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THE KOREAN TAKE-OFF

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The "take-off," one of the five stages of economic growth distinguished by W.W. Rostow, is "... the great watershed in the life of modern societies ... (when) growth becomes (a) normal condition."[1] This aeronautical methaphor is employed as a synonym for "industrial revolution," for Rostow notes that "the take-off is defined as an industrial revolution, tied directly to radical changes in methods of production, having their decisive consequence over a relatively short period of time."[2] Both the empirical validity and analytical worth of Rostow's analysis have been severely criticized.[3] It is by no means evident either that economic growth has typically conformed to Rostow's stages, or that recent economic developments place the Republic of Korea (South Korea) in the take-off stage.

Yet in the years after the Korean War (1950-1953), something has happened to transform a virtually stagnant economy in Korea into one of the world's most rapidly growing economies in the 1960's.[4] When Professor Rostow visited Seoul in the spring of 1969, he was quoted to the effect that "Korea might save four or five years in completing the take-off stage."[5] The country's remarkable growth in the last few years (real output rose 13 percent in 1968, almost 16 percent in 1969, and probably about 10 percent in 1970) has begun to attract widespread attention.[6] This growth has also raised the question of whether the economy is "taking-off" or not, a question which would never have been asked before 1963.

This question is essentially speculative. Rostow's take-off is considered to be a take-off into self-sustained growth, not an abortive flight followed by a crash landing. By 1981, observers should be able to answer the question, but

today they cannot. The interesting and fruitful issues now, in 1971, lie elsewhere. In particular, what is the evidence of a shift from stagnation to growth? To what extent has change in the tempo of development been accompanied by a restructuring of the economy? Changes in the pace of growth are likely to be marked not only by more of the same, but also by differences in kind. What are the causes of accelerated growth? The costs and the benefits? Finally, what are the prospects for the future? Some of these questions, particularly the last, are no less speculative than that of whether Korea is now in the take-off stage or not. But the questions posed here are different in kind from the take-off question, for evidence exists at present which can be used to provide answers to such questions, even if only limited or intuitive answers.

I. - The Evidence

Analysis of economic growth in Korea is usually limited to South Korea in the period after liberation from the Japanese in 1945. Though today's Republic was once part of a unified Korea which, in turn, was a major link in the Japanese empire, independence and division have created a new economy. This economy cannot be legitimately compared either with all of Korea or the Southern provinces before 1945. The sum of the parts, for once, does not equal the whole. Since continuous, reasonably reliable economic data extend back only to 1953 or even later, this analysis is limited for practical reasons to the period after the Korean War.

Gross national product (GNP) measured in constant (1965) prices is shown in the chart and table at the end of the paper. Constant-price or real GNP is used here to disentangle the effects of price increase from output growth on

GNP measured in current prices. This is particularly necessary when rates of inflation vary sharply from year to year (compare the 1964-65 with the 1965-66 price indexes shown in the table, column 3). Real GNP is related in the chart to the GNP which would have resulted if output had grown evenly (at a constant percentage rate) from 1953 to 1969. Comparison reveals a gap which opened to 1962 before closing in later years.[7] With the exception of 1957, growth before 1963 is of a different and lower order of magnitude than growth afterward. (This is confirmed by the annual increase rates shown in the table, column 2). The annual rate of increase in GNP averaged 4.6 percent from 1953 to 1962. The average more than doubled (to 10.9 percent) after 1962.[8]

Private consumption and gross domestic capital formation, two major components of expenditure on national product, are given in columns 5 and 7 of the table. The consumption figures, divided by population estimates (column 4), show that the increase in average per capita consumption was insignificant from the mid-1950's until the early 1960's. Individual consumption has risen almost 50 percent since then. International comparison of consumption and other expenditure components is known to be treacherous, but it is noteworthy that an average consumption of 23.3 thousand won in 1965, for example, was equivalent to less than 90 dollars at the prevailing exchange rate. An increase of 50 percent from such a level can only have profound and welcome welfare effects.

The increase in per capita consumption is a product of offsetting factors. On the one hand, GNP and total available resources (GNP plus net borrowing and transfers from the rest of the world) have risen sharply in recent years while the annual rate of population increase has declined from 3 percent in 1955-60

to 2.6 percent in 1960-66 and 1.9 percent in 1966-70. The share of resources (and GNP) going to capital formation (i.e. investment), on the other hand, has increased too. This is not entirely at the expense of consumption since capital formation today increases output available for consumption or further investment tomorrow. Nevertheless, the rapid increase in domestic investment from 10-12 percent of GNP in 1959-61 to almost 30 percent in 1967-69 (see table, column 10) has probably held down consumption in recent years.

Capital formation and the share of capital formation in total output (the investment ratio) both began to accelerate in 1963. The rate of capital formation is generally considered the primary determinant of economic growth in modern growth theory. To the extent that investment actually determines the rate of increase in GNP, the rapid growth of investment to over a third of GNP in 1969 has been responsible for Korea's remarkable growth rates in recent years.[9]

This investment has been financed from foreign and domestic sources (see table, columns 8 and 9). Domestic saving was negligible and even negative (when measured in constant, 1965 prices) in earlier years, but began to increase in 1963, almost doubled between 1965 and 1966, and has risen since then to account for more than half of total saving in 1967-69. Foreign saving increased to 1957, and then declined until 1966 before rising once more.

"Foreign saving" is calculated here by subtracting exports from imports (and net factor income from abroad); it is pretty much equivalent to Korea's current-account balance of payments which, in turn, is dominated by merchandise exports and imports (see table, columns 11 and 12). The current-account balance (a deficit each year since 1953) has been covered by foreign aid, particularly

U.S. aid, and by private lending. American aid and UNKRA (United Nations Korean Reconstruction Agency) supplies totaled 4.3 billion dollars between 1945 and 1969. Approximately 1.8 billion dollars was received in the form of commercial loans and direct private investment from 1959 through early 1970, mainly in 1966 and afterward. The decline in foreign saving since 1957 and its subsequent recovery reflects the gradual reduction in aid levels and the more recent increase in commercial borrowing.

Export growth since 1963 has been phenomenal. Exports doubled from 1963 to 1965, and almost doubled again from 1965 to 1967 and from 1967 to 1969. Less than a fifth of total exports were manufactures in 1957-59, but manufactures made up more than three-fifths of the total by 1969. The rapid growth of manufacturing, the main component of the secondary sector (see table, column 15), has essentially been export-led growth since 1963 or 1964.[10]

Agricultural output has increased too, but at a lesser rate since output has had to rise from a much larger base.[11] The result has been a change in industrial structure which accelerated in the mid-1960's. The share of the secondary sector rose almost 10 percentage points during the decade from 1953 to 1963-64. It rose another 10 points during the five years from 1964 to 1969. This increase has been almost wholly at the expense of the primary sector (predominantly agriculture), since the share of the "other" sector (trade, transport, government, and the remaining service industries) has remained quite stable.

Shifts in sectoral output shares are only one sign of the massive forces in Korea that are transforming an agricultural, rural society into an urban, industrial one. Changes in labor force composition, the widening gap between farm

and non-farm incomes, and flight to the cities are other signs.

