

Structural Change: Is South Korea a Good Model for Developing Countries?

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South Korea's structural change process seems to have been the result of an unbalanced growth strategy in which the agricultural sector was basically ignored for several decades while investment was focused on manufacturing. It has been argued by some scholars that for many of today's developing countries this sort of development strategy is likely to be successful. However, it is argued in this paper that the early success of this unbalanced approach based on manufacturing rather than agriculture is not a good model for others to follow. Specifically, commodity aid (food and raw materials) was critical for South Korea's unbalanced growth strategy. Without access to such significant amounts of aid most developing countries are unlikely to achieve successful structural transformation. As a result, agriculture must play a key role in the structural change process in many of today's developing countries.

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INTRODUCTION

The experiences of East Asia have been much analyzed by development economists in search of clues as to why this region (Japan, Taiwan, South Korea) experienced such rapid growth in the postwar period (World Bank, 1993). Much of this discussion has been focused on the role of the state in terms of orchestrating rapid economic growth. Initially, the view put forward was that in East Asia it was the restoration of the market and elimination of barriers to free trade that accounted for the miraculous economic performance of East Asia (Little et al., 1970). However, it quickly became clear that the state played a significant role in the process of economic development in the region and state policy often involved the use of subsidies, protection, and planning to promote rapid economic development (Wade, 1990). The debate on this issue continues even today (Yeung, 2017).

The mixture of market and state direction managed to achieve dramatic structural changes. Agriculture as a share of both GDP and total employment declined dramatically while that of manufacturing rose. While service shares also increased, it was manufacturing that seemed to play the most important role, especially in terms of rapid growth in exports. That is, manufacturing as a share of exports also rose dramatically. These are elements of the development process in Japan, Taiwan, and South Korea (World Bank, 1993).

In this context, agriculture's role in this process of economic development has also been widely discussed. A number of scholars have argued that agriculture has played a critical part in the development process in East Asia. Agricultural productivity growth has been thought to have played a significant role in the overall growth process in Taiwan and, if one includes the prewar time period, Japan (Francks et al., 1999). However, for South

Korea many scholars have argued that agriculture played little role in the rapid process of structural transformation and economic growth (Amsden, 1989). This view has been contested by Kang and Ramachandran (1999) who argue that rapid agricultural growth in prewar South Korea provided the foundation for rapid postwar structural change and growth. While there was, by historical standards, rapid agricultural growth in Korea prior to World War II, much of the benefits of this growth were captured by Japan since Korea was a colony of Japan. Nevertheless, much of the agricultural infrastructure created in the colonial period did prove useful for future growth in agriculture. After World War II agriculture in South Korea was initially neglected with much of the resources available to the country used to invest in the rapid expansion of manufacturing relative to agriculture, with the share of the former in GDP and employment rising dramatically relative to the latter (Lie, 1991).

Thus it would seem that South Korea represents a case of rapid growth and structural change without agricultural transformation (at least in the post World War II period). It seems that South Korea jumped into industrialization, rapidly changing the structure of the economy, without paying much attention to agriculture, i.e., an example of unbalanced growth. This issue is very important today since there are a number of scholars who argue that successful structural change and rapid development does not require (at least initially) rapidly raising the productivity of agriculture. Agricultural inputs (especially food) can be imported via trade and paid for by rapid expansion in other sectors of the economy (manufacturing and modern sector services) resulting in increased exports of these goods (developing a comparative advantage in these goods). For example, Matsuyama (1992) assumes an open economy setting and utilizes the comparative advantage idea to argue that growth in agricultural productivity is not necessary for rapid growth in the rest of the economy to occur and likely makes structural change more rather than less difficult. Dercon and Gollin (2014) have argued that many parts of Sub-Saharan Africa are sufficiently open to trade that agriculture may not pose a binding constraint to economic development and structural change. Again, agricultural commodities could be imported and paid for via rapid growth in manufacturing and modern services (unbalanced growth).

South Korea would seem to represent a historical example of just such unbalanced growth and thus seems to serve as a successful example of such a process of structural change and rapid economic development. However, it will be argued in this paper that South Korea does not serve as a good example of unbalanced growth and structural change. More specifically, the experience of South Korea was dramatically affected by food and other commodity aid provided by the U.S. and this aid allowed the rapid sprint to structural change, shifting resources from agriculture to industry (particularly manufacturing), altering the composition of the country's exports, with all of this resulting in rapid economic growth. Without access to such aid such an unbalanced growth path would have been much less likely to succeed.

