Fertig, Klaus

Article

South Korea: Successful large-scale international borrower

Intereconomics

South Korea: Successful Large-scale International Borrower

by Klaus Fertig, Hamburg*

At the end of 1982 South Korea had foreign debts of US $ 38 billion, the third highest total for a developing country after those of Mexico and Brazil. In contrast to these countries, however, South Korea has avoided debt crises so far. In view of the 20 or more rescheduling operations carried out in 1982, the country is at present a model for a successful programme of borrowing. The development of this Far Eastern country therefore deserves closer examination.

In 1959 South Korea still had no foreign debts.[1] The large balance of payments deficits on current account that had been incurred since the end of the Korean War (1950-53) had been offset almost entirely by military and economic aid in the form of grants. It was not until the sixties that this inflow of resources was supplemented and replaced by borrowing abroad. As the current account deficits remained persistently high – they represented about 9 % of gross domestic product in the sixties and around 7 % in the seventies – the debt burden grew significantly faster than that of most other developing countries. According to OECD estimates, the country's outstanding debts of US $ 38 billion at the end of 1982 placed it equal third with Argentina behind Mexico and Brazil in the developing countries' debt table.[2]

So far, however, South Korea has not suffered debt crises in spite of the rapid increase in its indebtedness. The country has always serviced its debts in accordance with the agreements and has won a reputation as a model borrower on the capital markets. This contrasts with the general situation on the international financial markets, which are currently afflicted by a rapidly growing number of repayment crises.

In August 1982 Mexico, the largest borrower in the Third World, had to request the postponement of due debt service payments. Since then Brazil and Argentina, which are also large debtors, have opened negotiations to reschedule their borrowing. Last year 22 countries had to reschedule a total of about $ 40 billion.[3] Against this background it is even more remarkable that South Korea has apparently been successful in her use of foreign capital. The conditions for borrowing by this Far Eastern country therefore deserve closer examination.

All borrowing gives rise to interest payments. The use to which the borrowed funds are put must generate adequate income to pay the interest charges if the commitment is to be met without prejudicing consumption. Developing countries have particularly little scope for curbing consumption to make room for interest payments, so that it is all the more important that the product from investments financed with foreign loans should be greater than the interest payable. To put it in technical terms, the marginal productivity of the foreign capital must be higher than the real interest rate payable on it.[4] The first and most important condition for successful borrowing is therefore that earnings from investments should exceed the capital costs (the *criterion of efficiency).* If this requirement is not met, the country is not competent to borrow.

Adequate earnings to meet the capital costs are all the more certain the higher the proportion of the inflow of

* HWWA-Institut für Wirtschaftsforschung-Hamburg. This paper was written as a contribution to the research project on "The borrowing ability of developing countries, their growth prospects and the transfer of resources" financed by the Deutsche Forschungsgemeinschaft as part of special research section 86 (world economy and international economic relations).

[1] Cf. A. O. Krueger: The Developmental Role of the Foreign Sector and Aid, Studies in the modernization of the Republic of Korea, 1945-75 (Harvard East Asian Monographs, 87), Cambridge, Massachusetts, and London 1979, p. 112.

[2] Cf. OECD: 1982 Survey of External Debt of Developing Countries, Paris 1982.

[3] Cf. Rückzug der Banken gefährdet Weltwirtschaft, in: Frankfurter Rundschau, 27. 1. 1983.

[4] Cf. A. Gutowski: Foreign Indebtedness and Economic Growth: Is there a limit to Foreign Financing? Paper presented for the conference of the International Economic Association on Financing Problems of Developing Countries, Buenos Aires, 26-30 October 1981; A. Gutowski, M. Holthus: Limits to International Indebtedness, contribution to the conference of the Société Universitaire Européenne de Recherches Financières (SUERF) on International Lending in a Fragile World Economy, Vienna, 22-24 April 1982.

capital used for investment purposes (the *transformation criterion)*; the greater the share of foreign capital that goes on consumption, the higher must be the profitability of the investment that can be made with the remainder in order to generate sufficient funds to service the debt.

