institutions, mainly the Korea Development Finance Corporation (KDFC), which was established in 1967 by the IFC to supply funds to various industrial investment projects. The Bank also requested the KDFC to support small and medium sized companies; however, due to rapid growth of heavy and chemical industry, Korean government

could not pay attention to these small and medium sized companies. Thus, in late 1970s, the Bank suggested that the loan would be directed to them through Small and Medium Industry Bank and the Citizen's National Bank, and due to these financial mechanisms, Korean firms did not face any serious issues in financing their development projects.

Another notable investment made by the World Bank and USAID in this period was training of Korean economists. In 1960s, Korea was short on trained economists with skills to plan, analyze and evaluate. Previously, USAID projects brought Korean students and economists and trained them in American universities, and though this was successful, Korean government needed institution of economists who can draw up long-term plans. Recognizing this demand, in 1971, the government established Korea Development Institute (KDI) to support the government with research and analysis of critical economic policy and planning problems, and many of economists at KDI studied or were trained in United States (Mason et al 1981, 203). Also, in the process of creating Korea's first and second economic development plans, economists who were trained in the U.S. played a major role and these plans became national strategies. This is to say that the expert programs by the U.S. and the Bank indirectly contributed to Korea's economic growth. Yet in 1981, the USAID terminated their projects in Korea by recognizing that their operation was successful and decided that Korea no longer needs outside assistance. With its termination, foreign assistance to Korea sharply declined and only few multilateral agencies, including the World Bank, and bilateral donors such as Japan, Germany, and United Kingdom provided support. From 1980s to mid-1990s, as Korea transformed itself again into a technology-intensive country, the Bank executed large amount of educational loans to Korea to promote manpower in science and technology.

As examined in this chapter, the assistance from the U.S. and the World Bank made significant contribution in Korea's economic development by providing loans and technical assistance in education and training, loans for infrastructure and facility development, and helping Korea to structure its economic system. Obviously there are other factors that contributed to the economic growth, yet without the foreign assistance, Korea, the country that had no natural resources and capital, would not have been able to achieve the miraculous growth. The following chapters will examine the changes in the paradigm of development economics and review literatures on the impact of aid on growth, and empirically analyze whether aid had impact on Korea's economic and human capital development.

III. LITERATURE REVIEW

Methodologies to analyze the role and effectiveness of foreign aid have been changing depending on the economic development paradigms. One of the major neoclassical growth theories is Harrod-Domar growth theory (1939, 1946), which is based on the idea that foreign loan can induce investment and savings in developing countries and eventually can have positive impact in their growth. The Harrod-Domar model showed that for faster economic growth, forced savings can be a valid mean for economic policy, and capital investment can bring low-income countries out of the poverty. To further elaborate on the previous model, Solow (1956) introduced aggregate production function to quantify economic growth in macroeconomic perspective under the hypothesis of the law of diminishing marginal profit. While Harrod-Domar model showed that increase in investment through increase in savings rate can stimulate sustainable economic growth, Solow model emphasized that growth through capital accumulation is only possible for a short term and sustainable growth is only possible through increase in productivity. However, Solow model did not give policy directions for foreign aid nor mentions what kind of variables are there to form productivity because total factor productivity is like a black box.

Later, exogenous growth theory by Lucas (1988) and Roemer (1990) were introduced and Lucas showed that human capital can be a driving force to a sustainable growth and shed the new light on the importance of human capital in economic growth. He emphasized that human capital is different from physical capital in the sense that the limits of marginal return does not work and human capital have positive externality. Lucas also introduced the problem of time allocation of

human economic activity as a basis for economic development; in other words, optimal allocation on working hours that is used for actual productivity, and time for investing in human capital, such as education and research and development, determines the rate of sustainable growth for net income. On the other hand, Romer endogenized black box variables from Solow model as a result of research and development and emphasized the importance of human capital. Romer's finding is significant because intentional investments in technology, and research and development by institutions can be a driving force of sustainable economic growth. Romer also emphasized that probability and the growth rate of a country is determined by a country's level of human capital.

Based on these theories, numerous discussions and empirical studies were conducted to prove whether aid is an effective tool to bring poverty reduction or promote economic growth in developing countries, and the debate is still ongoing. In the following parts, key literatures with three competing views will be reviewed; 1) aid is effective under certain conditions, 2) aid has positive effect on the economic growth, and 3) aid has negative effect on the economic growth.

3.1. Aid is effective under certain circumstances

There are two lines of argument within the view that aid is effective on economic growth under certain circumstances: one involves that aid is effective or not effective depending on the policy measures in developing countries and another being that the outcome of foreign aid can be different by aid flows and types.

First of all, Burnside and Dollar (2000, 2004) and Collier and Dollar (2002) argued that aid is effective under the certain policy environment. Burnside and Dollar (2000) examined the relationship between foreign aid, economic policies and growth of per capita GDP of 56 countries in six four year time periods, and through their cross-country analysis, authors concluded that poor countries with sound economic policies benefit directly from those policies, and aid can propel growth when it is given in such environment. Thus, the model by Burnside and Dollar showed that aid contributes positively to growth, but only in a good policy environment. Authors revisited their study in 2004 with a question of whether the impact of aid on growth is different between poor-policy countries and good-policy countries. Specifically, Burnside and Dollar tried to examine if aid should be allocated differently depending on the institutions and policies in developing countries. In their analysis, authors concluded that there is significant evidence to which aid drives growth when it is conditional on institutions rather than aid having same positive effect in all institutional environments. On the similar line of argument, Collier and Dollar (2002), in “Aid Allocation and Poverty Reduction,” presented that the allocation of aid varies depending on the poverty level and quality of policies in order to have a maximum effect on poverty. Moreover, authors noted that aid has been allocated entirely different from the poverty efficient allocation and predicted that aid could lift more than 10 million people annually from the poverty when aid is allocated efficiently.

On the other hand, several scholars argue against Burnside and Dollar and Collier and Dollar by presenting evidences that there are other existing conditions which can affect aid effectiveness. Ram (2003) assessed the different role of multilateral and bilateral aid in developing countries’ economic growth. The author argued that there are major differences between bilateral and

multilateral aid such as to donors' motivation, characteristics and certain conditions associated with aid, and the relationship between the donors and the recipients, and concluded that bilateral aid has more significant impact on the economic growth rather than multilateral aid. Dalgaard, Hansen & Tarp (2004) tried to rebuttal the previous argument made by Collier and Dollar and reexamined the effectiveness of aid by using overlapping generations model. Authors showed that impact of aid depends on policies, structural characteristics, and its size, and concluded the study with the notion that impact of aid is conditional on the country's geographical locations as the magnitude of aid effect has depended on climate-related circumstances. Ouattara and Strobel (2004) examined the aid effectiveness by project and program aid and resulted that project aid positively affects growth while program aid affects growth negatively. Authors also found that there is little evidence to where 'good policy' enhances the growth effect of either of these two types. To elaborate on Ouattara and Strobel's argument, Dalgaard and Hansen (2011) presented the empirical evidence that project aid is more effective than program aid. At last, Rahman (2008) investigated the implementation of aid facilities in developing countries. The author argued that when developing countries have sound management, financial aid has a big impact on growth and poverty reduction and concluded that aid generally has a bigger effect in countries with good-management environment, sound country management, and in partnership with private capital.

3.2. Aid is or is not effective on growth

While many development economists would agree with previous arguments, there are two radical views on the impact of aid on recipient countries' economic growth. Durberry et al (1998) examined the impact of foreign aid on economic growth through cross-country analysis and

supported the view that foreign aid does have some positive impact on growth. However, authors also found that these results differ depending on the income level, aid allocation and geographical location. Hadjimichael et al (2005) assessed the economic performance of Sub-Saharan African countries from 1986 to 1993 on the impact of foreign aid investment and resulted that there is a positive relationship between aid and economic growth.

On the other hand, Dalgaard and Hansen (2000) and Hansen and Tarp (2000) tried to rebuke the argument made by Burnside and Dollar. Dalgaard and Hansen (2000) reassessed the result from “Aid, policies, and growth” by Burnside and Dollar (2000) using their original dataset. Authors developed a neo-classical growth model with assumption that sound policy is expected to reduce the growth effect of aid since they undertake as substitutes in the process of growth. Dalgaard and Hansen found that policy selectivity result by Burnside and Dollar is fragile and disagreed with their findings that aid effectiveness is solely dependent on policies in developing countries and suggested that aid is effective regardless of the policy environment. Hansen and Tarp (2000) examined the significance of the synergy effect between policy and aid, and decreasing marginal returns to aid. Authors used average growth rate of GDP per capita in 56 countries from 1974 to 1993 and proved that aid escalates the growth rate and it is not conditional on ‘good’ policy. Furthermore, their empirical findings implied that aid impacts growth through investment.

On the contrary to the above arguments, there are also negative views on the impact of aid on the economic growth. The study by Mosley, Hudson and Horrell (1987) resulted that it is impossible to prove aid and growth rate of GNP in developing countries are statistically significant. Also Boone (1996) argued that aid does not boost investment nor it benefits the poor, but it increases

the size of the government. Taking on the argument made by Boone, Ovaska (2003) observed whether the level of development aid affects growth rates in developing countries and government's quality affects the outcome of aid. By using samples from 86 developing countries, author resulted that development aid has negative impact on economic growth. Especially, Ovaska discovered that when aid was increased by one percent, annual real GDP per capita growth was decreased by 3.65 percent. Moreover, empirical findings rejected the argument that aid is more effective in countries with better quality of governance.

Finally, Rajan and Subramanian (2005) examined the impact of aid on the economic growth through the cross-country regression analysis. In their analysis, authors found that there is negative relationship between aid and economic growth in the long-term and no evidence has been discovered that aid is effective in good policy environment or institutions or geographical locations, or that certain type of aid is more effective than others. Authors revisited this model again in 2008 and examined under the same assumptions but with different variables. Rajan and Subramanian found minor evidence which proved that aid inflows and its economic growth has positive relationship and recommended that aid system needs to be revised for aid to be effective in the future.

Although above literatures provide compelling evidences for impact of aid in economic growth, majority of these studies excluded Korea in their sample dataset; thus, it is difficult to apply their theories into Korea's experience.