The paper unfolds as follows. Section Two will discuss the process of structural change and the key role it plays in the overall development process. Section Three will discuss briefly the process of structural change in South Korea. Section Four will present some theoretical analysis concerning the relationship between structural change and agriculture. Section Five will focus on the experience of South Korea in terms of the role of food and commodity aid in the process of structural change. Finally, Section Six will summarize the paper.

STRUCTURAL CHANGE

Economic development involving a significant rise in productivity in general and labor productivity specifically can be thought of as involving two aspects. First, productivity growth occurs within particular sectors via the adoption of productive new technologies. Within a dualistic economy setting there is a second source of growth. Dualistic economies are those for which significant disparities in productivity exist between sectors and these disparities tend to persist over time. The causes for these disparities in productivity have been much debated. Vollrath (2009) and Restuccia (2004) argue that such productivity differentials represent resource misallocation resulting from various barriers to resource movements. This paper will not address the issue of causes and instead focus on the effects of such disparities. Traditionally, it has been argued that significant labor pro-

ductivity differences exist between traditional and modern sectors with the former often being identified with agriculture and the latter with manufacturing and modern services (Lewis, 1954; Ranis and Fei, 1961). Shifting resources from the low labor productivity sector (agriculture) to a high labor productivity sector (manufacturing and modern services) results in a comparative static gain in overall productivity. This process involves structural change with the share of agriculture in GDP and employment declining while that for manufacturing and modern sector services rising.

Structural change is often thought to also generate a dynamic gain via the shift of resources and production out of agriculture and into manufacturing and modern services. Rodrik (2013) has shown that absolute convergence in productivity tends to occur in manufacturing. That is, once a country has allocated a large enough share of resources to high productivity manufacturing, then the sector seems to exhibit absolute convergence to levels of productivity similar to that found in already developed countries. It seems then that manufacturing provides an escalator for productivity growth which occurs via the rapid adoption of newer technologies (Rodrik, 2013). Recent empirical work also seems to show that convergence of labor productivity also occurs in the service sector (Ghani, 2014). However, it seems likely that this holds only for modern (tradable) services.

Thus structural change would seem to play a significant role in the development process. Recent research work has pointed out another mechanism by which structural change generates rapid economic development. Easterly et al. (1993) used data from the post 1950 period to show that the main difference between rich and poor countries was not so much the high growth rate of the former relative to the latter, but the fact that the latter countries experienced many periods of negative growth which greatly reduced the impact of high growth years on the economy. Pritchett (2000) finds that the key to prosperity is in the dampening of growth reversals. Broadberry and Wallis (2014) utilizing data for 18 countries from the 19th century and information for four countries allowing for an analysis of growth instability for even earlier time periods, find that long-run growth has been historically associated with a reduction of periods of shrinking (negative growth). Finally, Anderson (2018) utilizing data for developing countries in Latin America, Asia, and Africa finds that resilience to shrinking (years in which growth is negative) plays a more important role for successful catching up than economic growth per se.

How is it that some countries have been able to reduce or eliminate the occurrence of periods of negative economic growth? How have countries that have caught up made their growth experience more resilient? Broadberry and Wallis (2014) indicate that structural change is one of the factors that greatly influences the likelihood of periods of economic shrinkage. Traditional agriculture is significantly influenced by the vagaries of nature (drought, insects, floods, etc.). Thus, production experiences significant positive and negative shocks. The development and application of new technologies which dramatically increase overall agricultural productivity will

Table 1. Structural Change: South Korea

	1962	1970	1980
Agriculture			
% of GDP	39.8	29.7	17.8
% of Employment	63.1	50.4	34.0
% of Export	45.0	11.2	6.9
Industry			
% of GDP	14.6	19.7	25.3
% of Employment	8.7	14.3	22.6
% of Exports	65.0	88.8	93.1
Services			
% of GDP	45.6	50.6	56.8
% of Employment	28.2	35.2	43.4

Source: Economic Planning Board (1982).

increase the resilience of the growth process. In addition, as resources and workers shift into manufacturing and modern sector services the overall economy becomes much more diversified and complex and thus more resilient. This makes the developing economy much less subject to periods of economic shrinking. Thus rapid structural change provides a mechanism for generating comparative static and dynamic gains in productivity, but it also provides a mechanism for increasing the overall resilience of the economy. Balanced growth involving agriculture and non-agriculture, especially manufacturing, increases a country's resilience to periods of economic shrinking.