The fact that debt service commitments are denominated in foreign currency must also be taken into account when borrowing abroad. The foreign exchange need not be earned immediately. If the flow of resources from abroad is organised efficiently enough, the borrowing country will be able to postpone all or part of the real transfer associated with debt servicing and concentrate on building up the capital stock at home. Over the long term, however, the structure of production should be geared towards earning the necessary foreign exchange by increasing exports and/or reducing imports (the *transfer criterion).*

The development of a country should therefore be examined closely in the light of these three criteria – efficiency, transformation and transfer – when assessing its borrowing ability.

Remarkable Process of Development

In 1960 South Korea was one of the poorest countries in the world. It was still suffering badly from the effects of the Second World War and especially the Korean War. Many of the public amenities had still not been rebuilt, industry was in its infancy and the partition of the country had cut the South off from mineral raw material deposits in the North. Agricultural production had reached a high level owing to the efforts of Japan, the occupying power until the Second World War, to develop the country systematically as a rice bowl to supply its own food requirements. Profits were unsatisfactory even here, however, owing to the inefficient way in which agriculture and forestry were administered.[5] No wonder many observers wrote South Korea off as a laggard incapable of self-sustained growth.[6]

At the beginning of the sixties, however, a strongly development-oriented leadership came to power. There was a marked upward turn in activity with the implementation of a programme to promote industrialisation that was geared towards world markets from the very outset owing to the paucity of indigenous natural resources; it also applied the principles of the market economy and by no means neglected agriculture. The guiding influence of the State and its planning authorities was supplemented increasingly by the dynamic and flexible development of the private sector. In view of the constant threat from the hostile North, the population's acceptance of economic performance targets was strengthened by equating economic growth with national security.[7] South Korea's real growth rate of 8.3 % a year from 1961 to 1980 was appreciably higher than that of most other developing countries.[8]

Today South Korea ranks among the newly industrialised countries with middle-range income. Industry's contribution to national income far outweighs that of agriculture, while exports account for around one-third of gross domestic product, so that South Korea is now the largest exporter of manufactured goods among the developing countries.[9] As the country has also become one of the largest borrowers in the Third World, the role of capital in general and that of foreign capital in particular warrant closer attention.

Table 1

Selected Development Data

	1960	1980
Per capita income (in US $)	83	1,520
Population (in millions)	25	38
Labour force (in millions)	8.3[a]	14.7
Percentage of total employment accounted for by		
– agriculture	66	34
– manufacturing industry	9	29
Percentage of GDP generated by		
– agriculture	37	16
– manufacturing industry	20	41
Imports as a percentage of GDP	12.6	41.7
Exports as a percentage of GDP	3	33
Savings as a percentage of GDP	2	23

[a] 1963.

Sources: World Bank: World Development Report 1982, Washington, D.C., 1982; National Bureau of Statistics, Economic Planning Board, Republic of Korea: Korea Statistical Yearbook, various years.

Rapid Capital Formation

At the beginning of the period of growth in the early sixties the available capital base was very narrow. The

[5] The first development plan cites this as one of the main reasons for the low level of development at that time. Cf. Republic of Korea, Economic Planning Board: Summary of the First Five-Year Economic Plan 1962-1966, Seoul 1962, p. 9.

[6] Cf. L. E. Westphal: The private sector as "principal engine" of development: Korea, in: Finance and Development, Vol. 19, No. 2, June 1982, pp. 34-38.

[7] Cf. M. Eli: Wirtschaftliche Entwicklungsperspektiven der Republik Korea, Hamburg 1979, p. 157.

[8] Calculated on the basis of data published by the World Bank (World Tables 1976 and 1980) and by the National Bureau of Statistics of the Korean Economic Planning Board (Korea Statistical Yearbook).

[9] Cf. World Bank: World Development Report 1981, pp. 156-157.

extensive destruction of buildings and plant during the Korean War, which Brown estimates to have been equal to the country's entire national product for 1953,[10] was not offset by investment in the post-war years, which was low by international standards.

After 1960, however, the capital input was increased considerably; indeed, during the sixties it rose faster than in any other country in the world.[11] The high rate of growth in investment could not be sustained in the seventies, but the capital stock was still being expanded at around twice the average rate for developing countries. The investment ratio of 34 % recorded in 1980 was exceeded by only eight countries in the entire world.