3.3. Aid effectiveness in Korea's economic growth

Thus far, three competing views on the impact of aid on the economic growth were examined. In this section, literatures on the impact of aid in Korea's economic development will be reviewed. In general, experts and scholars praise the positive role of foreign aid in Korea's economic development; however, some argues that aid had negative impact on Korea's economic growth.

First, Kim (1990) admits that foreign aid was one of the motives for capital productivity in Korea when it barely had anything and foreign aid motivated industrialization and growth. However, he argues that in the agricultural sector, foreign aid was not able to produce good outcomes due to increasing import of U.S. agricultural surplus. Park (1990) also argues that agricultural aid decreased the development of Korea's agricultural sector and deteriorated its industrial structure. He noted that agricultural aid by the United States was based on the low price grain policy, thus slowing down the development of agriculture sector, and also the policy brought changes to the consumption pattern of agricultural products.

On the other hand, Choi (2005) argued that Korea was able to achieve industrialization and increase its productivity in the manufacturing sector due to the aid by the United States. Lee (2002) also agreed that aid had negative impact on the individual sectors, but in macroeconomic perspective, aid had positive impact. Lee discusses that aid not only contributed to the formation of domestic fixed capital, but it gave second chance for Korea to accumulate its own capital, and inflow of foreign aid largely contributed to increase in human capital which led to increase in nation's productivity. Therefore, aid by the United States and changes in consumption activity is

not only to be thought as negative, but it made industrialization possible for Korea. On the similar note, Kim (2011) emphasized that foreign aid was a significant factor in bringing economic growth and development as it allowed Korea to overcome numerous national challenges and supported many government-led development projects.

Though there are significant amount of literatures on the impact of aid in Korea's economic growth, there is only one empirical study conducted so far on this subject. Based on a short-term economic growth model, Lee (2006) empirically assessed the impact of aid by its flow during Korea's pre-development era (1953-1960) and post-development era (1961-78). Lee suggested that loan showed positive relationship with economic growth, but insignificant in grant aid. However, Lee notes that during the pre-development period, grant aid had more impact in its growth. Furthermore, when the effects of consumption, investment, and government expenditures were examined, loan had impact in increasing the investment, but grant aid had impact in increasing the consumption. As already suggested by Ram (2003), conclusions in Lee's study could be a result of differences in the aid characteristics and how aid was delivered.

Although Lee's study provides significant evidence that foreign aid played an important role in Korea's economic growth, it would be important to assess whether foreign aid had direct impact on Korea's economic and human capital development, which may led to increase in nation's total factor productivity. Thus, next sections will provide hypothesis and econometric specifications of the empirical analysis, and deliver empirical findings and recommendations based on the result.

IV. DATA AND MODEL SPECIFICATIONS

4.1. Hypothesis

From the growth models by Harrod-Domar, Solow, and Lucas and Romer, we can simply assume that foreign aid affects the economic growth of a recipient country through its contribution in fixed capital investment and formation of human capital. To be specific, foreign aid has a direct impact on a recipient country through investment in economic and social infrastructure, thus contributing to the economic growth; which is the main purpose of foreign aid. Generally, investments in economic infrastructures are given in the form of loan, and investments in social infrastructures, such as education and health, are given in the form of grant aid. Furthermore, improvement in economic and social infrastructures through aid can also generate a spin-off effect by inducing foreign direct investment and domestic private investment through human capital, which can increase total factors of productivity of a recipient country; therefore, leading to the long-term economic growth.

Based on these assumptions, this study aims to empirically assess the direct impact of foreign aid in Korea's economic and human capital development. However, under the premises that positive impact of aid on both economic and human capital development will also have a positive contribution towards increasing the total factors of productivity, the long-term effect of aid will not be analyzed in this study. Thus, this research will test on following two hypotheses: 1) foreign aid had significant impact on Korea's GDP of the relevant year through fixed capital investment and 2) foreign aid had significant impact on Korea's human capital accumulation. If these two hypotheses are proved to be significant, then the overall short-term impact of foreign

aid can be regarded that the amount in gross fixed capital accumulation increased due to direct impact of foreign aid.

4.2. Econometric Specifications⁷

4.2.1. Impact of foreign aid on fixed capital investment

The model to analyze the impact of foreign aid on increasing the domestic private investment can be written as follows:

$$DI_t = \alpha + \delta LODA_{t-1} + \gamma GODA_{t-1} + \delta SOC_{t-1} + \zeta TE_{t-1} + \eta GDP_{t-1} + \varepsilon_t \quad (1)$$

Where: *DI* is domestic private investment

LODA is loan

GODA is grant aid

SOC is government's investment in SOC

TE is number of enrollment in primary and secondary education,

GDP is Gross Domestic Product

Determinants of domestic private investments are 1) level of economic infrastructure, 2) level of social infrastructure (number of enrolled students in primary, secondary, and high schools), 3) growth rate of GDP, and 4) amount of foreign aid. The level of national infrastructure is included since it is an important indicator for private investors when they decide on the effectiveness of investment. Thus, government's expenditure in social overhead capital (SOC) is included in this model as a variable to represent the level of physical investment.⁸ Also, the number of enrollment in primary and secondary education is included to represent the level of social infrastructure, and to reflect fluctuations in the business cycles of private investors, previous

⁷ This section is adapted from Lee (2012), "Analysis on the Impact of Korea's Aid in Vietnam's Economic Growth."

⁸ Social Overhead Capital (SOC) in Korea includes transportation, storage, communications, construction, electricity, and water and sanitary services (Chung 2007, 27). Data on government expenditure for individual sectors are combined to represent SOC and converted into dollar terms.

years' GDP is included. For the consistency in data, all variables are observed by the increasing rate of previous year's data.

4.3.2. Impact of foreign aid on human capital development

The model that forms human capital development can be represented as following:

$$SE_t = \alpha + \beta LODA_{t-4} + \gamma GODA_{t-5} + \delta TEA_{t-1} + \epsilon_t \quad (2)$$

Where: *SE* is number of students enrolled in primary and secondary education
LODA and *GODA* represents each for loan and grant aid
TEA is number of teachers

The variable that represents human capital is the number of enrolled students in primary and secondary educational institutions, and it is determined by number of teachers and amount of foreign aid. Since there are no significant indicators and statistics that define human capital, number of enrollment is used to represent human capital in this research. Also, the number of teachers is selected as an independent variable because it demonstrates national investment in education. Moreover, to consider the time gap between the time of investment and human capital development, the time difference is reflected in independent variables. For the consistency in data, all variables are observed by the increasing rate of previous year's data.

4.3. Data and Data Characteristics

Although the overall study focuses on the period from 1945 to 1990, due to lack of data availability, the empirical study will mainly focus on the period from 1965 to 1990. In respect to data sets, annual data on foreign aid are collected from the OECD Statistics since two major aid

data sources, annual reports by USAID and Annual Economic Statistics Yearbook by the Bank of Korea, were controversial to one another in terms of aid amount by each type and source. Thus, OECD Statistics will be used to clarify the statistical discrepancies between major aid data sources. Annual data on SOC, GDP, and economic growth rate are obtained from the Economic Statistics Yearbook as the source provides these data with most accuracy and well reflects Korea's economic and financial environment. At last, annual number of enrolled students and teachers in primary and secondary education are gathered from the Center for Education Statistics of Korean Educational Development Institute (KEDI) since it is only data source with wide collection that represents quantity of Korea's human resource.

V. EMPIRICAL RESULTS

5.1. Descriptive Statistics

The below table describes the summary of individual variables in Equation (1) and (2). From the table, we can observe that there are wide differences between maximum and minimum values in most of variables; thus, data fluctuates widely throughout the period.

[Table 1: Descriptive Statistics of the Variables]

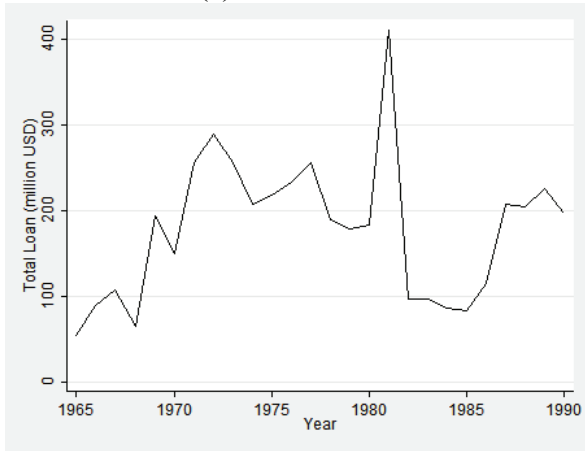
	Mean	Max	Min	Standard Deviation	Skewness Value	Kurtosis Value
DI	19.8	31.5	9.1	6.474244	.1128584	2.056686
LODA	16.71891	198.4462	-76.53838	56.18081	1.568518	5.90551
GODA	1.851201	53.18113	-56.49077	27.29272	.0315899	2.581837
SOC	20.95131	159.0835	-62.2103	42.13993	1.299377	6.166823
TE	1.765297	4.953084	-1.704221	2.120683	-.0410542	1.834654
GDP	13.88752	22.27297	1.710261	4.158051	-.8432902	4.668166
TEA	4.274585	7.166452	2.05804	1.393204	.4675932	2.123104

Figure 1 demonstrates the trends of individual independent variables. The variable for total loan is represented in million U.S. dollar terms and it shows rapid increase until mid-1970s and after a peak in 1980, the amount rapidly decreased. The peak in 1980 occurred due to structural adjustment loan provided by bilateral and multilateral donors to resolve market structure issues derived by rapid industrialization in 1960s and 1970s. The indicator for total grant shows decreasing trend from 1965, though there is a slight increase in 1990. This trend is affected by shifts in donors' assistance policy for Korea where it transition from grant-type, or program based, to loan-type, or project based, assistance after mid-1960s. The government's expenditure in SOC gradually increased and displays rapid increase after 1985. After the Korean War, the