Manufacturing employment doubled from 1963 to 1969. The number of persons employed in agriculture actually dropped during the period. Value added per worker in agriculture averaged 127 thousand won in 1968; the figure for manufacturing was 340 thousand. With a difference in productivity of this magnitude, clearly economic development is not only a matter of increasing output per worker in each sector, but also a process in which the center of economic gravity shifts from low-productivity to high-productivity activities.

This shift has been accelerated in Korea by increasing urban-rural income disparity. Average annual farm-household income equaled 179 thousand won in 1968. Annual incomes of urban wage-earner families averaged 221 thousand. Urban wages quadrupled from 1963 to 1968; farm-household income rose 92 percent. The standard of living (real income) of urban workers doubled during this period while farm families were no better off in 1968 than they were in 1963.[12] Is it surprising that the number of non-farm households has increased four times as fast as the number of farm households in recent years? Or that Seoul's population rose from 2.4 to 5.5 million persons during the past decade?

The evidence here, to summarize briefly, shows a marked acceleration in the pace of economic growth after 1963 or 1964 which distinguishes more recent years from the decade 1953-1962. This acceleration is seen in annual rates of increase in GNP, per capita consumption, capital formation, and in the investment ratio. It is also found in the shifting sectoral distribution of output. The share of manufactures, led by exports, has risen while agriculture's share has fallen. This shift has its counterpart in the labor force, where a larger proportion of workers now works in factories rather than in the fields, and in

population distribution, as Korea becomes increasingly urbanized. Insofar as the process described here, to quote Rostow, "... (is) tied directly to radical changes in methods of production, having their decisive consequences over a relatively short period of time," then Korea's take-off began seven or eight years ago. The take-off concept itself, as noted earlier, is subject to major reservations. Moreover, that this acceleration in the tempo of economic activity really constituted a take-off is also debatable, since we have not yet had the benefit of sufficient hindsight to test the hypothesis adequately. Whatever one wishes to call it, the major shift in Korea's economic situation deserves an explanation. An explanation is offered in the next section of this paper.

II. - The Causes

Any evaluation of the acceleration in Korea's rate of economic development in the early 1960's must explain why growth was slow from the end of the Korean War to approximately 1963, what happened at the time to change the situation, and why subsequent growth has been so rapid.

Slow growth after the Korean War is difficult to understand in the immediate historical context. The war was responsible for about one million casualties in the South from a population of 20 million. Physical damage was estimated to almost equal the value of total output in 1953.[13] Reconstruction of the shattered economy should have resulted in high growth rates if only because output reached very low levels during the war. The answer to this apparent paradox is that the battle line stabilized in early 1951, while agricultural and industrial output recovered to pre-war levels by 1953. Recovery was remarkably swift, a tribute to the Korean people, but earlier output levels were

low and the basic problems which had bedeviled the economy still persisted.[14]

Liberation from Japan and division of the Korean peninsula in 1945 had left the South a truncated part of a major component of the former Japanese Empire. Korea's comparative advantage within the Yen Bloc in producing rice, iron ore, chemicals, and other products ended with liberation in 1945. Separation of the country into North and South broke up a highly complementary economy in which rice and barley were mainly grown in the South, beans and cereals in the North. Most textiles and machine tools were manufactured in the South, while metal and chemical (especially fertilizer) production was centered in the North.

The division of an interdependent economic system clearly caused many problems. For example, light bulbs fabricated in Korea used tungsten filaments imported from Japan. Korea had exported the tungsten ore to Japan, but now had no filament-making facilities. Similar examples of disrupted economic ties could be listed indefinitely, but the major case in the South after liberation was in agriculture, and the immediate results were hunger and rice riots.

Though "starvation exports" of rice no longer had to be shipped to Japan, the domestic supply was inadequate because fertilizer could not be obtained from the North. Also, there were more mouths to feed. The population of the South rose from 16 million in 1944 to over 20 million in 1948-49 as many Koreans returned from Japan and Manchuria and others emigrated from the North.[15] The American Military Government (AMG) under General Hodge, faced with severe economic and political problems it was not adequately prepared to handle, eventually established compulsory rice collection and brought fertilizer to replace that no longer available from the North.

In addition to the major problem of feeding a swollen population, the AMG faced a host of other immediate problems. One was that plant and equipment had been run down and the economy cannibalized to meet war needs.[16] Korea's capital stock was consequently in poor shape. Limited productive capacity and severance of former economic ties combined to cause massive unemployment.[17] Also, the Japanese had monetized their assets (life insurance policies were paid out in full, etc.) in preparation for departure. Monetization plus shortages of necessities led to rampant inflation in 1945.[18] The United States responded to these problems during the occupation with a series of relief measures. Aid imports, for example, were composed mainly of food and raw materials rather than equipment. This was essentially a holding operation rather than a development program.[19]

After the occupation forces left, an independent Republic of Korea was established under the presidency of Syngman Rhee in August 1948. It was now becoming evident that this dismembered ex-colony would have to be transformed into a viable, independent economy. As a result, American aid policy began to shift from relief to longer-term development aid.[20] The issues now were how to develop economic independence and what to do first.

The basic outlook in 1948 appeared bleak. Only a fifth of the land area was arable yet Korea had one of the world's highest population densities. The economic structure was lopsided, with redundant export industries on the one hand and insufficient capacity to meet domestic needs on the other. Three-quarters of the population was illiterate at the time of liberation. After the Japanese were repatriated, Korea was left with virtually no administrative, managerial, or

technical manpower.

When the Korean War erupted less than two years after the founding of the Republic, too little time had passed and the political situation was too turbulent to expect much economic progress or the establishment of economic programs. The period from the armistice in July 1953 to the student revolution in April 1960 was sufficiently long, however, for government economic priorities to be set and for development efforts to show results. Land reform was completed by 1958; food production rose roughly 50 percent from 1949 to 1959; illiteracy was reduced sharply, and primary education greatly expanded. Industrial production doubled from 1955 to 1960, largely through import substitution.[21] Despite these gains, the overall pace of growth was unsatisfactory. Real output rose at an annual average rate of 5 percent from 1953 to 1959, but three-fifths of this increase was eaten up by population growth.

Given the basic outlook in 1948 and the havoc of the Korean War, one may argue that any progress was sufficient and that satisfactory rates of development could not be expected for several generations. This argument is simplistic because it fails to recognize the favorable factors. Korea had been well along the road to industrial development by 1939-41.[22] Though higher-level talent was missing, the more basic skills were available. Also, the United States was already committed in 1948 to help Korea become "a display window of democracy."[23] The committment was strengthened by the Korean War so that large-scale aid in the 1950's gave Korea one of the world's highest levels of per-capita assistance.[24]

What progress occurred before 1960 was achieved despite the lack of any coherent government economic program and despite the handicap of mistaken economic

policies.[25] These can be blamed on inexperienced administration, but the basic cause was President Rhee. He knew little of economics and had no plan for economic development.[26] The first opportunity for any sort of coordinated government economic policy occurred when the Rhee regime was overthrown in May 1960. The successor government of Dr. John M. Chang (Chang Myŏn) was too brief and unstable for new economic policies to be adopted before it was turned out by a military coup in May 1961.[27] The military junta, led by General Park Chung Hee, was succeeded in 1963 by civilian government under General (new President) Park. The government since 1961, unlike that in earlier years, has been a stable, continuous force with pronounced economic goals.[28]

The economic slowdown in 1959-1962 (see table, column 1) was due to poor crops in 1959-60 and again in 1962, and the disruption and uncertainty which followed the student revolution and military coup in 1960 and 1961. A poorly conceived currency reform in June 1962 also had a depressing effect on economic activity. By 1963, however, better harvests and heavy investment in First Five-Year Plan (1962-1966) projects caused GNP to rise substantially.

