

# The Relation of Higher Education and Economic Development in the Pacific Basin :

in case of the Republic of Korea



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◇... 김숙희 교육부장관은 지난 11월 20일 미국 플로리다주 보카레이론에서 열린 AASCU(미국주립대학협회) 연차총회에서 '주립대학동문 국제공로상'을 받았다. 이 자리에서 김 장관은 "태평양지역에서의 고등교육과 경제발전"이라는 주제로 기조연설을 하였는 바, 좋은 자료가 될 것 같아 원문대로 게재한다. 편집자 ...◇

## 1. The Korean Economy

With the advent of the 21st century, much interest is shown over how the Korean economy has reached its present stage, and from now on where it is heading toward. Particularly, in the recent situation of world economy, which is characterized by the World Trade Organization(WTO), the issue of Korean economy is of great interest.

For the past 40 years or so, Korean economy has progressed rapidly while experiencing its structural changes. Rapid industrialization accompanied by this process altered

the closed agrarian Korean society to an open industrialized society. During the past 40 years, per capita income has risen from less than 100 dollars to 8,000 dollars. Korea is now the thirteenth largest trading nation in the world.

What has the economic growth of Korea propelled? In order to achieve economic growth, at least the following four conditions should be met.

First, there should be, what W. A. Lewis calls, "the will to economize." This denotes the desire and will of people for their better lives. Economic growth is a product of human endeavor. Only with a strong will to economize, people will venture in economic activities. Until the 1980's, the rapid growth of Korean economy depended largely on the laborers who were willing to work for longer hours with low wages. The longing for being free from poverty was the most important incentive for them to work hard.

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Secondly, for economic growth, sufficient accumulation of knowledge and technology is indispensable. It is widely recognized that technology is a necessary condition for economic growth. As economic growth means more than physical phenomenon, the importance of areas dealing with humans should not be underestimated. In the early stage of Korean economic development, although science and technology were not highly progressed in terms of the world standard; they acted as a driving force for the economic development.

Thirdly, the needs for both robust propensity to save and willingness to invest should be met for economic growth. Who does the savings? The people. Who invests? Firms. Even though there is willingness to invest, with insufficient savings, inflation would be induced and investment can not take place properly. On the other hand, no matter how robust the propensity to save is, if firms do not invest actively, the economy would fall into a recession. Without possessing strong propensity to save and investment impulse, no country has successfully achieved economic growth. Looking back the last 40 years in Korea, the propensity to save was very strong although investment exceeded the savings except for in the case in the late 80's.

Fourthly, there should be enthusiastic and creative entrepreneurs for economic growth. Capitalistic economy are mainly led by entrepreneurs. The role of entrepreneurs, as J. A.

Schumpeter has pointed out, lies in innovation. Entrepreneurs are the ones who are constantly engaged in developing technology and management skills for making more profit; in this process, the national economy grows. In Korea, the role of hard working entrepreneurs was quite significant in her economic growth since they were the ones who expanded markets all over the world.

The mere fact that the Korean economy has grown astonishingly fast for the last 40 years suggests that the above four conditions were met to a certain extent. In addition to the above four prerequisite conditions for economic growth, one case-specific condition that helped the Korean economic growth was the favorable international environment. The United Nations designated the 1960's as "the decade of development"; along with it, world market for Korea was expanded as developed nations opened up their markets. Also scarce foreign currency flowed into the Korean economy as a result of the Vietnam War. After the oil shock in the 70's, the oil money of the Middle East flowed into the international financial markets, and Korea was able to have an access to it. Finally, in the 80's, low interest rate, low oil price and low exchange rate in the international market, so-called the Three Low Phenomenon provided a favorable condition for economic growth for Korea.

Ever since the 60's, Korea's strategy of economic growth was to combine domestic laborers with foreign resources, capital and

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technology while expanding international markets. Economic growth is more than material outcomes of given physical conditions, it is a product of social changes brought by workers, entrepreneurs and government officials.

In the process of economic development in Korea, there was a clear demarcation of roles among economic agents. The government formulated and executed developmental strategies, entrepreneurs performed their duties at a level of organizing production, and educated workers worked ceaselessly while being well adapted to new environmental situations. Unless these economic agents performed their job and cooperated with each other, the rapid economic growth would not have been possible in Korea.

So far, I mentioned that the rapid economic growth of Korea was possible owing to the followings: the will to economize, accumulation of knowledge and technology, high propensity to save and invest, entrepreneurship, utilization of the favorable international environment, and finally cooperation among various members of the society. More importantly, it should be recognized that all of these factors could be obtained through educational process since 1945.

These days, however, the situation has been changed. For example, as wages have gone up, there is a tendency for many workers to reduce their working hours. In addition, the transfer of foreign technology become tougher. Korea is now facing an in-

creasing pressure from developed nations regarding opening her markets. Moreover, increasing protectionism in the international trade adds uncertainty to the future of Korean economy.

## 2. Education and Economic Development in Korea

Let me now look at how education has contributed to economic growth in Korea. For this purpose, the process of economic growth will be discussed in two stages: the stage of extensive growth and the stage of intensive growth.