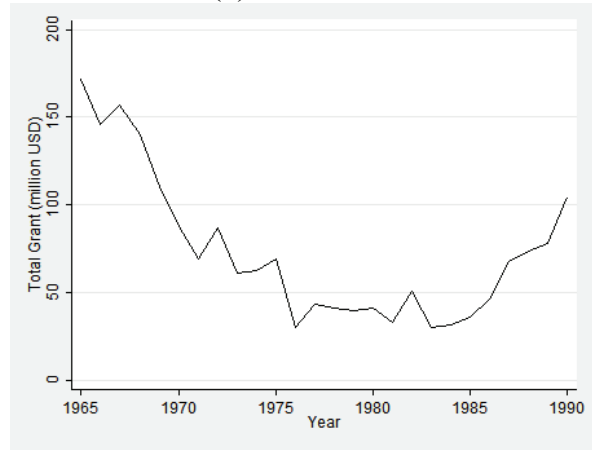
Korean government sought there was a need to reconstruct and improve production facilities and heavily invested in SOC. Among SOC, government highly invested in electric power as Korea had to depend on North Korea for its electricity and then improved communication facilities, highways and roads. The investment in railroad was relatively small as government only needed to repair what Japanese had already built. The GDP also increased continuously while GDP per capita rose annually by 7 percent in average. Indicators for number of enrollment and teachers in primary and secondary schools show an increasing trend, however, enrollment in primary education decreased overtime while it increased in secondary education. This trend is more likely caused by decrease in schooling population, especially for primary education. Furthermore, we can assume that increase in number of teachers indicates decrease in student per teacher ratio. In 1965, student per teacher ratio in primary school was 62:1 where it decreased to 57:1 in 1970, 52:1 in 1975, 48:1 in 1980, 38:1 in 1985, and to 36:1 in 1990. On the other hand, student per teacher ratio in secondary school shows increasing trend; in 1965, the ratio was 39:1 and it increased from 42:1 in 1970, 43:1 in 1975, to 45:1 in 1980, and decreased again to 40:1 in 1985 and 25:1 in 1990. However, for high schools, including general and vocational, the student-teacher ratio was sustained around 30:1. Thus, by examining the development of individual variables, we can suspect that the changes in the amount of loan and grant aid did not have direct impact on other variables.

[Figure 1: Development of Independent Variables]

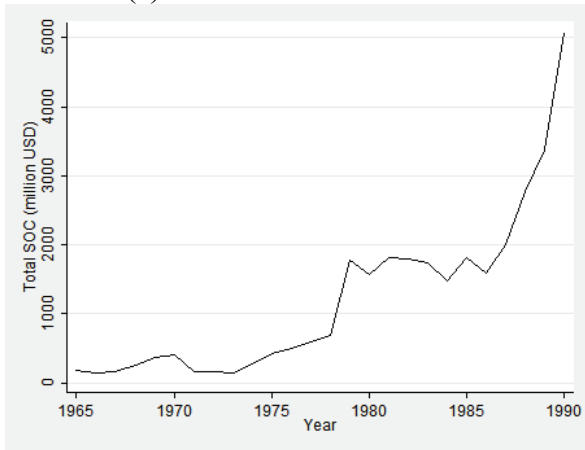
(a) Total Loan



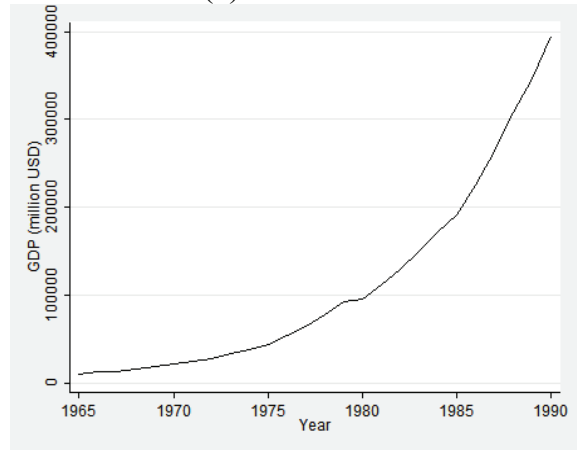
(b) Total Grant



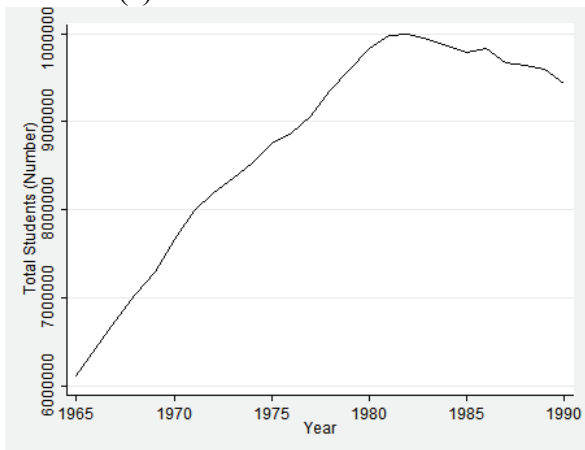
(c) Total Investment in SOC



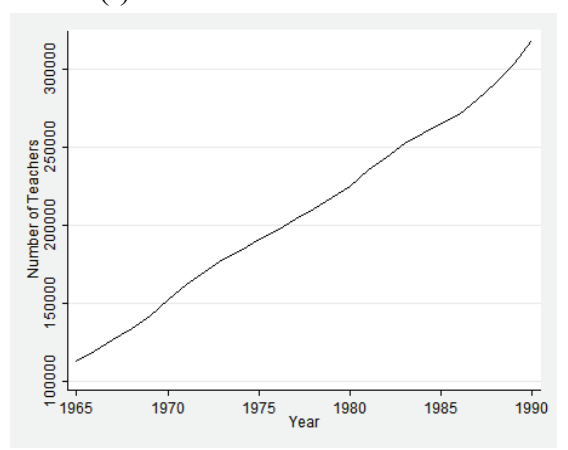
(d) Total GDP



(e) Total Number of Students



(f) Total Number of Teachers



5.2. Empirical Results

The result of regression analyses on equation (1) and (2) are represented in Table 2. Both equations have been tested by using time-series regression analysis and Augmented-Dickey Fuller (ADF) test showed that all variables are stationary.

[Table 2: Result of Regression Analysis (1965-1990)]

Equation(1): Impact of Foreign Aid on Fixed Capital Investment				
	Coefficient	t-value	p-value	R²
LODA_{t-1}	-.0062066	-0.54	0.593	0.8270
GODA_{t-1}	.0456381	1.76	0.095	
SOC_{t-1}	-.0099672	-0.66	0.518	
TE_{t-1}	-2.404782	-7.07	0.000	
GDP_{t-1}	.3179744	1.98	0.064	
Equation (2): Impact of Foreign Aid on Human Capital Development				
	Coefficient	t-value	p-value	R²
LODA_{t-4}	-.0020826	-0.33	0.746	0.4628
GODA_{t-5}	-.0065625	-0.49	0.629	
TEA_{t-1}	.9665471	3.62	0.002	

For the first equation on the impact of loan and grant aid in economic growth, neither of them had significant impact on fixed capital investment. The regression analysis shows that if the loan of previous year increased by one percent then domestic private investment either decreases or has no impact. As for the grant aid, if it increases by one percent then there is 0.05 percent change in domestic private investment, however it is not significant at 95%. The variable that represents physical investment, SOC, showed negative relationship with the dependent variable and social capital, denoted as TE, also did not have any significant impact in increasing domestic private investment. In terms of GDP, it increases private investment by 0.3 percent, yet it is not statistically significant.

The result of the regression analysis on the second equation also demonstrates similar result. The increase in loan and grant by one percent had negative impact in increasing enrollment, thus foreign aid did not contribute to Korea's human capital accumulation. However, increase in number of teacher by one percent increased the enrollment by the same rate and this signifies that teachers made some contribution toward human capital accumulation. Hence, in the period of 1965 to 1990, foreign aid had negative impact on Korea's economic and human capital development and did not contribute to its total factor productivity.

Yet, considering that Korea's socioeconomic circumstances changed drastically during this period, this study further analyzed the impact of foreign aid by separating into two periods: period (1), from 1965 to 1979, and period (2), from 1980 to 1990. In period (1), Korea transitioned itself into an industrialized nation through labor-intensive industries, and in period (2), it was fully developed and achieved financial and import liberalization, induced foreign direct investment, and industries were restructured into technology-intensive industries. Recognizing the differences in Korea's socioeconomic development overtime, there could be a different outcome to where foreign aid had impact in its economic and human capital development. The following Table 3 and 4 shows the result of two equations in two different time periods.

[Table 3: Result of Regression Analysis (1965-1979)]

Equation(1): Impact of Foreign Aid on Fixed Capital Investment				
	Coefficient	t-value	p-value	R²
LODA_{t-1}	-.0251577	-2.28	0.056	0.8876
GODA_{t-1}	.0780947	2.61	0.035	
SOC_{t-1}	-.0277829	-1.54	0.168	
TE_{t-1}	-1.866849	-2.48	0.042	
GDP_{t-1}	.6421899	2.71	0.030	
Equation (2): Impact of Foreign Aid on Human Capital Development				
	Coefficient	t-value	p-value	R²
LODA_{t-4}	.0050271	1.03	0.328	0.5025
GODA_{t-5}	.0048339	0.44	0.673	
TEA_{t-1}	.4809826	2.25	0.051	

Table 3 is a result of analysis in the period from 1965 to 1979 and shows that if loan of previous year increased by one percent, then domestic private investment would decrease by -0.02 percent. However, when grant aid of previous year increased by one percent, domestic private investment also increased by 0.08 percent and was significant at 95% level. Yet, other variables, except GDP, had negative coefficient and were not statistically significant. Hence, from equation (1) in period (1), we can conclude that grant aid had small, but positive impact on economic growth. On the other hand, loan and grant aid had some positive influence in human capital accumulation, but both variables are statistically insignificant. However, increase in number of teachers had small, but significant impact on increasing enrollment, which emphasizes the importance of teachers in human capital development.

[Table 4: Result of Regression Analysis (1980-1990)]

Equation(1): Impact of Foreign Aid on Fixed Capital Investment				
	Coefficient	t-value	p-value	R²
LODA_{t-1}	.0242972	0.78	0.478	0.6788
GODA_{t-1}	.0475595	0.89	0.423	
SOC_{t-1}	.0219954	0.26	0.807	
TE_{t-1}	-2.80155	-1.69	0.166	
GDP_{t-1}	.0082465	0.02	0.985	
Equation (2): Impact of Foreign Aid on Human Capital Development				
	Coefficient	t-value	p-value	R²
LODA_{t-4}	.0002565	0.03	0.975	0.0108
GODA_{t-5}	-.0024102	-0.16	0.878	
TEA_{t-1}	.0525749	0.10	0.924	

Table 4 is a result of analysis in the period from 1980 to 1990 and shows that if loan of previous year increased by one percent, then domestic private investment would increase by 0.02 percent. Also, it indicates that if grant aid of previous year increased by one percent, then domestic private investment would increase by 0.05 percent. However, both variables are not statistically significant at 95%, thus, loan and grant aid did not have any impact on the economic growth during this period. Furthermore, government's expenditure on SOC, enrollment in primary and secondary schools, and GDP did not have significant influence on increasing domestic private investment. Therefore, from equation (1) in period (2), we can conclude that both loan and grant aid did not have any impact on economic growth.