Rapid growth from 1963 on can be attributed to planning, new policies, accidental factors, and basic sources of economic strength. Like computers, five-year plans have been endowed with powers they do not possess and made the subject of much economic science fiction. To be taken seriously a plan must be more than a shopping list of projects, and more than an exercise in futility by government economists who either lack the information needed to draw up an adequate plan or whose government is unwilling or unable to

implement one. If a plan meets the necessary conditions for credibility, then it can be used like a map on which the course of the economy has been plotted for the next five years. As is often the case with maps, however, the map may prove misleading, there may be detours due to unforeseen circumstances, or one may miss signs and either overshoot or stop short of the destination.

In Korea, unlike many other developing countries, the five-year plans can be taken seriously. The Second Plan (1967-1971), with annual modification, has served as a guide to the country's economic future and so, to a lesser extent, did the First Plan. The Third Plan (1972-1976), which is now being prepared, will undoubtedly perform the same function. The First and Second Plans established aggregate growth-rate targets and sectoral output goals. The amounts of foreign and domestic investment needed to meet the various targets are specified. Less detailed information on savings sources and labor requirements is also provided. Each plan, despite inclusion of a proposal to achieve self-sufficiency in food grains production, has emphasized industrialization with particular stress on the expansion of manufactures.[29]

The plans set targets but usually do not specify how they are to be reached. This appears, at first sight, to be dodging the issue. When plans are being constructed, however, the appropriate choice of policies needed to implement them is not readily apparent. Nor is the quantitative effect of a particular policy decision likely to be known in advance, though attempts are of course made to predict such things. A "stabilization program," or set of new policies adopted in 1963-1965, does not appear in the plans. This program had a major impact on plan achievement and subsequent growth.

Government deficits, financed mainly by borrowing from the central bank, had been the main factor responsible for increase in the money supply and a chronic cause of inflation since 1954. Beginning with the budgets of 1963-64, budgets were adjusted -- first by holding down expenditure, later by increasing revenues -- so that the government would be a net saver rather than a net borrower. This new role of government as saver has limited inflation which, at Korean rates, has probably retarded development.[30] To the extent that the increase in government saving is greater than the reduction in saving of those whose taxes rose, and insofar as government funds are used more productively than the same funds would have been were they still in private hands, greater government saving has also contributed directly to economic growth.

A major devaluation of the won took place in June 1964 (from 130 to 255 per dollar). The won has since depreciated to 315 per dollar at the end of 1970. The 1964 devaluation, and the simultaneous elimination of multiple-exchange rate devices and relaxation of quantitative import restrictions, all made export more attractive relative to domestic sales for Korean producers. The import liberalization which accompanied devaluation expanded government revenues (from duties on imports), sustained counterpart fund receipts, and reduced the profiteering and resource misallocation which occur when the price of foreign exchange is too low to reflect its actual scarcity. Liberalization has also limited the growth of noncompetitive, low-productivity industries which flourish like weeds behind the protective import barriers used to prop up an overvalued currency.

The interest-rate "reform" of September 1965 was another dramatic policy move. The basic loan rate (on bills) was doubled, while rates on some time and saving deposits more than doubled.[31] Like devaluation, the purpose of the reform was to correct unrealistic prices, in this instance the prices paid to savers and charged to borrowers. The average annual rate of inflation (19 percent) had been above the bill rate (14 percent) and payments on savings deposits (15 percent or less) in 1960-65. Savers were being asked to subsidize borrowers, which is patently ridiculous in a capital-scarce country like Korea.

The results were predictable. Demand for loans exceeded supply, and supply was limited because savers placed their funds in the unorganized money market. With reform, savings deposits in banks doubled between September 1965 and April 1966. As with fiscal stabilization, the interest-rate reform can be evaluated according to how much it increased savings and whether savings were better utilized after the event than before. Most of the new deposits in banks were probably transferred from the private (unorganized) market. Since private lending is illegal, the size and loan characteristics of the unorganized market are unknown. It is probable, however, that the reform increased saving and improved the overall utilization of loans.

Devaluation and the interest-rate reform both constituted readjustment of administered prices which had gotten out of line. In addition, a series of more positive measures were adopted to promote exports and encourage foreign lending. Tax exemption, easy access to low-cost loans, and direct subsidies have been used to encourage export. By the spring of 1969, when the exchange rate was 285 won per dollar, these incentives were estimated to be worth from

40 to 52 won per dollar's worth of exports.[32]

Foreign lending has been encouraged by political stability, rapid growth of exports (which provide the foreign exchange needed to repay loans), and Korea's limited foreign-debt service obligations. In addition, the Bank of Korea and more recently the Korea Exchange Bank have guaranteed repayment of foreign loans. The results can be seen in the foreign currency liabilities (guarantee acceptances) of these banks. Acceptances totaled 26 billion won in 1965; they reached 413 billion won by August 1970. The increase in exports has already been seen (table, column 11).

Random or exogenous events with major consequences for the Korean economy have included atypical weather and war in Vietnam. In 1964 and 1966, for example, harvests were unusually good because weather conditions were particularly favorable. Draught was largely responsible for a drop in the GNP growth rate from 13.4 percent in 1966 to 8.9 percent in 1967. The influence of weather on growth should diminish as agriculture's share in total product declines.

Merchandise exports to Vietnam reached a peak of almost 14 million dollars in 1966 before declining more recently. Most of the war related dollar earnings, however, have come from "sales to U.N. forces" (mainly to the two U.S. divisions stationed in Korea, but also an unspecified amount of receipts from Vietnam) and U.S. offshore procurement, which includes payments to Korean contractors in Vietnam and costs of maintaining Korean troops stationed in Vietnam since 1966. Receipts from these sources (presumably included under "government, n.i.e., military transactions" in the balance of payments) doubled from 1966 to 1969. They accounted for a little over 20 percent of total exports of goods

and services in 1969.[33] As Japan benefitted from the Korean War, so has Korea benefitted from war in Vietnam.[34]

Basic resources or elements of economic strength, most of which existed before 1963, have permitted Korea's rapid growth in recent years. Without such resources, the best planning, most sophisticated policies, or simple good luck are likely to prove ephemeral. Their possession may be a necessary condition for rapid growth, but it is not a sufficient condition since these resources were part of Korea's economic endowment during the earlier era of unsatisfactory progress.

A literate, relatively well-educated labor force is perhaps the main element of Korea's economic strength. Expenditure on education of seven to eight percent of GNP, which is undoubtedly above the international average, has given Korea an educational system on par with semi-advanced countries like Norway.[35] Stress in education has been on quantity rather than quality, but Korean workers have probably been better able than most to adopt the new techniques and develop the new skills required by rapid industrialization.[36]

A second element is Korea's relatively well developed infrastructure. Though the transport and communications networks inherited from the colonial era were oriented toward North-South traffic, while East-West movement became more important after partition, the networks have been expanded to meet the increased demand generated by a growing population and increasing levels of economic activity. The recently completed Seoul-Pusan expressway is a noteworthy case in point. Similarly, electric output has risen sharply in recent years (generation doubled from 1962 to 1966, and doubled again from 1966 to 1969).