Table 2

Inflow of Resources from Abroad, Capital Input and Capital Productivity

	1954-60	1960-70	1970-80
Average annual inflow of resources from abroad (as percentage of GDP)	8.3	9.0	7.0
Average investment ratio	9.6	19.1	32.2
Annual growth in investment	7.3	23.6	13.4
Annual growth in gross domestic product	4.1	8.6	9.5
Marginal capital/output ratio (annual average)	2.5	2.3	4.6

Source: The author's own calculations. Cf. K. Fertig: Korea: Auslandsverschuldung im Wachstumsprozeß (in preparation).

Efficient Use of Capital

All the indications are that the country managed to employ the rapidly expanded capital stock in a highly profitable way. This is revealed by, for example, the level of the marginal capital/output ratio (the ratio between the additional capital input and the additional output). According to this indicator, a marginal capital productivity of over 40 % was achieved in the sixties. This high level of profitability could not be maintained during the seventies, however, particularly in the second half of the decade.[12] Nevertheless, at over 20 %, the marginal capital productivity recorded during this period was well above real interest rates on foreign funds.

A closer examination of changes in the structure of investment reveals the reasons for the highly efficient deployment of capital. Over the years the country increasingly exploited opportunities to invest in the sectors of manufacturing industry in which it enjoyed international competitive advantages. In the sixties these were first labour-intensive branches of light industry, later to be joined by sections of the chemical industry, capital goods industries (such as transport equipment) and specialised high-technology industries (such as electronic equipment). Investment in other sectors, in particular infrastructure and agriculture, was by no means neglected. Furthermore, in expanding the capital stock, modern technology was adopted on a large scale, including that developed abroad. Imports of investment goods increased as a proportion of total imports from 11 % in the period 1956-60 to roughly 30 % in the seventies.

Other Efficiency Factors

The high efficiency of the deployment of capital in South Korea was enhanced by a series of complementary factors. The most important of these was the size and calibre of the labour force. The rapid economic growth was only possible because of a rapid increase in employment. In both the sixties and the seventies the number of persons employed increased much faster than the average for developing countries. Over the two decades the number of jobs was practically doubled from something over 7 million to almost 14 million. More important, however, was the fact that this reservoir of labour had to be regarded as extremely well educated by international standards.

In 1960 the literacy rate already stood at 71 %.[13] In the next two decades the country built on this legacy by making further efforts in the field of education such as no other country with a comparable level of development has undertaken. The results achieved were impressive: by 1977 the literacy rate was 93 %, participation rates at all levels of education had increased significantly and the proportion of skilled workers had more than trebled. The labour force was not only highly qualified – it also displayed extremely good discipline, a willingness to work, mobility and adaptability.

---

[10] Cf. G. T. Brown: Korean Pricing Policies and Economic Development in the 1960s, Baltimore 1973, p. 31 ff., quoted in L. L. Wade, B. S. Kim: Economic Development of South Korea. The Political Economy of Success, New York and London 1978, pp. 17-18.

[11] Cf. here and in the subsequent paragraphs World Bank: World Development Report 1982, Washington, D.C., 1982, p. 116 ff.

[12] According to an international comparison carried out by the World Bank, South Korea was still one of the most efficient developing countries in the world up to 1973. Cf. World Bank: World Development Report 1981, p. 68.

[13] Cf. here and in subsequent paragraphs M. Eli, op. cit; C. P. Frank Jr.: Foreign Trade Regimes and Economic Development: Republic of Korea, in: Trade Strategies for Economic Development: The Asian Experience, published by the Asian Development Bank, Manila 1975, pp. 133-187, in this context p. 159 ff.; L. E. Westphal, op. cit.

Growth was also stimulated by the vast reservoir of people with business acumen and management qualities on which the country could draw. The great number of refugees who had fled from North Korea during and after the Korean War included many qualified people who saw no opportunities to develop their abilities under the communist régime in the North.[14]

Labour was therefore of great importance for the development of the country. In spite of all the reservations that must be felt with regard to methodology and source data, the results of estimating a Cobb-Douglas production function for the factors capital and labour give an idea just how important it was, for it explains the growth over the period as a whole predominantly in terms of labour. In the sixties, when high labour intensity coincided with high labour productivity, the calculations ascribe as much as nine-tenths of the growth to labour.[15]

Though unquantifiable, the political environment was certainly also of great significance for economic growth. The remarkable political stability of the leadership deserves particular mention.