Additionally, in equation (2) none of the variables have significant relations to increasing number of enrollment in primary and secondary schools. Moreover, equation's R² is relatively low, which indicates that independent variables do not accurately represent the dependent variable. Thus, we

can conclude that in period (2), loan and grant aid had no significant impact on economic growth and human capital accumulation.

From above empirical analyses, we can draw following conclusions: 1) in the period from 1965-1979, when foreign assistance to Korea started to decline, grant aid had minor impact on economic growth; 2) in the period from 1980-1990, when foreign assistance decreased significantly, loan and grant aid had no impact on economic growth and human capital accumulation; and 3) in overall, from 1965-1990, foreign aid had no impact on growth and human capital accumulation. Therefore, economic development in this period may have been influenced by other factors such as government's strong leadership, economic policies, and foreign direct investment, while human capital development was influenced by government's vast investment in education. The study also implies that foreign assistance can be a basis of economic development, however, it cannot be a sole source of economic growth; hence, emphasizes the importance of recipient government's ownership in the development process.

VI. CONCLUSIONS

This paper analyzed the impact of foreign aid in Korea's economic and human capital development through short-term time-series regression analysis. The empirical study used indicators that could represent Korea's economic and human capital development, such as GDP, economic growth rate, number of teachers and students in primary and secondary education, and SOC, and examined the direct and indirect impact of foreign aid in its economic and human capital development by three different periods.

Previous studies on aid effectiveness resulted that grant aid does not or has less effect on the consumption, and even if aid affects the consumption, it contributes to the increase in the national consumption of poor countries; and after the economic development, it does not have significant impact (Lee, 2006). However, this argument comes from a different perspective on aid effectiveness and its direct or indirect influence; in other words, grant aid may have direct or indirect contribution in increasing the level of consumption.

The empirical result from this study shows that from 1965-1990, neither loan nor grant aid had significant impact on fixed capital investment and majority of the independent variables were insignificant at 95% level. Also, loan and grant aid did not have significant impact on Korea's human capital development, but the result indicates that teachers in primary and secondary schools made some contributions in building human capital through increasing school enrollment. Yet, the impact is relatively small, thus it would be fair to conclude that foreign aid did not have any impact in increasing Korea's total factor productivity. During the period of 1965-1979, when Korea had substantial industrialization through promotion of light and heavy

and chemical industry, foreign loan decreased private domestic investment while grant aid increased private domestic investment. However, other variables had no significant contribution to fixed capital investment. In this period, we can also observe that increase in number of teachers had important contribution to increase in school enrollment and this signifies that teachers are vital in human capital development. On the contrary, from 1980-1990, there was no impact of both loan and grant aid in economic and human capital development. Therefore, since the direct impact of foreign aid on both economic and human capital showed weak relationship, the assumption that foreign aid's indirect impact on total factor productivity is disregarded here.

Nevertheless, above conclusions have several limitations. First, due to lack of data availability, it was difficult to observe periods before 1965, when Korea received significant amount of aid. Also, important indicators such as number of enrolled students in primary and secondary education and number of teachers could not be found prior to 1965 where some of educational projects through foreign aid were carried out. Hence, if the observation period of the empirical study is shifted from 1965 to 1953, then the impact of foreign aid in economic and human capital development could be much stronger. Second, many of the data observed here had to be gathered from several different sources and it lacked in consistency in terms of the amount. Especially, data on aid statistics showed differently among the sources, thus, the data collected by the OECD was used in the study. However, with more concrete and collective data, the result might have been turned out differently. Third, due to lack of data on higher education, it was difficult to examine whether aid projects and programs on higher education had impact on the human capital development. At last, more exogenous variables could not be observed since Korea's political and socioeconomic environment rapidly shifted from year to year and was difficult to determine

what really influenced Korea's economic and human capital development. Therefore, the outcome could have been better with more solid variables and data.

In conclusion, foreign aid had insignificant impact in Korea's economic and human capital development during the period of 1965 to 1990; instead, the government's strong leadership and will to push for industrialization through Five-Year Economic and Manpower Development Plans may had more direct contribution in its course of development. This implies that despite the large foreign assistance, Korean government took ownership in its national development, which is an essential part of growth. For the future research, we need to expand the time frame from 1953 to 1990 and include more macroeconomic and policy variables to examine what really brought Korea's development. Furthermore, Korea holds successful history of transitioning from an aid recipient to a donor country and it would be important to examine whether its aid management had any impact on the country's development.

APPENDICES

APPENDIX A

List of World Bank Projects in Korea

Project Title	Commitment Amount (Thousand Dollars)	Approval Date	Closing Date
Railway Project	14.00	1962-08-17	N/A
Railway Project (02)	11.00	1967-12-18	N/A
Korea Development Finance Corporation Project	5.00	1968-01-31	N/A
Highway Study	3.50	1968-07-16	N/A
Irrigation Project	45.00	1969-05-15	1976-12-31
Education Project	14.80	1969-05-27	1976-09-30
Korea Development Finance Corporation Project (02)	20.00	1969-06-24	N/A
Railway Project (03)	55.00	1970-04-14	1976-12-31
Dairy Beef Development Project	7.00	1971-01-26	N/A
Korea Development Finance Corporation Project (03)	30.00	1971-04-15	N/A
Highway Project	54.50	1971-06-22	1977-12-31
Yong San Gang Irrigation Project	48.00	1972-01-11	1978-12-31
Agricultural Credit Project	10.50	1972-05-15	N/A
Railway Project (04)	40.00	1972-11-14	1979-03-31
Korea Development Finance Corporation Project (04)	40.00	1973-05-29	N/A
Education Project (02)	43.00	1973-05-29	1979-12-31
Port Project	80.00	1973-06-19	1980-06-30
Seed Production Project	7.00	1973-10-23	1979-12-31
Kyongju Tourism Project	25.00	1973-12-11	1980-12-31
Highway Project (02)	47.00	1974-01-08	1978-12-31
Integrated Agricultural Products Processing Project	13.00	1974-05-21	1980-06-30
Secondary Cities Regional Project	15.00	1975-01-07	1980-09-30
Korea Development Bank Project	60.00	1975-03-20	N/A

Education Project (03)	22.50	1975-03-25	1981-06-30
Program Loan Project	100.00	1975-03-25	N/A
Railway Project (05)	100.00	1975-04-08	1980-06-30
Korea Development Finance Corporation Project (05)	55.00	1975-07-15	N/A
Integrated Dairy Development Project (02)	15.00	1975-10-28	N/A
Medium Industry Bank Project	30.00	1975-11-18	N/A
Highway Project (03)	90.00	1976-02-03	1982-09-30
Rural Infrastructure Project	60.00	1976-03-09	1980-06-30
Program Loan Project (02)	75.00	1976-03-09	N/A
Miho Watershed Development Project	29.00	1976-07-27	1984-12-31
Agricultural Credit Project (02)	20.00	1976-09-21	N/A
Korea Development Bank Project (02)	82.50	1976-11-16	1981-04-30
Yong San Gang Irrigation Project (02)	95.00	1977-01-25	N/A
Port Project (02)	67.00	1977-04-12	1983-12-31
Korea Development Finance Corporation Project (06)	70.00	1977-06-14	N/A
Heavy Machinery Project	80.00	1977-06-23	N/A
Education Project (04)	23.00	1977-07-05	1983-06-30
Ogeo Area Development Project	36.00	1977-12-22	1985-06-30
Medium Industry Bank Project (02)	55.00	1977-12-27	N/A
Rural Infrastructure Project (02)	95.00	1978-03-07	1984-06-30
Railway Project (06)	120.00	1978-03-30	1982-12-31
Korea Development Bank Project (03)	110.00	1978-05-23	N/A
Korea Development Finance Corporation Project (07)	100.00	1978-12-05	N/A
Highway Project (04)	143.00	1978-12-14	1984-06-30
Chunju Multipurpose Project	125.00	1979-03-20	1985-12-31
Electronics Project	29.00	1979-03-22	1986-05-30
Small and Medium Industry Bank Project (03)	60.00	1979-07-12	N/A
Gwanju Secondary Cities Project (02)	65.00	1979-09-11	1985-06-30
Population Project	30.00	1979-12-11	1987-12-31
Gojeong Power Project	115.00	1979-12-20	1984-12-31
Education Project (05)	100.00	1980-02-19	1985-06-30
Citizens National Bank Project	30.00	1980-04-15	N/A

Railway Project (07)	94.00	1980-04-29	1984-12-31
Agricultural Projects Processing (02)	50.00	1980-05-22	1985-02-28
Korea Development Bank Project (04)	100.00	1980-12-23	N/A
Korea Long Term Credit Bank Project (01)	90.00	1980-12-23	N/A
Agricultural Credit Project (03)	50.00	1981-04-21	N/A
National Urban Land Development Project	90.00	1981-04-30	1986-06-30
Small and Medium Industry Bank Project (04)	60.00	1981-05-26	N/A
Structural Adjustment Loan Project	250.00	1981-12-17	N/A
Water Supply Project (01)	90.00	1981-12-17	1987-06-30
Agricultural Marketing Project	50.00	1982-03-25	N/A
Technology Development Project	50.00	1982-03-25	N/A
Citizens National Bank Project (02)	30.00	1982-05-13	N/A
Small and Medium Machinery Industry Project	70.00	1982-12-14	1987-12-31
National Urban Land Development Project (02)	100.00	1982-12-14	1987-03-31
Provincial and County Roads Project	125.00	1982-12-21	1988-12-31
Coal - Cement Distribution Project	122.00	1983-04-26	1988-12-31
Industrial Finance Project	255.00	1983-06-09	N/A
Water Supply Project (02)	78.50	1983-10-18	N/A
Structural Adjustment Loan Project (02)	300.00	1983-11-08	N/A
Jeonju Regional Development Project	60.00	1984-03-13	N/A
Highway Sector Loan Project	230.00	1984-03-20	1989-06-30
Education Sector Loan Project (02)	100.00	1984-05-29	N/A
Technology Development Project (02)	50.00	1984-10-25	N/A
Water Supply Project (03)	95.00	1985-02-05	1990-12-31
Small and Medium Industries Sector Loan Project	111.00	1985-04-16	N/A
Seoul Urban Transport Project	53.00	1985-04-16	1992-06-30
Agricultural Credit Project (04)	25.00	1985-05-21	N/A
Financial Sector Loan Project (02)	222.00	1985-06-06	1994-09-30
Seoul - Busan Corridor Project	67.00	1985-07-02	1992-12-31
Water Supply Project (04)	38.00	1985-08-27	N/A
Power Project (02)	230.00	1986-03-27	N/A
Urban Land Development Project (03)	150.00	1986-05-29	N/A