Inadequate infrastructure could have easily constituted a crippling bottleneck for industrialization in Korea. That it has not is largely due to the construction industry. The supply of skilled workers and production of construction materials have both been sufficient to meet most of the demand for new overhead facilities in recent years.

Other elements which deserve more attention than can be given here are Korea's size, ethnic and linguistic homogeneity, location, and social and political structure. Size in this context refers not only to area (about equal to Indiana), but also to population, now almost 32 million. Neither area nor population are so large as to hamper communication or overtax administration, as in India or China, nor is the country so small that the internal market cannot support specialization or economies of scale. Imagine Korea with the population density of Sierra Leone; its population would then be only 4 million.

Korea has also benefitted in recent years from proximity to "the economic miracle", Japan, one of the villains in Korea's tragic modern history. This proximity has provided access to new ideas, new technology, and new markets, particularly after the signing of the normalization treaty between the two countries in 1965. Though blocked from trade with the North, China, and Russia, location near Japan means that Korea is not nearly so economically isolated as countries like Nepal or Burma.

Because the population is quite homogeneous, there has been none of Ceylon's linguistic strife, Malaysia's ethnic conflict, Northern Ireland's religious battles, or Nigeria's separatist warfare. Political power is highly centralized because the government has not had to cater to local or regional interests, as in

Pakistan, nor is Korea saddled with a rigid social structure or tenure system in which ancestral origin or very skewed land holding determine individual status and prospects, as in much of Latin America. One consequence is that the government can govern. Korea is not a "soft state" like many of the South Asian countries Myrdal describes in his Asian Drama.

III. - The Consequences

Evidence of a shift from slow to fast growth in the early 1960's was found in the behavior of GNP, consumption, and other broad economic aggregates. The industrialization and urbanization which accompanied this shift were seen in sectoral-share estimates and demographic data. Such aggregate data have their counterpart in individual experience. Accelerated growth has provided sufficient food and shelter, opportunities for worthwhile employment, and an optimistic outlook for many persons who had none of these in earlier years.[37] Though the average Korean is still quite poor by international standards, he is demonstrably better off now than a decade ago.[38]

Statistical aggregates do not reveal the physical transformation which has accompanied rapid growth, however, nor do they show qualitative changes. Any foreign visitor who stays long enough or returns over a period of years can see the new buildings and highways. Increased traffic congestion and air pollution are also visible, though not acknowledged in the national income statistics. We know that one of every 14 Koreans lived in Seoul in 1949; the figure is now one in six. We do not really know, though, how urbanization and industrialization have influenced the pace of life, family structure, or the individual's sense of identity.

There are clearly non-economic as well as economic costs and benefits of rapid economic expansion. The realistic alternative to rapid growth is slow growth rather than no growth. Given past rates of population increase in Korea, slow growth entails little or no improvement in individual welfare.[39] It is not clear how the balance of costs and benefits changes as growth accelerates. The economist's efficiency criteria are essentially static (one chooses among alternatives when everything else is "given") and provide no answere here. We all know that "haste makes waste," and every beginning economics student is taught that supply is more elastic in the long run than in the short run. Still, given the choice, most people -- and governments -- in developing nations would choose rapid rather than slow growth. With low living standards and high rates of population increase, this is hardly surprising.

Cost-benefit considerations of the sort raised here tend to be speculative because there is no actual alternative to use as a measuring stick, and intuitive because the costs and benefits are essentially incommensurable.[40] Prospects for the future, surprisingly, are more certain. This becomes less surprising, however, when one considers that the press is already carrying articles on the Third Plan 1972-1976) and that previous events have future consequences.

Extrapolation of past trends is normally used to predict future developments, and there is no reason why Korea's progress in the 1970's should not resemble that in the second half of the 1960's if allowance is made for the effects of an even-larger base on growth rates. Past successes and neglect of particular problems are likely to alter the future path of development, however.

Agricultural modernization and manpower development, for example, are to receive more emphasis in the Third Plan period than in the past. These are cases of previous neglect. The costs of backward agriculture are evidently beginning to outweigh the benefits (more resources available for allocation elsewhere), while the previous assumption that the labor supply would impose no constraints on growth is probably no longer true.[41]

A moderate growth rate (8.5 percent per year) is projected in the Third Plan. Development of the heavy machinery industry is to be encouraged. Greater reliance on domestic saving and an improved balance of payments are additional, related targets.[42] These are, in a sense, goals which result from past success. Rapid growth has been led by exports of light manufactures. The equipment and much of the materials used to produce these exports have been imported, and financed in large part by borrowing abroad, which has increased dependence on foreign saving and led to current-account deficits in the balance of payments. Insofar as heavy machinery and other investment goods are produced locally, less foreign borrowing will be necessary. The net result, then, will be to increase the importance of domestic saving and reduce current-account deficits in the balance of payments.

Export-led growth of light manufactures has provided access to foreign exchange, created opportunities for employment, built manufacturing capacity, and generated impressive growth rates. The rising opportunity costs of emphasis on export promotion are reflected in Korea's increasingly overtaxed infrastructure, comparative neglect of agriculture and manpower requirements, and the postponement of previous plans for developing a petrochemical complex, integrated steel mill, and other heavy, import-substitute manufactures like

machinery.[43] Preliminary evidence indicates that the new elements in the Third Plan are designed to reduce these costs.

The sort of investment required to meet the new plan goals tends to be more expensive than investment in production for export. That is, capital requirements (capital/output ratios) are much higher in the transport, communications, or power industries, for example, than in building export capacity. Agricultural modernization and manpower development require overhaul of educational administration, creation of an effective extension service, and other kinds of institutional change which may take decades to achieve. The really cheap sources of growth, in short, have already been exploited. This is one reason that the Third Plan's projected growth rate is below rates achieved in recent years.[44]

The main single determinant of Korea's growth in the near future is likely to remain export expansion. Either more exports or fewer imports will be required to right the balance of payments and reduce dependence on foreign saving. Import substitution, as experience elsewhere indicates, has proven to be a poor alternative to export expansion in closing the trade gap.[45] Until this gap is closed, growth will not be "self-sustained," to revert to Rostow's terminology.

Export expansion has benefitted from diversification, both in markets and in products, and from a combination of low labor costs and a technological base which have allowed Korean exporters to exploit comparative advantage in producing relatively simple, labor-intensive manufactures. Diversification has kept market shares small and thus reduced the likelihood of trade restriction.

It has also limited the risk associated with instability in markets for particular products. Although protectionist sentiment in high-wage countries is still a potential threat to Korean exports, as are the winding down of war in Vietnam and the U.S. troop withdrawals from Korea, the main problem is internal.[46]

Korean exports are maintained by subsidy. The amount of subsidy needed to bring forth exports depends, in turn, on producers' costs and productivity. Manufacturing output more than doubled between 1965 and 1969 while employment rose only 50 percent. Productivity (output per worker) clearly increased, but wages did too, almost two-and-a-half times. This wage increase has outstripped productivity growth so that unit labor costs rose, profits fell, and more subsidy has been needed.[47] Such developments cannot continue indefinitely.