Extensive growth is attained by expanding the use of hitherto unemployed resources. It occurs when production technology or public ethics is not yet mature enough to contribute to economic development. At this stage the economy experiences inefficiency as well as diminishing returns. Extensive growth is not growth in the real sense, in that the exhaustion of the surplus input puts an end to it. As economic development makes progress and bottlenecks begin to proliferate, the economy should shift from extensive to intensive use of resources. From this stage, economy is progressed mainly through modernization process, that is, increasing productivity in all sectors of the economy through better uses of advanced technology and human resources. The economy will then have entered the stage of intensive growth.

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The period under consideration is divided into four phases; the first(turmoil), from 1945 to 1953; the second(reconstruction), from 1954 to 1961; the third(extensive growth 1), from 1962 to 1971; and the last(extensive growth 2), from 1972 to the present.

\* Phase I (Turmoil)

Phase I(1945-1953) is marked by severe economic dislocation, associated first with the departure of the Japanese, then with the partition of the country into South and North, and finally with the Korean War.

The sudden withdrawal of the Japanese and the subsequent division of the country created chaos in the economy. The chaos, which was accompanied by the American military occupation(1945-1948), resulted in a pressing need for relief aid.

The objectives of the aid were to provide people with sustenance, and make possible the restoration of basic economic activities. The former objective was met through commodity imports. Reviving educational system was part of the strategy to achieve the latter objective of the aid.

Upon liberation, trained teachers, bulidings, and supplies were in short. To solve these problems, the military government launched a program for teacher training. As a result, literacy rate increased remarkably in Korea. In 1947, over 70% of Koreans were literate. The educational endeavor initiated in the first phase became the base for economic development in later

years.

From 1945 to 1950, economic conditions improved substantially. During the following years, however, the country was involved in a devastating confrontation between North and South Koreans. Nearly all of the industrial facilities and urban centers were either totally destroyed or heavily damaged during the war. Disasters also included the destruction of a large proportion of the country' educational facilities. Relief aids were desperately needed at this point, and the U.S. assistance played an important role in economy as well as in education.

\* Phase II(Reconstruction)

The phase II(1954-1961) is divided into two distinct periods: 'the reconstruction' (1954-1957) and 'the slow-growth' (1958-1961) periods.

The extensive destruction resulted from the war forced Korea to commence postwar reconstruction virtually from scotch. From 1954 to 1957, economic growth rate was about 5% per year in real terms. However, from 1958 to 1961, Korea experienced slower economic growth rate (about 3% per year).

One of the important factors related to the economic growth of Korea is armed forces, which has been seldom discussed. Most of Korean men were obliged to join the army for a certain period of time. The armed forces in Korea at that time were relatively modernized. In the army, men were exposed to

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modern organizational principles, and had an opportunity to learn modern skills involving transportation, construction, communication, a sense of duty, and so forth. These skilled men played an important role in the economic development in Korea.

\* Phase III (Extensive Growth 1)

The decade encompassing phase III (1962-1971) may perhaps be the highlight in the history of Korean economy. It was marked by the military government's initiation of a series of programs for economic development. During this period, average annual growth of gross national product exceeded 10% and that of export reached nearly 40%.

At this time, Korea was in short of capital, but had plenty of laborers. Fortunately, many of these laborers were literate by virtue of the education programs launched in the 1940's and 1950's, although their technical knowledge was minimal. The essence of the developmental strategy was to make use of this labor force, that is, to combine it with capital from abroad.

Contact with the West, especially with the United States, in the 1940's and 1950's exerted a favorable influence on the economic development in the 1960's. Educational investment during the last two decades also contributed to the economic development in terms of increasing literacy, which in turn increasing productivity.

\* Phase IV (Extensive Growth 2)

The fourth phase refers to the period from 1972 to the present. This period is characterized by strong centralization in politics and sustained economic growth.

The Dr. Soon Cho's observation on the Korean economy in the 1970's deserves our attention.

"As the economy grows in size, its structure becomes more complex; it requires, as a matter of principle, more sophistication in national economic management. Private initiative... in making decisions regarding investment, price setting, and sale... and the proportion of resource allocation through the market should be enlarged, and the extent of direct control by bureaucrats must be abridged. Rules ought to substitute for arbitrary discretion.

The role of government should change. The influence it exerts and the control it exercises ought to become more indirect. The basic strategy for economic development now is to foster the factors responsible for growth, rather than to achieve the growth targets. Economic growth, it ought to be realized, rests ultimately on productivity, which in turn depends on investment in the human being."

Strong leadership in the 1970's is being evaluated either to have positively influenced or at least not to have impeded the rapid growth of Korean economy. Economic growth rates were high in the 1970's, but there existed limitations in this process. For example, many of major industries in Korea

experienced, as Dr. Cho stated, deterioration in terms of making profits.

At this time, Korean economy was concerned primarily with extensive growth, and placed little emphasis on intensive growth. For example, the proportion of GNP assigned to education sector gradually declined during the same periods.