Pusan Port Project	141.00	1986-06-23	N/A
Pusan Urban Management Project	50.00	1987-04-28	N/A
Housing Finance Sector Project	150.00	1987-06-23	N/A
Kyonggi Region Multimodal Transport Project	116.00	1988-02-02	N/A
Taegu Urban Transport Project	30.00	1988-02-09	N/A
Technology Development Project (03)	50.00	1988-02-23	N/A
Technology Advancement Project	16.40	1989-04-18	N/A
Road Improvement Project	200.00	1989-05-16	N/A
Juam Regional Water Supply Project	34.00	1990-03-20	N/A
Universities Science and Technology Research Project	45.00	1990-05-22	N/A
Technology Advancement 02 Project	31.60	1990-05-22	N/A
Vocational Education Project	30.00	1991-03-28	N/A
Technology Advancement Project (03)	60.00	1991-04-02	N/A
Housing Project	100.00	1991-05-23	N/A
Health Technology Project	0.00	1991-05-23	1994-12-31
Gas System Expansion Project	100.00	1991-11-05	1997-06-30
Pusan and Taejon Sewerage Project	40.00	1992-03-26	1996-06-30
Science Education and Libraries Computerization Project	50.00	1992-05-12	1997-12-31
Vocational Schools Development Project	30.00	1992-05-12	1997-12-31
Public Hospital Modernization Project	30.00	1992-09-01	1996-12-31
Kwangju and Seoul Sewerage Project	110.00	1993-04-13	1999-12-31
Petroleum Distribution and Sector Management Improvement	120.00	1993-06-03	1998-12-31
Environmental Research and Education Project	60.00	1993-06-03	1998-12-31
Financial Intermediation Project	100.00	1993-12-23	1999-06-30
Science and Technical Education Project	190.00	1994-01-06	1999-12-31
Environmental Technology Development Project	90.00	1994-01-06	1998-09-30
Ports Development and Environment	100.00	1994-09-15	2003-12-31
Pusan Urban Transport Management Project	100.00	1994-12-20	2002-06-30
WASTE DISPOSAL PROJECT	75.00	1994-12-20	2001-12-31
Economic Reconstruction Loan	3,000.00	1997-12-23	1998-02-28
Structural Adjustment Loan Project	2,000.00	1998-03-26	1998-08-31
Financial and Corporate Restructuring Assistance Project	48.00	1998-08-06	2002-06-30

Structural Adjustment Loan Project (02) (Second Series)	2,000.00	1998-10-22	1999-06-30
ASEM GRANT FOR STRENGTHENING EXTERNAL FOR REFORMS IN KOREA	0.24	1998-11-09	2000-10-31
PHRD GRANT - KR- CORPORATE RESTRUCTURING	0.77	1999-01-15	2001-12-31
ASEM GRANT - KR FINANCIAL SECTOR ADVISORY SERVICES	0.72	1999-01-26	2002-06-30
ASEM GRANT - KR PRIVATE SECTOR PARTICIPATION IN INFRASTRUCTURE	0.30	1999-06-17	2000-12-31
PHRD Miyazawa for the Korea Financial Accounting Standard Board	0.75	1999-12-21	2001-10-31
PHRD GRANT - KOREA FINANCIAL SECTOR ADVISORY SERVICES	0.14	2000-04-07	2001-06-30
Admin of ASEM TF028341 (ASEM Trust Fund Grant for Pilot Training Programs for the Unemployed and Productivity Enhancement Grant No. TF 028341)	0.25	2001-05-22	2001-12-31
PHRD Miyazawa for Transparency of Regulatory Environment	0.50	2001-11-30	2001-11-30
CORPORATE AND FINANCIAL SECTOR ADJUSTMENT LOAN	300.00	Dropped	Dropped

Source: Projects & Operations, World Bank (2013)

APPENDIX B

CRIK Supplies Received, by Principal Commodity

Unit: Thousand Dollars

	1951	1952	1953	1954	1955
Foodstuffs	34,746	45,756	73,974	23,397	8,721
Medical, Sanitation Supplies	6,220	5,592	1,742	1,035	1,035
Fuel	555	8,991	12,985	2,810	-
Construction Materials	4,496	5,560	13,260	1,674	2,883
Transportation Equipment	1,947	1,454	347	485	393
Agricultural Equipment	-	23,495	709	13,904	14
Rubber & Rubber Products	1,039	3,875	19,874	-	-
Textiles & Clothing	25,444	47,004	33,286	5,037	583
Misc.	-	13,805	2,610	1,472	395
Total	74,447	155,532	158,787	50,190	14,024

Source: Economic Statistics Yearbook, Annual Series, Bank of Korea

APPENDIX C

Imports of Surplus Agricultural Commodities under U.S. PL 480

Unit: Thousand Dollars

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Total	32,955	45,522	47,896	11,436	19,913	44,926	67,308	96,787	60,985	59,537	37,951	44,293	55,927	74,830	61,703	33,651
Rice	-	25,840	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat	7,504	1,520	29,941	3,623	18,576	20,162	26,168	55,670	24,726	28,394	11,202	7,871	27,271	31,626	33,007	17,953
Barley	12,419	4,608	14,104	140	-	2,141	6,072	5,170	3,266	1,293	-	-	-	-	-	-
Sorghum	-	-	2,226	6	-	90	470	538	1	-	-	-	-	-	-	-
Corn	-	-	672	575	574	247	1,701	1,193	1	-	-	-	-	-	-	-
Pork	-	8,243	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tobacco	4,848	2,126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Raw Cotton	8,184	1,807	448	6,986	763	21,492	31,290	31,766	30,541	29,717	26,749	33,999	24,658	39,017	27,434	15,698
Others	-	378	505	106	-	794	1,607	2,450	2,450	133	-	2,423	3,998	4,187	1,261	-

Source: Source: Economic Statistics Yearbook, Annual Series, Bank of Korea

APPENDIX D

Status of UNKRA Aid and Supplies Received

Unit: Thousand Dollars

By projects	1951-52	1953	1954	1955	1956	1957	1958	1959
Agriculture and forestry	215	1,807	2,021	300	79	31.2	-	-
Agricultural research and extension	215	283	126	31	17	29.4	-	-
Reforestation and forest research facilities	-	31	5	52	10	1.4	-	-
Irrigation and flood control	-	914	1,694	147	52	-	-	-
Livestock and veterinary	-	216	78	6	-	-	-	-
Community development	-	16	39	64	-	0.4	-	-
Farm implements	-	347	79	-	-	-	-	-
Fishery	344	392	402	1,796	372	321.4	30	291
Industry	-	396	4,940	2,541	12,026	5,872.1	879	-
Briquetting plant equipment	-	91	25	-	-	-	-	13
Flat glass plant	-	-	61	669	1,182	1,355.4	244	6
Paper plants	-	118	139	324	351	300.7	117	-
Farm tool plants	-	131	160	-	-	-	-	-
Wire plants	-	17	227	4	-	49.4	-	-
Misc small industries	-	-	1,220	113	768	84.1	121	-
Salterns	-	-	17	381	16	-	-	1
Auto repair shops	-	-	-	79	196	97.5	19	13
Textiles	-	-	2,810	117	4,864	1,022.5	34	296
Cement plants	-	39	199	814	4,649	2,982.5	344	-
Fertilizer plant engineering	-	-	82	40	-	-	-	-
Power	-	46	950	2,189	191	-	-1	-
Transmission and distribution lines	-	-	849	1,773	128	-	-	-
Construction of Cheju-Do power system	-	24	31	415	55	-	1	-
Power planning and development	-	22	70	1	8	-	-	-
Transport and	-	2,152	3,021	373	9	0.9	-	-

communications								
Port and harbor facilities	-	1,147	743	209	9	0.9	-	-
Trucks	-	447	1,459	-	-	-	-	-
Rails and ties and equipment	-	549	743	164	-	-	-	-
Broadcasting equipment	-	9	78	-	-	-	-	-
Mining	14	127	916	1,898	2,790	5,450.2	2,312	169
Mineral assay laboratory	-	71	71	71	52	48.9	4	-
Placer mining development	-	44	17	-	449	62.6	60	15
Metal mineral mine development	-	-	261	282	378	222.4	16	-
Chang Hang smelter rehabilitation	-	-	-	53	85	439.9	737	91
Crystalline graphite development	-	-	-	52	-	211.9	159	84
Chungju iron mine	-	-	-	-	53	44.2	-	-
Chungju talc plant	-	-	-	-	74	52.7	-	-
Peat production	-	12	103	25	-	-	-	-
Coal mining development	-	-	464	1,415	1,699	3,457.6	1,336	- 21
Housing	179	214	1,644	1,951	547	401.8	-	9
Education	490	2,495	3,601	1,674	935	347.7	41	7
Restoration of school laboratories & libraries	-	318	66	34	12	-	-	-
Fundamental education	15	88	-	-	87	67.5	-	-
Foreign language institute	-	12	28	26	36	36.5	-	-
Teacher training	-	42	105	52	44	17.2	1	-
Vocational training	8	132	70	429	485	201.7	35	7
Reconstruction of classrooms	-	1,438	2,684	964	221	15.5	-	-
Merchant Marine Academy	-	38	148	130	48	4.7	5	-
Foreign book retail store	-	18	27	32	2	-	-	-
Textbook printing plant	-	21	211	4	-	-	-	-
Others	467	388	262	3	-	4.5	-	-
Health, sanitation and welfare	37	336	1,044	781	640	916.4	1,968	787
Taegu medical college & hospital	-	219	665	323	77	11.2	10	11
National medical center	-	-	-	-	108	745.1	1,875	695
Orphanages & child welfare	-	1	242	164	8	6.8	-	-
Rehabilitation of physically handicapped	-	16	48	214	154	79.3	61	46
National vaccine & chemical laboratories	-	-	6	80	293	74.0	22	35