Agricultural modernization, education and training, and the government's ability to meet social needs are among the more important internal factors which should influence the pace of economic development and levels of individual welfare in the long run. "Agricultural modernization" requires the raising of wages and productivity in rural areas to approximate industrial levels. Increased productivity will probably not lead to self-sufficiency in food production, however, nor is it clear that such self-sufficiency is desirable.[48] Modernization may or may not hasten the farmers' cityward flight, depending upon the labor-intensity of new production techniques, but it should reduce the disparity between farm and non-farm incomes. This disparity is a likely cause of increasing income inequality which, in turn, is a potential source of political unrest.[49]

The demand for new skills, like that for electricity, seems to increase more than proportionately with economic growth. Korea's trained manpower has been a major asset in the past, to the point that doctors, nurses, miners, and construction workers have been sent abroad to induce foreign-exchange earnings. Yet manpower projections indicate both shortage and surplus of particular skills (in particular, a shortage of technicians) that show no sign of abating.[50] Korea is also a major victim of the "brain drain." The relative economic status of teachers has probably declined in recent years, while the educational system suffers from administrative inflexibility.[51] The system clearly needs to be reformed if manpower bottlenecks are not to strangle growth in the future.

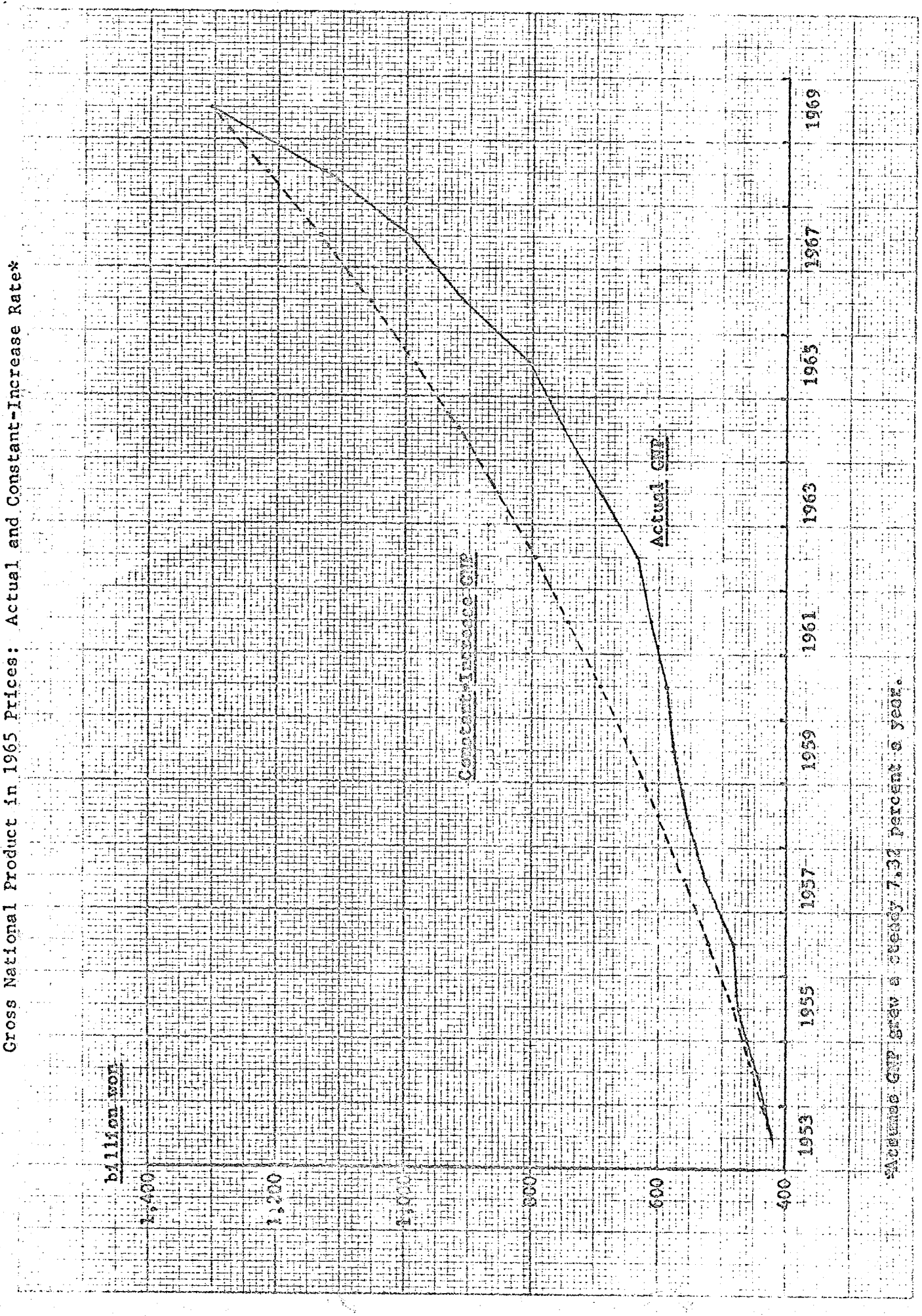
Korea's pattern of government expenditure differs from that of other Asian countries (and more economically mature nations as well) in that outlays for social services are quite modest.[52] There are historic and social reasons for this; moreover, private foreign agencies have assumed part of the welfare burden in the years after the Korean War. Yet rapid urbanization has raised the social or external costs of living for many city dwellers while the extended family, the individual's traditional shelter in the time of need, has been eroded by city life styles. Again, as in the case of agricultural modernization, recent trends carry the threat of political disturbance. Government action will be necessary to meet social needs, if only to maintain political stability.

Economists will probably note the absence of reference to market allocation or stabilization programs here. The reason is simple. Korea's basic economic problems are problems of growth rather than stability, the

government's economic role if pervasive, and conventional market allocation criteria are generally inapplicable. Others may wonder why nothing was said of administrative, ecological, or health problems, all of which have economic effects. The need for brevity and the tenets of comparative advantage both argued for the ommissions.

Questions of procedure and coverage or discussion of particular economic problems should not be allowed to obscure the essential finding here: A basic shift in the pace of growth took place during the early 1960's that transformed Korea from just another stagnant, underdeveloped country into one of the world's fastest growing economies. Whether this was the "take-off" or not, as Rostow has used the term, is debatable. Whatever the term, rapid growth experienced in Korea is most unusual, and merits the attention it has begun to receive.

Gross National Product in 1965 Prices: Actual and Constant-Increase Rate*



*Assumes GNP grew a steady 7.32 percent a year.