STRUCTURAL CHANGE IN SOUTH KOREA

After World War II and the defeat of Japan its Korean colony was divided into North and South. Initially, South Korea was subject to a great deal of turmoil and unrest and then was subject to the destruction and chaos associated with the Korean War. Rapid structural change and economic development in South Korea did not occur until the early 1960s. However, once begun the economic transformation was significant. The results are illustrated in Table 1 (Looney, 2012).

As can be seen, significant structural change occurred between 1962 and 1980. The share of agriculture in GDP, employment, and total exports declined significantly. Alternatively, the share of industry rose for all three categories while services increased for the first two categories. Focusing on manufacturing employment as a share of total employment and value added in manufacturing as a share of total value added, one sees a similar pattern. Figures 1 and 2 present the data on employment share (MFGE/TOTE) and value added share (MFGVA/TOTVA). The data comes from the work of Timmer et al. (2015) which created a data set on employment and value added by sector for South Korea and a number of other countries. As one can see, beginning in the early 1960s there is a sharp rise in both. Thus significant structural change occurred on the South Korean economy occurred during the 1960s and 1970s.

The rapid structural change was also associated with increased resilience in terms of economic growth. Above, it was argued that a reduction in agriculture's share in the economy combined with economic diversification has, in the past, resulted in a reduction in the number of times economic shrinkage (negative growth rates) occurred. Indeed, this also seems to be true for South Korea as well. Data on the growth rate of GDP per capita (GRGDPP) taken from World Development Indicators is presented in Figure 3. As can be seen, between 1953 and 1962 South Korea was characterized by three years of negative growth (1959, 1960, and 1962). Thus 30% of the decade

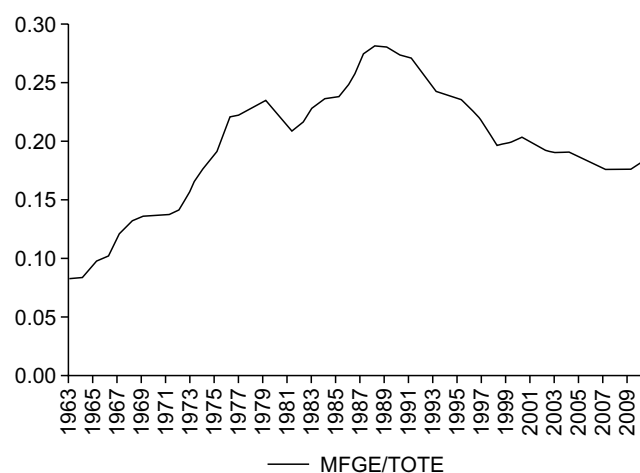


Fig. 1. Manufactured employment as a share of total employment.
Source: This figure was constructed by the author utilizing data located at www.rug.nl/ggdc/productivity/10-sector/.

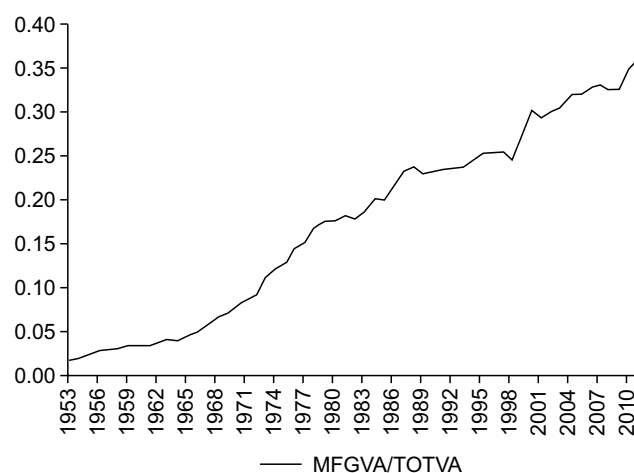


Fig. 2. Manufactured value added as a share of total value added.
Source: This figure was constructed by the author utilizing data located at www.rug.nl/ggdc/productivity/10-sector/.



Fig. 3. Growth rates of GDP per capita.

Source: Data for this figure is based on data from World Development Indicators.

was afflicted with economic shrinking. From 1963 to 2013 (forty years) there were only four instances of shrinking (10% of the forty years). Thus growth has become more resilient.