Others	37	100	83	-	-	-	-	-
Commodities sustaining imports	-	19,501	1,150	7,009	3,809	1,225.0	2,462	1,090
Grain	-	10,565	-	382	-	-	-	-
Fertilizer	-	8,936	-	410	-	-	-	-
Raw rubber, tires and tubes	-	-	-	1,446	1,000	-	497	2
Raw hides	-	-	198	-	-	-	-	-
Paper, pulp and printing supplies	-	-	750	449	849	172.0	549	290
Chemicals & dyes	-	-	-	426	69	-	-	13
Raw wool; rayon & worsted yarns	-	-	202	2,765	1,596	-	-	-
Construction materials	-	-	-	-	166	737.5	531	220
Iron and steel shapes	-	-	-	948	-	-	61	4
Misc raw materials	-	-	-	183	129	345.5	824	561
Personnel expenditures & special programs	812	2,114	1,608	1,670	936	416.3	106	118
Total	2,091	29,580	21,297	22,182	22,334	14,103.0	7,797	2,471

Source: Economic Statistics Yearbook, Annual Series, Bank of Korea

APPENDIX E

Status of ICA Aid and Supplies Received: Project Assistance (1954-1964)

By Projects	Unit: Thousand Dollars												
	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964		
Agriculture & Natural Resources	198	3,404	1,784	5,947	4,549	6,876	4,981	1,862	433	284	354		
Agricultural Research	-	-	42	357	426	1,116	885	618	284	144	354		
Land and water resources	-	2,239	859	3,124	3,035	3,361	1,038	886	-14	1	-		
Crop and livestock development	198	1,151	686	2,165	374	838	398	90	5	-	-		
Forestry	-	-	187	79	77	17	-	-	-28	-	-		
Fisheries	-	-	-	98	571	1,359	2,578	259	195	-	-		
All others	-	14	10	124	66	185	82	9	-	139	-		
Industry and Mining	6,367	20,668	25,960	28,935	22,345	9,366	15,997	13,414	9,840	7,619	3,858		
Mining and minerals	-	-	29	102	863	1,201	2,689	2,298	1,465	574	1,095		
Power	6,207	11,876	13,893	6,083	2,246	1,807	3,758	4,690	6,343	4,865	2,145		
Rehabilitation Hwachon Powerplant	88	380	4,778	3,932	356	32	48	-	-	-	-		
Thermal plant construction	6,119	10,674	7,912	1,474	349	651	657	1,079	3,205	-20	28		
Others	-	822	1,203	677	1,541	1,124	3,053	3,611	3,187	4,885	2,117		
Communications	29	2,008	2,195	3,600	2,296	-	-	-	-	-	-		
Manufacturing and processing	-	6,663	9,843	19,079	15,828	5,943	9,159	5,806	1,241	106	507		
Fertilizer plant	-	5,645	5,683	13,527	8,277	2,828	3,279	1,489	278	-78	-		
Misc small industries	-	970	3,621	5,413	5,469	2,951	5,473	4,184	859	190	30		
Others	-	48	539	139	2,082	164	443	133	104	-6	477		
Engineering and construction	131	35	-	-	1,059	400	67	-	19	23	-		
All others	-	86	-	71	53	15	288	620	772	2,051	111		
Transportation	1,305	62,024	42,097	42,129	20,229	13,138	12,298	9,328	2,498	1,660	122		

Highways and bridges	122	3,893	2,192	1,816	2,215	1,788	1,395	1,205	1,499	174	-
Urban transit and traffic engineering	-	-	377	662	158	81	-	-	-	-	-
Railways	627	49,937	31,942	37,042	17,051	7,607	6,460	4,709	222	1	-28
Railway construction	300	9,697	5,187	11,432	438	713	999	1,215	20	-	-
KNR Coal	-	24,370	22,077	22,770	378	-250	4	-	-	-	-
Coaches and freight cars	-327	14,870	2,047	1,184	4,067	1,636	8	-	-	-	-
Diesel Locomotives	-	-	-	6,800	3,094	3,317	3,899	-2	5	1	-
Others	-	-	2,631	1,656	12,168	2,191	1,550	3,496	197	-	-28
Port and harbor facilities	556	8,089	7,530	1,832	705	326	327	1,755	-16	-7	-
Civil aviation	-	21	42	269	118	230	249	367	392	220	25
Ship operation	-	-	14	5	8	118	353	364	175	-	-
Communications	-	-	-	-	-	2,988	3,358	796	254	50	23
All others	-	84	-	503	-26	-	156	132	-28	1,222	102
Health and Sanitation	255	2,106	2,099	2,741	3,786	3,079	3,165	602	-	-36	-77
Control of specific diseases	-	-	-	-	606	813	670	270	2	-16	-
Environmental sanitation	255	2,106	2,076	2,104	2,913	1,867	1,156	111	-18	-	-
Health and hospital facilities	-	-	12	591	225	320	1,147	33	-4	-12	-77
All others	-	-	11	46	648	79	192	188	20	-8	-
Education	-	33	982	3,491	3,172	3,692	4,245	2,255	963	14	586
Technical Education	-	-	-	421	562	831	679	938	152	-	603
Professional & Higher Education	-	33	657	2,225	1,941	2,338	3,365	1,243	740	-115	-1
All others	-	-	325	845	669	523	201	74	71	129	16
Public Administration	-	-	124	396	1,437	1,170	1,462	1,941	1,128	484	387
Social Welfare and housing	1,570	7,330	9,003	6,266	4,927	2,492	4,014	2,872	181	164	-144
Community Development	-	-	-	16	925	477	796	1,323	85	98	18
Social Welfare	-	5,478	5,258	2,985	835	700	277	34	-	-	-181
Housing	-	-	336	131	2,032	158	1,530	1,458	-19	10	1

Armed forces assistance to Korea	1,570	1,251	2,479	2,125	764	837	1,369	-	-	-	-
All others	-	601	930	1,009	371	320	42	57	115	56	18
Operating & General Costs	470	1,395	3,341	2,824	3,445	3,798	4,368	3,814	1,547	856	939
Total	10,165	96,960	85,390	92,729	63,890	43,611	50,530	36,088	16,590	11,045	6,025

Status of ICA Aid and Supplies Received: Project Assistance (1965-1974)

Unit: Thousand Dollars

By Projects	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Agriculture & Natural Resources	354	726	679	712	724	639	650	145	257	407
Agricultural Research	354	-	679	712	724	-	-	-	-	-
Land and water resources	-	-	-	-	-	-	-	-	-	-
Crop and livestock development	-	-	-	-	-	-	-	-	-	-
Forestry	-	-	-	-	-	-	-	-	-	-
Fisheries	-	-	-	-	-	-	-	-	-	-
All others	-	-	-	-	-	-	-	-	-	-
Industry and Mining	2,647	1,743	2,280	2,827	4,676	534	840	-4	335	270
Mining and minerals	820	916	608	293	163	-	-	-	-	-
Power	1,279	284	-	-	-	-	-	-	-	-
Rehabilitation Hwachon Powerplant	20	-	-	-	-	-	-	-	-	-
Thermal plant construction	-	-	-	-	-	-	-	-	-	-
Others	1,259	284	-	-	-	-	-	-	-	-
Communications	-	-	-	-	-	-	-	-	-	-
Manufacturing and processing	281	409	1,328	38	218	-	-	-	-	-
Fertilizer plant	-	-	-	-	-	-	-	-	-	-
Misc small industries	-	-	-	-	-	-	-	-	-	-
Others	281	409	1,328	38	218	-	-	-	-	-

Engineering and construction	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
All others	248	134	344	2,496	4,295	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation	110	265	176	113	52	-19	47	-5	-	-	-	-	-	-	-	-	-	-
Highways and bridges	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urban transit and traffic engineering	94	171	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Railways	-	29	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Railway construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KNR Coal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coaches and freight cars	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diesel Locomotives	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	29	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port and harbor facilities	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Civil aviation	8	30	116	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ship operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Communications	8	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
All others	-	24	-	98	52	-	-	-	-	-	-	-	-	-	-	-	-	-
Health and Sanitation	-	-	38	136	1,018	598	1,212	678	610	-38	-	-	-	-	-	-	-	-
Control of specific diseases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Environmental sanitation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Health and hospital facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
All others	-	-	38	136	1,018	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	95	76	119	247	190	158	455	1,785	105	89	-	-	-	-	-	-	-	-
Technical Education	95	63	53	22	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Professional & Higher Education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
All others	-	13	66	225	183	-	-	-	-	-	-	-	-	-	-	-	-	-
Public Administration	635	981	843	1,100	5,383	1,100	1,006	229	186	408	-	-	-	-	-	-	-	-
Social Welfare and housing	-74	-	20	2	23	-1	5	812	-	-	-	-	-	-	-	-	-	-
Community Development	-	-	20	2	23	-	-	-	-	-	-	-	-	-	-	-	-	-

Social Welfare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Housing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Armed forces assistance to Korea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
All others	-74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating & General Costs	1,143	1,325	1,519	1,424	1,194	924	1,005	901	821	821	901	1,005	5,220	4,541	2,314	982	-154		
Total	4,910	5,116	5,674	6,561	13,260	3,933	5,220	4,541	2,314	982									

Source: Economic Statistics Yearbook, Annual Series, Bank of Korea

APPENDIX F

Status of ICA Aid and Supplies Received: Non-Project Assistance (1954-1963)