The Korean Economy Since 1953* - 1

	Gross National Product (1)	Annual Increase (%) in (1) (2)	Price Index: 1965=100 [a/] (3)	Population (thousands) [b/] (4)	Private Consumption Expenditure (5)
1953	422		11.4	21,546	362
1954	447	6.0	15.0	--	381
1955	475	6.1	24.5	21,502 (C)	423
1956	480	1.2	31.7	22,307	445
1957	523	8.8	37.8	22,949	471
1958	552	5.5	37.6	23,611	486
1959	576	4.4	38.4	24,291	509
1960	589	2.3	41.9	24,989 (C)	523
1961	614	4.2	48.4	25,700	528
1962	635	3.5	54.9	26,432	569
1963	693	9.1	70.4	27,184	588
1964	750	8.3	92.9	27,958	620
1965	806	7.4	100.0	28,670	669
1966	914	13.4	112.9	29,193 (C)	717
1967	995	8.9	124.8	29,784	784
1968	1,127	13.3	139.8	30,469	874
1969	1,306	15.9	156.7	31,139	970
1970	1,436 (P)	9.7 (P)	178.7 (P)	31,461 (C)	

* All figures are billions of won, expressed in constant (1965) market prices, unless otherwise indicated.

a/ Implicit deflator for GNP.

b/ Census figures for September 1 (1955), October 1 (1966, 1970), December 1 (1960), others are end-of-year estimates, except for 1967-1969 (July 1 estimates).

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The Korean Economy Since 1953 - continued - 2

	Per Capita Consumption (1,000 won)	Gross Domestic Capital Formation	Saving [c/]		Investment Ratio (%)
			Foreign	Domestic	
	(6)=(5)÷(4)	(7)	(8)	(9)=(7)-(8)	(10)=(7)÷(1)
1953	16.8	70	70	0	16.5
1954	--	58	50	8	12.9
1955	19.7	61	71	-10	12.9
1956	19.9	57	87	-30	11.9
1957	20.5	88	103	-15	16.8
1958	20.6	78	83	-5	14.1
1959	20.9	58	60	-2	10.0
1960	20.9	62	69	-7	10.6
1961	20.6	73	53	20	11.9
1962	21.5	78	77	1	12.3
1963	21.6	137	107	30	19.8
1964	22.2	114	59	55	15.2
1965	23.3	118	52	66	14.7
1966	24.6	207	86	121	22.7
1967	26.3	242	111	131	24.3
1968	28.7	344	177	167	30.5
1969	31.1	451	211	240	34.6
1970					

[c/] Foreign saving was derived by subtracting exports plus net factor income from abroad from imports.

The Korean Economy Since 1953 - continued - 3

	Exports d/	Imports d/	Merchandise Balance d/	Industrial Origin of GDP e/ (%) Primary f/	Secondary g/	Other
	(11)	(12)	(13)=(11)-(12)	(14)	(15)	(16)
1953	39.7	347.1	-307.4	51.2	8.9	39.9
1954	25.1	241.2	-216.1	51.8	9.7	38.5
1955	17.7	327.0	-309.3	50.1	11.1	38.8
1956	25.3	380.1	-354.8	47.0	13.0	40.0
1957	19.5	390.4	-370.9	47.0	13.3	39.7
1958	17.3	343.7	-326.4	47.5	13.7	38.8
1959	19.8	273.4	-253.6	45.2	14.4	40.4
1960	32.9	305.4	-272.5	44.3	15.4	40.3
1961	40.9	283.1	-242.5	46.5	15.1	38.4
1962	54.8	390.1	-335.3	42.5	17.0	40.5
1963	86.8	497.0	-410.2	41.7	18.2	40.1
1964	120.0	364.9	-244.9	44.6	17.8	37.6
1965	175.1	420.3	-245.2	41.3	20.2	38.5
1966	250.3	679.9	-429.6	40.7	20.6	38.7
1967	334.7	908.9	-574.2	35.8	23.6	40.6
1968	486.2	1,322.0	-835.8	32.0	26.1	41.9
1969	658.3	1,655.9	-997.6	30.7	27.4	41.9
1970						

d/ Millions of U.S. dollars.

e/ Gross domestic product at 1965 constant factor cost.

f/ Agriculture, forestry, and fisheries.

g/ Mining, manufacturing, electricity and gas.

Sources: Bank of Korea (BOK), Economic Statistics Yearbooks; BOK, Monthly Economic Statistics; Economic Planning Board (EPB), Korea Statistical Yearbooks.

Footnotes

1. W. W. Rostow, The Stages of Economic Growth: A Non-Communist Manifesto (1960), p. 7.
2. Ibid., p. 57.
3. The main lines of criticism are as follows: a - modern growth has generally been continuous rather than discontinuous, with few clearly defined "stages"; b - stage theory imposes specious uniformity on economic history, whose essential characteristic is diversity; c - the analysis is non-operational. That is, one can only confirm that the "preconditions" for take-off existed after the fact, or that a take-off actually occurred if growth were subsequently sustained. See W. W. Rostow, ed., The Economics of the Take-off into Sustained Growth (1964).
4. Figures on GNP growth rates during 1960-1967 for most countries can be found in the United Nations, Yearbook of National Accounts Statistics (1968), Vol. II, Table 5-B.
5. The Korea Times, June 20, 1969. The take-off stage normally takes several decades, according to Rostow.
6. An article on the Korean economy in the Morgan Guaranty Survey of October 1970, for instance, is entitled "South Korea: Asia's Newest Growth Economy."
7. A logarithmic scale, which assigns equal distances to the same percentage changes, would perhaps have been more appropriate here. The absolute gap does not begin to close until 1966 (see chart), but the percentage gap (see table, column 1) begins to narrow in 1963 as annual percentage

increases rise above the 1953-1969 average.

8. Though three stages might be distinguished from column 2 (slow growth from 1953 through 1958 or 1959, stagnation from 1960 through 1962, and rapid growth thereafter), simplicity of exposition and examination of causal factors both suggest that two stages are sufficient.

9. Investment and increase in output are conventionally linked by the incremental capital/output ratio. This measure is too unstable to be a useful policy parameter, and too aggregate to reveal the sectoral shares or shifts in investment which are major determinants of the investment-output relationship. The incremental ratio is designed to show the number of units of investment required to increase the annual product flow (GNP) by one unit. (A lagged relation is usually employed to calculate the ratio since this period's investment is unlikely to increase output until the next period). The average annual rate of increase in real GNP for the United States in 1963-1969 was 4.8 percent, for example. The investment ratio in 1967-1969 averaged 15 percent. Though the implied aggregate incremental capital/output ratio (3.8:1) was considerably higher than Korea's (2.0:1), when one tries to explain the difference, it is necessary to examine variation between the two countries in the sectoral allocation of investment, amount of excess capacity, and in relative prices and inputs of labor and capital. The aggregate capital/output ratio hides more than it reveals here.

10. The index of manufacturing production (1965=100) rose most rapidly after 1964. Production doubled during the five-year period from

1959 to 1964, and then tripled between 1964 and 1969. By 1969, exports accounted for roughly half of value added in manufacturing.

11. Gross national product originating in agriculture (forestry and fisheries) was almost three times that originating in manufacturing in 1963. In addition to arithmetic reasons for slower growth, agricultural output has grown less rapidly than manufacturing production because investment in agriculture has been much lower (fixed capital formation, in constant 1965 prices, totaled 125 billion won during 1963-69; the figure for manufacturing was 418 billion), and labor input declined (from 4.8 million employed in 1963 to 4.7 million in 1969) while manufacturing employment doubled. Agriculture has also suffered from the well-known difficulties of applying new technology to small-scale, widely dispersed production units. Limited access to credit and adverse cost-price relationships are other factors in Korea which have served to limit growth of agricultural output.