Positive Effects of Economic Policy

The efficiency of capital deployment was enhanced not only by these complementary factors but also by the Government's economic policy.

The country attempted to establish and preserve undistorted price relations for goods and factors of production. This becomes evident in the trend in the prices of capital and labour, for example. Whereas in the years following the interest rate reform in 1965 real interest rates were predominantly positive, the level of real wages did not rise in the period 1958-66, when unemployment was still high. A progressive tightening of the labour market led to real wage increases in later years, but until the mid-seventies these remained below the gain in labour productivity.[16]

Similarly, the country's outward orientation had as its backcloth the establishment and maintenance of realistic exchange rates. The currency was devalued by a large amount in 1964, and thereafter it fluctuated much less than previously and was kept relatively stable in real terms.[17] Attention to the country's international competitiveness increasingly became the maxim of the industrialisation strategy. The extensive measures introduced in the early years to promote exports were gradually reduced and imports were liberalised. A detailed examination shows that by the end of the sixties the effective protection enjoyed by the great majority of industries was already low by international standards.[18]

The closeness of the link between undistorted prices of goods and factors and the efficiency of resource allocation was again brought home to South Korea in the second half of the seventies, but this time increasingly from a negative point of view. With the persistence of high rates of inflation capital investment attracted increasing subsidies. In 1980 Woronoff identified more than one hundred different interest rates depending on whether or not a sector was to be promoted and to what extent.[19]

In addition, the rise in real wages at a much faster rate than labour productivity in the second half of the seventies together with insufficient exchange rate adjustment to international inflation differentials increasingly jeopardised the competitive price and cost advantages South Korea had previously enjoyed. Capital productivity fell markedly. The nadir was reached in 1980, when gross domestic product contracted in real terms for the first time since the end of the Korean War.

The Government then enacted a series of corrective measures, some of them quite drastic. Nominal lending rates were increased substantially, incomes policy prevented further real wage increases in excess of improvements in labour productivity and the currency was devalued by 20 %. This economic policy brought the country back onto a growth path: gross domestic product rose by 7.1 % in 1981[20] and, according to provisional figures, still managed an increase of 5.4 % in 1982 in spite of the difficult conditions worldwide.[21]

---

[14] Cf. Statistisches Bundesamt Wiesbaden: Allgemeine Statistik des Auslandes, Länderberichte, Süd-Korea 1975, Stuttgart and Mainz 1975, p. 20.

[15] The calculations were carried out by analogy with the procedure followed by P. Desai: The Productivity of Foreign Resource Inflow to the Soviet Economy, in: American Economic Review, Vol. 69, No. 2, May 1979, pp. 70-75, and by R. Erbe: Foreign Indebtedness and Economic Growth: The Philippines, in: INTERECONOMICS, No. 3, 1982, pp. 125-132.

[16] Between 1970 and 1975 real wages rose by just under 6 % a year, while labour productivity improved by over 9 % a year over the same period.

[17] Cf. B. B. Aghevli: Exchange rate policies of selected Asian countries, in: Finance and Development, Vol. 19, No. 2, June 1982, pp. 39-42.

[18] Cf. L. E. Westphal, K. S. Kim: Industrial Policy and Development in Korea, Washington, D. C., 1974.

[19] Cf. J. Woronoff: South Korea: Park's gone, but his infrastructure lingers on, in: Asian Business, Vol. 16, December 1980, pp. 66-69, in this connection p. 70.

[20] Cf. Bank of Korea: Monthly Statistical Bulletin, Vol. 36, 1982, No. 5, p. 134 ff.

[21] Cf. P. Odrich: In Ostasien herrscht für 1983 Optimismus, in: Frankfurter Allgemeine Zeitung, 22. 1. 1983, p. 12.