Unit: Thousand Dollars

By Projects	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
Agricultural Commodities	23,405	28,443	37,747	73,758	41,736	32,426	6,807	16,962	839	-
Wheat	2,007	3,982	9,012	22,809	3,945	7,295	1,231	16	-	-
Barley	1,785	104	5,073	13,863	1,931	-13	-	5,635	-	-
Raw Sugar	574	1,299	4,717	8,271	3,250	-6	-	-	-	-
Raw Cotton	17,019	22,039	16,396	26,425	30,815	23,369	28,439	8,968	46	-
Molasses	209	421	317	183	-	-	-	-	-	-
Soy Beans	691	200	198	81	-	-	358	671	-	-
Tallow	645	398	1,943	1,084	1,322	1,336	2,780	1,672	793	-
Others	475	-	91	1,042	473	445	3,999	-	-	-
Fuels	11,712	10,471	23,473	24,000	35,935	20,625	24,539	20,346	23,274	25,877
Petroleum, oil and lubricants	10,499	7,215	20,162	20,357	24,667	19,379	22,005	19,530	23,274	25,573
Bituminous coal	1,213	3,211	3,025	2,900	10,569	1,070	2,138	586	-	-
Paraffin wax	-	-	286	198	13	-	-	-	-	304
Others	-	45	-	545	146	176	396	230	-	-
Raw materials and semi-finished product	30,518	54,937	107,171	105,638	97,960	88,895	76,463	55,223	115,423	63,133
Fertilizer	16,979	40,792	55,686	56,556	47,652	45,617	40,680	22,702	46,416	21,016
Pesticides	139	448	1,083	869	745	721	955	249	97	999
Raw rubber	1,217	1,000	5,884	3,658	3,774	5,509	4,745	3,367	8,732	5,898
Raw hides	200	334	1,515	611	506	504	407	-	321	249
Rayon yarn	1,982	1,449	14,228	12,715	10,144	9,723	5,528	2,542	1,848	6,734
Worsted yarn	505	505	6,764	7,546	7,592	3,735	2,564	-	1,196	1,590
Chemicals	861	1,487	3,334	3,853	5,933	5,326	3,346	4,468	6,307	8,266

Medical supplies	1,183	1,185	4,019	4,541	3,761	3,503	2,721	1,380	1,625	1,064
Abaca	804	-	729	661	400	831	970	499	851	726
Papers	400	329	6,836	5,012	7,096	1,553	1,138	-	-	50
Pulp	110	183	850	790	1,306	2,245	3,299	2,646	9,575	-
Dyestuffs	-	199	958	1,489	1,550	1,146	1,026	254	-	-
Caustic soda	-	279	565	841	-	-	-	-	-	-
Nonmetallic minerals	318	71	-	-	265	749	402	1,157	3,029	1,136
Synthetic Plastics	-	451	2,162	2,425	3,136	1,995	3,170	475	-	-
Auto spare parts	337	1,344	85	95	274	27	1	-	-	-
Tires and tubes	975	139	532	783	179	-	962	467	13	-
Generators and motors	58	1,829	608	265	1,139	336	6	17	48	-
Electric apparatus	21	1,641	900	1,949	1,638	1,328	281	595	7	-
Engines and Turbines	-	-	-	-	-	21	-	-	-	-
Laboratory and scientific equipment	144	464	308	458	668	660	571	123	2	-
Others	4,285	808	125	521	202	3,366	3,703	9,306	35,356	15,405
Investment salable	6,637	15,004	17,268	27,142	26,648	22,740	36,427	25,700	8,876	19,604
Lumber and logs	3,501	3,208	2,505	4,359	4,044	5,093	7,769	4,213	374	9,032
Flat glass	350	538	1,743	1,721	144	-	90	210	-	-
Cement	410	1,755	2,112	2,392	1,039	-	1,112	1,048	8	-
Misc construction materials	830	161	176	49	571	335	28	-	-	-
Coal tar pitch	-	593	171	995	1,940	2,143	1,541	1,197	-	-
Creosote	-	181	214	-	-	-	-	-	-	-
Mining Machinery and Equipment	-	-	-	-	-	356	99	1,037	-	-
Misc industrial machinery	354	2,198	3,351	5,401	8,800	8,114	12,134	9,590	2,694	102
Metal working machinery	262	1,529	413	419	939	584	59	-	-	-
Iron and steel shapes	207	2,210	2,796	5,541	4,604	2,763	4,402	3,284	4,416	4,752
Nonferrous metals	483	693	1,494	2,433	2,979	1,872	2,189	1,832	20	5,040
Explosives	217	708	110	400	-	-	247	-	-	-

Fishery supplies	-	-	522	942	330	666	1,545	1,438	559	-
Vessels and equipment	-	50	1,291	1,535	376	100	-	-	-	-
Military surplus	23	302	161	64	-	-	-	-	-	-
Ocean freight	-	378	141	709	2	-	50	322	-	-
Others	-	-	68	182	880	714	5,162	1,529	805	678
Total	72,272	108,855	185,659	230,538	201,739	164,686	174,706	118,231	148,412	108,614

Status of ICA Aid and Supplies Received: Non-Project Assistance (1964-1974)

Unit: Thousand Dollars

By Projects	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Agricultural Commodities	14	2,902	6,634	1,915	203	-	-	34	-	-	-
Wheat	-	-	-	-	-	-	-	-	-	-	-
Barley	-	-	-	-	-	-	-	-	-	-	-
Raw Sugar	-	-	-	-	-	-	-	-	-	-	-
Raw Cotton	-	-	-	-	-	-	-	-	-	-	-
Molasses	-	-	-	-	-	-	-	-	-	-	-
Soy Beans	-	-	-	-	-	-	-	-	-	-	-
Tallow	-	2,498	6,634	-	-	-	-	34	-	-	-
Others	14	404	-	-	203	-	-	-	-	-	-
Fuels	8,566	606	-	-	-	-	-	-	-	-	-
Petroleum, oil and lubricants	8,243	-	-	-	-	-	-	-	-	-	-
Bituminous coal	-	-	-	-	-	-	-	-	-	-	-
Paraffin wax	198	606	-	-	-	-	-	-	-	-	-
Others	125	-	-	-	-	-	-	-	-	-	-
Raw materials and semi-finished product	43,662	53,215	51,319	44,984	41,134	16,563	12,571	10,754	507	-	-
Fertilizer	16,224	24,371	26,878	25,766	6,611	824	-	-	-	-	-
Pesticides	-	-	-	-	-	-	-	-	-	-	-

Raw rubber	6,030	6,338	3,313	1,288	6,817	4,036	664	460	-	-
Raw hides	206	200	10	106	150	-	-	-	-	-
Rayon yarn	200	2,152	2,020	1,240	2,508	3,169	-	1,117	-	-
Worsted yarn	-	-	-	-	-	-	-	-	-	-
Chemicals	5,729	6,722	306	259	1,840	2,003	361	1,667	-	-
Medical supplies	1,168	1,854	967	276	166	12	316	8	-	-
Abaca	398	-	-	-	-	-	-	-	-	-
Papers	8,622	4,346	10,152	8,062	2,115	-	-	-	-	-
Pulp	-	3,738	203	2,570	11,118	2,562	13	-	-	-
Dyestuffs	358	308	4	-	-	-	-	-	-	-
Caustic soda	-	-	-	-	-	-	-	-	-	-
Nonmetallic minerals	1,786	579	68	156	18	-	576	394	-	-
Synthetic Plastics	-	2,929	1,552	4	-	-	5,847	5,200	326	-
Auto spare parts	-	641	863	-	-	-	-	-	-	-
Tires and tubes	-	-	-	3	12	-	-	-	-	-
Generators and motors	-	324	79	-	-	-	-	-	-	-
Electric apparatus	-	-	-	-	-	-	-	-	-	-
Engines and Turbines	-	-	-	-	-	-	-	-	-	-
Laboratory and scientific equipment	-	-	-	-	-	-	-	-	-	-
Others	2,941	3,079	4,904	5,254	9,779	3,957	4,794	1,908	181	-
Investment salable	8,668	5,905	2,241	67	2,031	2,611	4,429	1,558	1,558	-
Lumber and logs	4,443	298	-	-	-	-	-	-	-	-
Flat glass	-	-	-	-	-	-	-	-	-	-
Cement	-	-	-	-	-	-	-	-	-	-
Misc construction materials	-	-	-	-	169	80	245	28	-	-
Coaltar pitch	-	-	-	-	-	-	-	-	-	-
Creosote	-	-	-	-	-	-	-	-	-	-
Mining Machinery and Equipment	-	-	-	-	-	-	-	-	-	-

Misc industrial machinery	-	84	-	-	79	2,531	4,184	735	-	-
Metal working machinery	-	119	125	-	-	-	-	-	-	-
Iron and steel shapes	1,758	903	1,042	-	-	-	-	-	-	-
Nonferrous metals	2,047	4,501	1,074	67	1,289	-	-	-	-	-
Explosives	-	-	-	-	-	-	-	-	-	-
Fishery supplies	-	-	-	-	-	-	-	-	-	-
Vessels and equipment	-	-	-	-	-	-	-	-	-	-
Military surplus	-	-	-	-	-	-	-	-	-	-
Ocean freight	-	-	-	-	-	-	-	-	-	-
Others	420	-	-	-	494	-	-	795	41	-
Total	60,910	66,994	60,194	46,966	43,368	19,174	17,000	12,346	548	-