12. These figures are based on employment and wage data from the EPB, Annual Reports on the Economically Active Population, EPB, Annual Reports on the Family Income and Expenditure Survey, and Ministry of Agriculture and Forestry (MAF), Reports on the Results of Farm Household Economy Survey and Production Cost Survey of Agricultural Products.

13. Bank of Korea, Annual Economic Review, 1955, Appendix Tables 8-9.

14. Output in the fiscal year ending in March 1954 was virtually back to the prewar level reached in 1949-1950. "This is a remarkable recovery by any standard" (John P. Lewis, Reconstruction and Development in South Korea . [National Planning Association, December 1955], pp. 18-19).

15. Migration from Korea before liberation was so large that "at least 10 percent of the Korean population was abroad" (Lee Chung-myun, "Population Movement of Korea--International Movement," Korean Affairs [1963], p. 21). By 1940, Osaka contained the third largest Korean population after Seoul and P'yongyang (Irene B. Taeuber and George W. Barclay, "Korea and the Koreans in the Northeast Asian Region," Population Index [October 1950], p. 287). Return migration was heavy at the end of World War II but the official statistics published by the South Korean Interim Government (SKIG) and the Supreme Allied Commander for Japan (SCAP) are too incomplete to estimate gross flows.

16. "Even the iron water mains and fire plugs were taken up during the war and concrete pipes substituted" (Earnest J. Fisher, "Korea Today," Far Eastern Quarterly [May 1946], p. 263).

17. Almost 900 thousand were listed as unemployed (from a population of 20.2 million) as late as May 1949. The actual number was probably higher. See Bank of Chosŏn, Annual Economic Review, 1949, Table 173.

18. The Seoul wholesale price index rose almost 800 percent between April 1945 and September 1945. These were official prices. Black market prices were 20 or 30 times official prices immediately before the war's end (George M. McCune, Korea Today [1950], p. 103).

19. This is hardly surprising since Korea's importance to United States national interests had never been defined (see Soon Sung Cho, Korea in World Politics: 1940-1950 [1967], Chapter 12). Also, until it became evident that Korea was to remain divided, there was no basis for embarking on a program to develop one portion of the peninsula.

20. The ECA (Economic Cooperation Administration, predecessor to AID) was scheduled to begin a three-year, 350 million dollar development program in Korea during fiscal 1950. Funds for expanding coal and electric-power output and building fertilizer plants were included in the program. See W. A. Brown, Jr., and R. Opie, American Foreign Assistance (1953), pp. 375-76.

21. Food production (rice and other grains, pulses, and potatoes) rose from 3.5 million metric tons in 1949 to 5.4 million tons in 1959. See UNKRA-FAO, Rehabilitation of Agriculture, Forestry, and Fisheries in South Korea (1954), and MAF, Yearbooks of Agriculture and Forestry Statistics. Estimates of agricultural output are especially liable to error and bias, while sharp year-to-year variation in weather conditions makes single-year output estimates potentially misleading indicators of trend. Nevertheless, output in the late 1950's was considerably above that in 1949, the best post-liberation, pre-war year.

A literacy drive after the war helped to reduce the proportion of illiterates to less than 30 percent by 1960. The number of primary school students rose from 1.9 million in 1945 to 3.6 million in 1960 so that two-thirds of all children aged 6-11 were enrolled in primary schools in the latter year (Central Education Research Institute, Education in Korea, 1966, p. 105, and EPB, Korea Statistical Yearbook, 1966).

Available supply (domestic output plus imports less exports) of cement, flat glass, newsprint, and tires was largely produced in Korea by the late 1950's.

22. The share of mining and manufacturing in net commodity product (e.g.

the net output of goods originating in agriculture, forestry, fisheries, mining, and manufacturing) had reached 35-40 percent by 1939-41. See Suh Sang-chul, "Growth and Structural Changes in the Korean Economy Since 1910," unpublished Ph.D. Dissertation, Harvard University, 1966, Table II-4.

23. Brown and Opie, op. cit., p. 373.

24. Korea received over 1.7 billion dollars in official grants and loans from 1955 through 1960, which amounts to a little over 73 dollars per person.

25. The list of policy failures is endless, but insistence on overvaluation of the won, use of multiple exchange rates, finance of continued government deficits by borrowing from the central bank, and artificially low interest payments on savings are the main ones.

26. President Rhee evidently believed, for instance, that inflation was caused by exchange devaluation. My judgment of Rhee's economic policies may be too harsh, for the sort of institutional change and educational reform required for economic growth is likely to be slow, and later progress can be traced back in part to developments under Rhee. Still, "his tragedy is that a lifetime devoted to his country should have left so little of lasting value" (Richard C. Allen, Korea's Syngman Rhee: An Unauthorized Portrait [1960], p. 235).

27. This is not to say that there was no economic planning or any attempts to coordinate development policies. A three-year economic plan was approved three months before the Rhee government was overthrown. A new five-year plan was prepared by the Chang government. Given

Rhee's anti-planning bias, however, it is unlikely that the plan would ever have been implemented had he remained in power. See David C. Cole and Young Woo Nam, "The Pattern and Significance of Economic Planning in Korea," in Irma Adelman, ed., Practical Approaches to Development Planning: Korea's Second Five-Year Plan (1969), pp. 12, 16.

28. Economic achievement has also served political ends. The ruling Democratic-Republican party sponsored a referendum in the fall of 1969 to revise the constitution so that the president might serve a third term. President Park, campaigning for revision, said "I proposed the referendum because I thought that retaining the present system... will contribute to economic development.... I wanted to...add the finishing touch to the vast enterprises of construction I started" (The Korea Times, October 11, 1969).

29. See P. W. Kuznets, "Korea's Five-Year Plans," in Irma Adelman, ed., op. cit., pp. 41, 54.

30. Most economists regard price increase as inevitable, and moderate rates of increase as possibly desirable. But when rates of increase rise above five or ten percent a year, price relations become increasingly distorted and the cost of such distortion is likely to outweigh possible benefits. (In Korea, annual price increases averaged over 20 percent in 1953-60, 19 percent in 1960-65, and 12 percent in 1965-69). See Graeme S. Dorrance, "The Effect of Inflation on Economic Development," IMF Staff Papers, 1963, and Harry G. Johnson, "Is Inflation the Inevitable Price of Rapid Development or a Retarding Factor in Economic Growth?", Malayan Economic Review, April 1966.

31. The yield on 18-month saving accounts went to 2.5 percent a month, or more than 34 percent a year!

32. The Korea Times, April 27 and May 20, 1969. For a more detailed description of policy measures, see S. Kanesa-Thasan, "Stabilizing an Economy: The Korean Experience," in Irma Adelman, ed., op. cit.