### 3. Educational Development since 1945

The value of education has been extraordinarily high among Koreans. The zeal for learning is easily found in some commonly used Korean words. For example, Seobang, referring to man, literally means a study room; and Seobang-nim, a respectful form of addressing a husband, means a cherished person in a study.

There has been a continuing expansion in educational sector since the independence of Korea in 1945. As shown in table 1, the number of students enrolled in schools remarkably increased in all levels of education-

al institutions. Quantitatively speaking, primary school enrollment reached its saturation point within two decades since 1945, although these two decades included the periods of confusion following the liberation and of interruption by the Korean War. The school enrollments in the secondary and tertiary education were also considerably increased. The expansion of educational sector was indeed a remarkable achievement, particularly as there was a sharp increase of school-aged populations due to the influence of postwar baby boom.

In the late 1960's, the expansion of educational sector shifted from primary to secondary and higher education. In this period, there were over one million students in middle schools in Korea. In the mid-1980's, the number of middle school students exceeded one half of that of primary school students. The rate of entering middle school reflects a rapid development in secondary education. Ninety-six percent of primary school graduates entered middle schools in 1980, and this increased further to 99.2% in 1985.

Because of time lags in educational proc-

Table 1. School Enrollment in Korea, 1945~85(in thousands)

Type of School	1945	1952	1960	1965	1970	1975	1980	1985	1990	1994
Primary	1,366	2,370	3,623	4,941	5,749	5,599	5,658	4,857	4,869	4,098
Middle (M+H)		292	529	751	1,319	2,027	2,472	2,782	2,276	2,508
High	=84	134	264	427	590	1,123	1,697	2,153	2,283	2,061
College and University	8	34	101	142	194	297	598	1,260	1,217	1,521

Source : Ministry of Education, *Statistical Yearbook of Education*, various issues.

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esses, only in the mid-1970's did the number of high school students reach the one-million mark. In 1985, the rate of entering high school marked over 90%.

As compared to the rate of enrollment in primary and secondary schools, that in college or university was clearly lower until the late 1970's. In fact, rates of entering college and university somewhat declined in the 1960's and the 1970's, because college student quotas were set at low levels. After lifting these quotas in 1978, the number of college students increased. The number of freshmen was 88,000 in 1978 and tripled in 1985 (234,000). This shows that the rate of entering college or university sharply increased in the early 1980's. There were more than one million college students in 1983. Since then, the rate of college enrollment has been slowing down up to present.

The expansion of educational sector in Korea has been very impressive. It can be stated without exaggeration that no other developing country has yet witnessed such rapid increases in student enrollment at all levels. It took less than four decades for Korea to reach the entering rates to schools in industrialized countries. Even though only primary education is compulsory in Korea, the level of secondary education is close to that in developed countries in terms of school enrollment. More impressive is the fact that dropout rate is almost zero in Korean education. The college enrollment rates of Korea are almost as high as those of

Japan in the 1980's.

Regarding a human-capital perspective, education has been considered as a major contributor to economic development. Meeting the need of manpower through education during the period of dynamic economic growth is, however, not an easy task. Immediate manpower needs are often thwarted by the lengthy gestational period required for education and training. It is often said that even well-established theories are limited to predict a long-term need of manpower within a range of reasonable accuracy, which would serve as a basis for planning education and manpower development. Besides the limitation of predicting manpower requirements, rapid changes in technology put extra burden in educational plan for meeting the need of labor force for the future.

Even though Korea has experienced those limitations described above, fortunately, educational investment in the 1940's and 50's effectively functioned with regard to meeting the need of manpower for the economic and social transformation occurred beginning in the early 1960's. There were relatively well-educated people available before rapid changes in economy have taken place. By providing short-term on-the-job training and informal education, a pool of secondary school graduates possessing a solid background in mathematics and sciences could satisfy specific needed manpower. Therefore, education played a vital role in economic development in Korea in terms of meeting

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needed manpower.

Recently, a need for improving the quality of education is widely recognized for the Korean economy heading for intensive growth. Education has considerably been progressed quantitatively since 1945, yet there is room for qualitative improvement. Korean education now faces an unavoidable wind of change.

#### 4. Conclusions

Since 1945, educational development in Korea has been quite spectacular largely owing to Koreans' high value on education. There is no need to say that human elements were extremely important in the economic development of Korea. By providing necessary laborers, education greatly contributed to the Korea's rapid economic development. Although it was never intended, the timing was right in the sense that educational development preceded industrial development. There had been relatively well-

educated people available before the country was rapidly industrialized.

Korean economy has been developed well enough to play an important role between developed and less developed countries. During the past one century, ideological conflict between the East and the West has become critical, but now we are being encountered the North and South conflict represented by the confrontation between the wealth and the indigence. Occasionally, however, critical issues raised by the North, such as negative ecological consequences of economic development, are likely to be less persuasive to the South as these issues imply for the South to limit their economic growth.

The most urgent task for educational policy makers including myself is to seek a new educational paradigm for development satisfying both sides, that is a paradigm aiming for both material prosperity and ecological harmony. Needless to say, it is extremely difficult to fulfill this task, but it is something that should be performed. Thank you. ◀