Table 3
The Savings Ratio

	1960	1960-69	1970-80	1980
Overall savings ratio	1.5	10.2	25.2	23.4
Public-sector savings ratio	–1.9	3.0	6.2	6.1
Private-sector savings ratio	3.4	7.2	19.0	17.3
– households	–1.4[a]	0.8	6.5	n.a.
– firms	6.7[a]	6.4	12.5	n.a.

[a] 1960-62.
n.a. not available.
Sources: P. Hasan and D.C. Rao: Korea: Policy Issues for Long-Term-Development, Baltimore and London 1979, S. 470; E.S. Mason et. al.: The Economic and Social Modernization of the Republic of Korea, Cambridge etc. 1980, S. 107; World Bank: World Development Report 1982; the authors own calculations; cf. K. Fertig op. cit.

On the whole, South Korea's rapidly growing capital stock displays a high degree of efficiency that was encouraged by a series of complementary factors and by economic policy. However, critical limitations on the borrowing capacity of developing countries often derive less from the low efficiency of capital deployment than the fact that a large proportion of foreign borrowing is used for consumption rather than investment. In certain circumstances the inflow of external resources has an adverse effect on domestic savings formation.[22]

Use of Resources for Investment Purposes

In Korea domestic savings were extremely low just two decades ago. In 1960 the savings ratio stood at only 1.5 %. More than four-fifths of investment could be financed only by extensive recourse to foreign capital.

The inflow of resources from abroad remained high in subsequent years, but it was only because domestic savings formation was expanding rapidly at the same time that investment could be increased at a rate unknown anywhere else in the world. There was a steady rise in the sixties, with the marginal savings ratio reaching a value of about 25 %,[23] but in the seventies there was no consistent trend. The average savings ratio stood as high as 24.1 % in 1973, fell to 18.9 % by 1975, rose again to 26.6 % by 1979 before slipping back to 23.4 % in 1980.

Both private-sector and public-sector savings contributed to the rapid increase in domestic savings over the period under examination. The rise in the private-sector savings ratio was determined essentially by the trend in corporate saving, which grew continuously. Corporate saving represents retained profits; it was significant in this connection that the State never introduced tax measures that interfered excessively in the generation and use of profits. The positive real interest rates that obtained for most of the period after the 1965 interest rate reform encouraged saving by households, although this was subject to fluctuations, as was public-sector saving. Nevertheless, here too a sound fiscal policy eradicated the negative public-sector savings ratio that had still prevailed in 1960. The remarkable thing is that this was achieved not only by increasing tax revenues but also by reducing public-sector expenditure on consumption in relative terms, a rare achievement.

In the light of the encouragement economic policy gave to saving, the discontinuous trend of the savings ratio in the seventies would not seem to be attributable to the use of foreign capital for consumption purposes over the longer run. It is more likely that the fluctuations were simply the domestic reflection of growing external imbalances in 1974-75 and 1979-80 as a result of the oil price rises: with a reduced volume of resources available for distribution, short-term inelasticity in consumer behaviour caused a temporary fall in the savings ratio. At the same time, however, investment was increased further by means of greater foreign borrowing. The investment ratio rose from 25.6 % in 1973 to 31 % in 1974 and from 31.2 % in 1978 to 35.4 % in 1979.

The analysis suggests that South Korea channelled the inflow of foreign capital into investment, but even if a part had been used for consumption, the high profitability of capital deployment would have ensured more than adequate earnings to cover interest on the loans.[24] The question remains, however, whether this income was generated in foreign currencies.

Strong Competitive Position on World Markets

In 1960 South Korea's ability to make real transfers of foreign currencies for debt service payments was extremely limited: exports of goods totalled US $ 31.8

[22] The so-called substitution theory. See in this connection P. Mosley: Aid, Savings and Growth Revisited, in: Oxford Bulletin of Economics and Statistics, Vol. 42 , 1980, No. 2, p. 79 ff., and the literature mentioned there. In more recent works, S. Schattner, examines this link for countries with mineral raw materials. Cf. S. Schattner: Mineral Economies – Indebtedness without Growth, in: INTERECONOMICS, No. 5, 1982, pp. 234-240, in this connection p. 239 f.

[23] Cf. P. Hasan: Korea: Problems and Issues in a Rapidly Growing Economy. A World Bank Country Economic Report, Baltimore and London 1976, p. 6.