33. Balance-of-payments categories which combine receipts from sales to U.N. forces in Korea with service payments earned by Korean contractors or troops in Vietnam were not designed for use in determining Korea's earnings from war in Vietnam. Similarly, annual reports of the Agency for International Development show military assistance programs (MAP's) by country, but not by activity, so Korea's receipts cannot be obtained from the MAP budget for Vietnam. Recent testimony before the U.S. Senate revealed that military equipment originally valued at 3.4 billion dollars had been given to allied governments (Korea was a major recipient) between 1951 and 1970 for a small fraction of cost, and that nearly a billion dollars had been paid to finance Korean combat troops in Vietnam since 1965 (The New York Times, March 29, 1970, p. 1, and April 1, 1970, p. 1; The Korea Times, September 13, 1970). One may conclude that Korea's earnings from the war in Vietnam are hard to define (what is a ten-year old destroyer worth?), that the balance-of-payments figure used here is too low to measure such earnings (government, n.i.e., military credits totaled only 942 million dollars from 1965 through mid-1970), and that the actual amount--if it were known--would probably be much higher.

34. Credits under the "government, n.i.e., military" category in Japan's

balance of payments rose from 49 million dollars in 1949 to 803 million in 1953. This item, which includes sales to military personnel stationed in Japan as well as sales to U.N. forces under special procurement programs in connection with the Korean War, made up 37 percent of Japan's total earnings from sales of goods and services in 1953.

35. The expenditure estimate, for 1967, includes private as well as public outlays. It was released by the Office of Planning and Control (see The Korea Times, November 21, 1968). International comparison of educational expenditure is difficult because the share of private outlays in total expenditure varies widely, and because private expenditure data are often inaccurate or not available. One comparison, which includes Korea, is given in Frederic Harbison and Charles A. Myers, Education, Manpower, and Economic Growth (1964).

36. That emphasis in Korea has been placed on quantity rather than quality was noted in the 1965 report of a Unesco advisory team for educational planning.

37. The term "sufficient" in this context, particularly with regard to food, may be misleading. Nutritional standards are controversial and the published estimates are inconsistent (see Marguerite C. Burk and Mordecai Ezekiel, "Food and Nutrition in Developing Countries," in Bruce F. Johnston and Herman M. Southworth, eds., Agricultural Development and Economic Growth [1967]). The Ministry of Health and Social Affairs announced recently that the national average caloric intake was 2,105 per day (The Korea Times, December 20, 1970); an earlier study gives a

figure of 2,438 as the national average for 1958-59 (Y. J. Yu, cited in E Hyock Kwon, et. al., A Study of Urban Slum Population [1967]). Still, there is undoubtedly less hunger--and better housing--than there was a decade ago. (Data on housing from the 1970 census of population and housing are not yet available).

Unemployment statistics are suspect because they are based on quarterly surveys which cannot adequately reflect seasonal swings in agricultural work. Also, underemployment is more of a problem than unemployment in Korea and most other developing countries. Both employment and wage statistics show rapid growth of employment and wages, though, especially in manufacturing. Such expansion of employment in manufacturing and other industrial activities is atypical, and suggests that unemployment and underemployment have lessened (see, for example, Charles R. Frank, Jr., "Urban Unemployment and Economic Growth in Africa," Oxford Economic Papers, July 1968).

38. Korea ranked 71st of 80 countries included in a study of real per capita consumption in 1960. With the United Kingdom assigned a value of 100, Korea's index was 6 (see W. Beckerman and R. Bacon, "International Comparisons of Income Levels: A Suggested New Measure," Economic Journal, September 1966). If all other countries maintained their 1960 consumption levels, Korea's index would have advanced from 6 to 9 in 1969, but its rank would only rise from 71st to 61st.

39. Rates of population increase and economic growth are probably related, however. Interaction between economic and demographic factors is largely ignored by economists and demographers. Better medicine and sanitation

may explain the practically universal decline in mortality which has occurred during the last few decades, but little is known of the factors, some economic, which determine fertility. It hardly seems coincidental that rapid economic growth in Japan, Taiwan, and Korea has been associated in recent years with declining rates of population increase, and unlikely that these rates would have declined or declined as much if economic growth, urbanization, and industrialization had been less rapid.

40. How, for example, are the costs of breaking up the extended family system to be weighed against the benefits of more to eat for people living at subsistence levels?

41. See Roger D. Norton, "Planning with Facts: The Case of Korea," American Economic Review, May 1970, pp. 62-63. Shortages of particular skills can be seen in sharp wage increases. Housing repair wages in Seoul, for example, rose more than any other component of the Seoul consumer price index from 1965 through 1969.

42. See, for instance, The Korea Times, March 18, April 16, and September 3, 1970.

43. New emphasis on any target necessarily implies previous neglect or revaluation of opportunity costs. Problems caused by neglect and those due to success can both be subsumed under the opportunity-cost concept. The distinction between the two types of problems is raised here because their causes are different. In one case a positive, successful program created new difficulties. In the other, continued neglect and a changing situation increased existing problems.

44. Other reasons are credibility (it is hard to believe that the phenomenal

rates of the late 1960's can be sustained) and opposition from the central bank and potential foreign aid doners. These last are concerned with possible inflationary consequences of over-investment, and tend to discourage ambitious growth targets. On the other hand, underestimate of actual growth in the First and Second Plans has led to transport and power bottlenecks because too little investment was allocated for expanding the infrastructure.

45. See for example, Albert O. Hirschman, "The Political Economy of Import Substituting Industrialization in Latin America," Quarterly Journal of Economics, February 1968.

46. Opposition to free trade in the United States, one of Korea's major trading partners, has come mainly from shoe and textile producers in the last few years. The unions were strangely silent, but this has changed. The electrical workers' union recently joined the opposition, citing the growth of imports produced by cheap labor in American-owned plants abroad, including a TV manufacturing plant in Korea. See The New York Times, January 3, 1971, Section 3, p. 12.

47. Value added (GNP originating in the manufacturing sector, in constant prices) increased 125 percent from 1965 to 1969. The index of manufacturing output (1965 = 100) was 265.3 in 1969. Manufacturing employment grew from 800 to 1,222 thousand during the period. The average monthly wage for production workers in manufacturing rose from 4,600 won in 1965 to 11,270 won in 1969. The increase in the wage bill (number of employees times average wage) divided by the increase in output indicates that unit labor costs rose at least 40 percent from 1965

to 1969. This increase was partly but not entirely offset by devaluation. The won fell from approximately 272 per dollar in 1965 to 285 per dollar by mid-1969. The Bank of Korea's financial statements analyses show that profit ratios, however defined, fell from 1965 through 1968.

48. Each five-year plan has announced the goal of agricultural self-sufficiency, but none has provided the means to achieve it. Given Korea's high man/land ratio, industrial base, and access to foreign food grains, a program of "self-sufficiency" makes little economic sense. The term is evidently a shibboleth which the government feels obliged to honor for political reasons.

49. The quantity and quality of Korean statistics are unusually good by international standards but, like most developing countries, there is little or no good income information. Much essentially idle speculation on whether income distribution is becoming less equal has resulted. The sizeable and growing divergence between farm and non-farm income and increasing migration from the countryside to cities suggest, however, that the speculation is probably correct.

50. Republic of Korea, The Second Five-Year Plan for Development of Science and Technology: 1967-1971 (1966). See also Larry E. Westphal, "Labor Projections," in EPB, Selected Papers on the Third Five-Year Economic Development Plan (Preparatory Stage), May 1970.

51. See Horace Underwood, "Korean Education: Master of the Future or Slave of the Past," Korean Quarterly, Autumn 1963.

52. See United Nations Economic Commission for Asia and the Far East, The Planning and Financing of Social Development in the ECAFE Region (1969).