Source: Economic Statistics Yearbook, Annual Series, Bank of Korea

APPENDIX G

Major Contents of Korea's Five-Year Economic and Manpower Development Plans

Periods	Economic Development Plan	Economic Development Goals	Economic Development Strategy	Manpower Policy	Major Educational Policies
1960s	1 st (62-66)	Find solution to solve socioeconomic vicious cycle; Structuring foundation for self-sustaining economy	Restore imbalance in national economic structure caused by increase in agricultural productivity; Secure the source of energy supply; Expansion of social overhead capital and key industries; Utilize unused resources; Improve balance of payments; Technology promotion	First Technology Promotion Plan ('62); securing technicians and engineers	Expansion of compulsory education
	2 nd (67-71)	Modernization of industrial structure; Expedite in establishing self-sustaining economy	Self-sufficiency of food, forestation, development of fishery resources; Creating basis for industrialization (chemical, steel, machinery); Expedite \$700 million export and import substitution (improve balance of payments); Increase employment, control expansion of population; Diversification in agriculture, stabilization of rural household incomes; Promotion of science and management technology, increase productivity through manpower development; External-oriented industrialization	Second Technology Promotion Plan ('66); Ministry of Science and Technology, KIST ('67), Vocational Education, Industry-Education cooperation, KAIST ('71)	The Charter of National Education ('68); Science Education Promotion Act ('68); Middle School Equalization Policy ('69)
1970s	3 rd (72-76)	Harmonization between growth, stability, and balance; Realization of	Self-sufficiency of staple grains; Improve the living environment of fishing and farming villages;	Securing specialized manpower; National Technical	Long-term educational plan ('72); KEDI ('72); High School

		self-sustaining economy; National land planning, equal regional development	<p>Improve balance of payments; Accelerate industrial structure through construction of heavy and chemical industry; Improvement in science and technology and manpower development; Expand the balance of social overhead cost; Effective development of land resources and optimal distribution of industries and population; Improvement in social security and national welfare; Export-oriented economy; Growth based on heavy and chemical industry</p>	Qualification System (’74)	Equalization Policy (’74)
	4th (77-81)	Realization of self- sustaining growth structure; Increase equality through social development; Technology innovation and improvement in efficiency	<p>Procure investment sources; Achieve international balance of payment; Restructuring industries and improve international competitiveness; Expansion of employment opportunity and manpower development ; Expansion of Saemaeul movement; Improving living environment; Increase investment in science and technology; Improving economic management and system</p>	<p>Training for scientific technician; Fostering skilled technicians; Creating conditions to develop technical manpower; Stabilize labor- management relations</p>	<p>Long-term manpower supply plan (’77); Future prospects on educational development (’78); Reorganization of technical colleges and increasing enrollment quota (’78)</p>
1980s	5th (82-86)	Improvement in balance of payments through economic stability; Increase in income through stable growth; Improvement in national welfare through balance	<p>Shed away from inflation economy; Recover the competitiveness of heavy and chemical industry; Modify agricultural policy; Overcome energy limitation; Improve financial system; Reestablish government function and rationalize financial management; Establish competition system and enforce open policy; Promote education, manpower development,</p>	<p>Preferential treatment to science and technology manpower; Establishment of Science high schools (’83-)</p>	<p>University graduation quota system (’80); Prohibit private tutoring, abolish examinations; Establish Open University (’82); Establish foreign language high schools (’85)</p>

			and science and technology; Settle on new labor-management relationship; Expansion of social development	Secure high science and technology manpower; Reinforce vocational education; Supply plan for industrial manpower ('90)	Science and technology education; Long-term plan ('86); Vitalization of career path education ('90)
			Improve fairness of tax burden; Regulate real estate investment, improve the land system ; Enforce financial liberalization; Intensive regulation on economic power and strengthening fair trade system; Settle the relationship between labor-management;. Structural improvement in agricultural development; Relax shortage of housing for urban working class; Improve the quality of educational environment; Balanced regional development, promote local industries; Protect merchants and modernization of retail; Trade policy under the surplus of international balance of payments; External economic policy in the era of globalization		
			Securing fairness and improve economic management; Balanced economic development and improvement in people's lives; Open economy, push for internationalization		
		6 th (87-91)			

Source: adopted and reorganized from Lee and Hong (2014)

BIBLIOGRAPHY

REFERENCES

- Bank of Korea. *Economic Statistics Yearbook*. various years.
- Boone, Peter. 1996. "Politics and the Effectiveness of Foreign Aid." *European Economic Review* 40(2): 289-329.
- Burside, Craig, and David Dollar. 2000. "Aid, Policies, and Growth." *American Economic Review* 90(4): 847-868.
- _____. 2004. "Aid, Policies and Growth: Revisiting the Evidence. World Bank." *Policy Research Working Paper*. Washington DC.
- Center for Education Statistics. n.d. Korean Educational Development Institute (KEDI). <http://cesi.kedi.re.kr/> (in Korean).
- Chang, Ha-Joon. 2008. *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*. New York, NY: Bloomsbury Publishing.
- Choi, Sang O. 2005. "Foreign Aid, Industrialization, and Import Substitution." In *History of Korea's Economic Development – From the Chosun Dynasty to the 20th Century*, edited by Kim Nak Nyun, Lee Dae Guen, Lee Young Hoon, Joo Ik Jong, and Park I-taek. Seoul, Korea: Nanam. (in Korean)
- Chung, Young-Iob. 2007. *South Korea in the fast lane: economic development and capital formation*. Oxford, New York: Oxford University Press.
- Collier, Paul, and David Dollar. 2002. "Aid allocation and poverty reduction." *European Economic Review* 26: 1475-1500.
- Dalgaard, Carl-Johan and Henrik Hansen. 2000. *On Aid, Growth, and Good Policies*. CREDIT Research Paper No. 00/17. Nottingham, UK: Centre for Research in Economic Development and International Trade.
- Dalgaard, Carl-Johan and Henrik Hansen. 2011. *Evaluating Aid Effectiveness in the Aggregate: A critical assessment of the evidence*. Evaluation Study for Ministry of Foreign Affairs of Denmark
- Dalgaard, Carl-Johan, Henrik Hansen, and Finn Tarp. 2004. "On the Empirics of Foreign Aid and Growth." *The Economic Journal* 114: 191-216.
- Durbarry, Ramesh, Norman Gemmell, and David Greenway. 1998. *New Evidence on the impact of foreign aid on economic growth*. CREDIT Research Paper 98/8. Nottingham, UK: University of Nottingham.
- Hadjimichael, M.T., Ghura, D. Mühleisen, M., Nord, R. and Uçer, E.M. 1995. *Sub-Saharan*

- Africa: Growth, Savings and Investment, 1986-83*. Occasional Papers 118. Washington D.C.: International Monetary Fund.
- Hansen, Henrik and Tarp, Finn. 2000. "Aid effectiveness disputed." *Journal of International Development* 12: 375-398.
- Kim, Dae-hwan. 1990. "Study on Korea's Economy in 1950s centered on the Industrialization." In *Recognizing 1950s in Korea*. 208-213. Seoul, Korea: Hangilsa. (in Korean).
- Kim, Jiyoung. 2011. "Foreign Aid and Economic Development: The Success Story of South Korea." *Pacific Focus*, 16(2): 260-286. doi: 10.1111/j.1976-5118.2011.01065.x.
- Kim, Jun-Kyung and KS Kim. 2012. *2011 Modularization of Korea's Development Experience: Impact of Foreign Aid on Korea's Development*. Seoul, Korea: Ministry of Strategy and Finance.
- Kim, Kwang Suk and Michael Roemer. 1981. *Growth and Structural Formation*. Cambridge, Massachusetts: Council on East Asian Studies, Harvard University.
- Kim, Kwang Suk and Joon-Kyung Kim. 1997. "Korean Economic Development: An Overview." In *The Korean Economy 1945-1995: Performance and Vision for the 21st Century*, edited by Dong-Se Cha, Kwang Suk Kim, and Dwight H. Perkins, 3-56. Seoul, Korea: Korea Development Institute.
- Kim, Mahn-Je. 1997. "The Republic of Korea's Successful Economic Development and the World Bank." In *The World Bank: Its' First Half Century, Volume 2: Perspectives*, edited by Devesh Kapur, John P. Lewis, and Richard Webb, 17-47. Washington D.C.: Brookings Institution Press.
- Lee, Dae Geun. 2002. "Korea's economy in 1950s after the liberation." Seoul, Korea: Samsung Economic Research Institute. (in Korean).
- Lee, Jaewoo. 2006. Effectiveness of Concessional Loan and Grant Aid in the Course of Korea's Economic Development. *Exim Overseas Economic Review*, 4-22. (in Korean).
- _____. 2012. *Effectiveness of Korean ODA in the Economic Growth of Vietnam*. Seoul, Korea: Export-Import Bank of Korea.
- Lee, Ju-ho and Sung Chang Hong. 2014. *2013 Modularization of Korea's Development Experience: Development of Vocational High School in Korea during the Industrialization Period*. Seoul, Korea: Ministry of Strategy and Finance.
- Lee, Kye Woo. 2010. "Borrowing from the World Bank for Education: Lessons from Korea and Mexico." *Journal of International Cooperation and Education* 13(2):49-71.
- Maddison, Angus. 2006. *The World Economy, 1950-2001: Volume 1: A Millennial Perspective*

- and Volume 2: Historical Statistics*, Paris, France: OECD Development Centre. doi: 10.1787/9789264022621-en.
- Mason, Edward S., Mahn Je Kim, Dwight H. Perkins, Kwang Suk Kim, and David C. Cole. 1980. *Economic and Social Modernization of the Republic of Korea*. Cambridge: Harvard University Council on East Asian Studies
- Mechau, Vaughn, 1961. *Economic Assistance to Korea and Aid Accomplishments: 1945-1960*. Washington D.C.: United States Agency for International Development
- Mosley, Hudson, John Hudson, and Sara Horrell. 1987. "Aid, the Public Sector, and the Market in Less Developed Countries." *The Economic Journal* 97(387): 616-641
- Organisation for Economic Co-operation and Development (OECD). 2013. "Country and sectoral data." *Aid Statistics*. <http://www.oecd.org/dac/stats/data.htm>
- Organisation for Economic Co-operation and Development (OECD). 2013. *Development Co-operation of the Republic of Korea: DAC Special Review*. <http://www.oecd.org/development/peer-reviews/42347329.pdf>.
- Ouattara, Bazoumana and Eric Strobel. 2004. *Disaggregating the Aid and Growth Relationship*. School of Economic Studies Discussion Paper No. 0414. Manchester, UK: University of Manchester.
- Ovaska, Tomi. 2003. "The Failure of Development Aid." *Cato Journal* 23 (2): 175–188.
- Park, Hyun Chae. 1990. "Economics of U.S. Agricultural Surplus Aid to Korea." In *Recognizing 1950s in Korea*. Seoul, Korea: Hangilsa. (in Korean)
- Rahman, Khan Md Azizur. 2008. "A Paper on -Aid Effectiveness Reconsidered." *International Research Journal of Finance and Economics* (13): 145–151.
- Rajan, Raghuram, and Arvind Subramanian. 2005. "Aid and Growth: What Does the Cross-Country Evidence Really Show?" Cambridge, MA. doi:10.3386/w11513.
- _____. 2008. "Aid and Growth: What does the cross-country evidence really show?" *The Review of Economics and Statistics* 90(4):643-665.
- Ram, Rati. 2003. "Roles of Bilateral and Multilateral Aid in Economic Growth of Developing Countries." *KYKLOS* 56:95-110.
- The World Bank. 2013. "Republic of Korea: Projects." Projects and Operations. http://www.worldbank.org/projects/search?lang=en&searchTerm=&countryshortname_exact=Korea,%20Republic%20of