[24] According to a calculation based on the assumption that just under one-third of the inflow of resources was used for consumption in the seventies, the marginal productivity of foreign capital would have been roughly 28 %, a figure that is still well above real interest rates abroad.

million, only 3.4 % of gross domestic product. In the years that followed, however, the country's foreign trade position changed dramatically. For twenty years exports were increased at a rate that no other country in the world could better,[25] making South Korea one of the leading trading nations of the Third World. By 1981 the country had a 1.2 % share of the world market, placing it in 16th position in the world export statistics according to country.[26]

Export growth was powered by exports of manufactured goods. In the sixties this meant initially textiles and other light industrial products. In the seventies the range of export goods was greatly diversified to include increasing quantities of capital goods, chemical products and goods such as electronic equipment that called for a high level of technology and a well-educated, skilled work force. Over the period under review the country showed an impressive increase in its ability to offer goods that were competitive in world markets.

The capacity for real transfers did not, however, increase to anything like the extent that might be assumed in view of the country's unprecedented export growth. The paucity of natural resources and the determination to expand the economy by making intensive use of foreign technology led to an equally rapid increase in imports. In the seventies the fact that the country imports all its oil requirements was extremely important in this regard. The large trade deficit was reduced only slightly as a proportion of GDP. However, the highly efficient deployment of external resources gave creditors the necessary confidence for the real transfer associated with debt servicing to be largely postponed by means of further borrowing. It remains, however, to be seen whether South Korea will be as successful in future as it has been in the past.

Risks and Opportunities for the Future

The Achilles heel for South Korea's further borrowing activities lies in the country's heavy dependence on world markets. A number of studies have shown that South Korea must achieve export growth of 12-14 % a year in the eighties if its gross domestic product is to rise at a rate of 8-9 %.[27] In the past, nine tenths of export turnover was in trade with industrial countries. In many of these the persistence of recession has recently strengthened the trend towards protectionism. In view of the limited possibilities for South Korea to divert exports to the Third World or the Eastern bloc, this casts distinct shadows on its future export prospects. In addition, past experience has shown the dangers that the continuing dependence on imports holds, particularly for the terms of trade.

The risks inherent in future world developments cannot obscure the fact that South Korea is also in a favourable position as regards the requirements for growth in the eighties. The country can continue to rely on an abundant, highly qualified reservoir of labour, which offers opportunities to employ modern technology on a large scale in order to raise productivity. It therefore has the possibility of establishing a prominent competitive position in world markets in high technology products. If this is viewed in conjunction with the broad diversification of the range of export goods that has already taken place, Korea's overall export prospects are bright in comparison with those of other countries.

In future, domestic demand will probably make a greater contribution to growth than in the past. With a population of more than 38 million in 1980, the country has a substantial home market that shows good prospects of expansion in view of the level of per capita income that has now been reached.

The assassination of President Park in 1979 was followed by a short period of disturbances, but political stability has now been restored. The main prerequisite for a continued growth policy oriented towards the long term is therefore present. In the past the private sector has demonstrated its dynamism and flexibility, so that there is a high probability that the country will seize the opportunities presented to it and will thus create the conditions in which it will be able to continue to use foreign capital sensibly in the development process in the eighties.

Nevertheless, the success of the future borrowing programme will probably depend largely on whether the return to relatively undistorted prices for goods and factors of production initiated in 1980 will be sustained and complemented by other economic measures. There would seem to be particular need for curbing inflation in further periods of growth, abandoning the system of interest rate and export subsidies and making further rapid and flexible exchange rate adjustments. If South Korea holds to this course the success of the country's growth and borrowing policies will continue to distinguish it favourably from the vast majority of other highly indebted developing countries.

---

[25] Cf. World Bank: World Development Report 1982, pp. 124-125.

[26] Cf. L. Julitz: Zuversicht nur für wenige Länder. Der Welthandel bleibt flau, in: Frankfurter Allgemeine Zeitung, 10. 5. 1982, p. 13.

[27] Cf. K. W. Kim: South Korea, in: Chr. Saunders (ed.): The Political Economy of New and Old Industrial Countries, London 1981, pp. 159-182, in this connection p. 175.