Thus South Korea has been extremely successful not just in terms of increases in per capita GDP. It has also been very successful in terms of altering the structure of its economy. Manufacturing as a share of value added and total employment has grown rapidly while exports of such goods have also increased as a share of total exports. The next section of the paper focuses on theoretical explanations as to how this could have happened.

DUALISTIC MODELS AND STRUCTURAL CHANGE

As discussed above, dualistic models presume that the economy is divided into sectors, each with a different level of labor productivity. Moreover, these differences in productivity are presumed to persist for long periods of time. To keep things simple, it will be presumed (Ranis and Fei, 1961) that there are two sectors, agriculture and manufacturing (incorporating modern or tradable services). The productivity in the former is assumed to be significantly lower than in the latter. In a closed economy setting the prices for each sector are endogenously determined. Manufacturing utilizes labor and capital while agriculture relies on labor only. Assuming no technical innovation in either sector, then growth can only come via structural change. This assumption is made since the focus of the paper is on this process.

In the context of this model, growth must involve structural change. Policies that are aimed at focusing investment on manufacturing sector (capital accumulation) will automatically involve the transfer of labor from agriculture to manufacturing and GDP per capita will rise. The difficulty is that drawing labor out of agriculture will reduce agricultural output (assuming no surplus labor). If this output is a crucial input to manufacturing (say food), then the relative price of agricultural goods will rise and this will likely slow the expansion of manufacturing as the profitability of investment in this sector will decline. Thus agricultural productivity must rise in order to allow for the expansion of manufacturing. In other words, growth must be balanced.

In an open economy setting, the analysis is altered. It will be assumed initially that a comparative advantage currently exists for agricultural goods while a potential comparative advantage in labor intensive manufactured goods also exists. By potential it is meant that with investment labor productivity in manufacturing can be rapidly increased and a comparative advantage developed. This can occur via the importation of intermediate goods for utilization in manufacturing and modern service production. One can envision an unbalanced growth path through which investment is focused on manufacturing while the food and other agricultural raw materials needed for manufacturing expansion are imported. Thus agricultural prices are now exogenously determined

and therefore fixed (small country case).

There are, however, several difficulties involved with this unbalanced growth process (Rattso and Torvik, 2003). First, even when a country is open to trade and can import food and agricultural raw materials, it is often not true that these imports will not affect prices (the small country case does not hold). This is due to the fact that markets for agricultural goods are often quite thin in nature. Thus the amount actually traded is relatively small compared to production levels for many countries. If so, then a country that significantly increases imports of these types of economies is likely to experience price increases (Gollin et al., 2007). Thus unbalanced expansion in manufacturing is still likely to face constraints from low productivity agriculture. Second, unbalanced growth in manufacturing goes against the concept of comparative advantage. As investment is focused on manufacturing, this implies that agriculture will be ignored. This will undermine comparative advantage in this sector reducing export based earnings. Third, much of the existing foreign exchange will have to be utilized to purchase food and raw materials for manufacturing. However, this means that foreign exchange for the importation of complex intermediate goods will be in short supply. New technology is assumed to be embodied in these complex intermediate goods and thus technological upgrading in manufacturing, the basis for developing new comparative advantages, will become increasingly difficult. Thus an unbalanced growth process in an open economy context is still likely to face difficulties.

A third possibility suggests itself. What if an external supply of agricultural goods, food and raw materials, can be imported at little or no cost? Within this context a successful process of unbalanced growth based on a shift in comparative advantage now seems possible. A policy structure aimed at shifting investment to manufacturing will indeed cause this sector to rapidly expand drawing labor out of agriculture resulting in the decline in agricultural production. The food and raw materials needed for the expansion of manufacturing are imported at no or little cost. The latter occurs via foreign aid which provides food and agricultural raw materials at no cost (or dramatically reduced cost). Thus foreign exchange can be utilized for the importation of complex intermediate goods embodying new technology. This in turn results in a shift in comparative advantage from agriculture to manufacturing. In this case dramatic structural change can be the result of an unbalanced growth process that basically ignores the agricultural sector. Prices of food and agricultural raw materials will not rise and structural change can proceed.

Of the scenarios discussed above, it will be argued that the third one is representative of the development and structural change process in South Korea in the 1960s and 1970s. Given the fact that few developing countries today have access to the kind of aid supplies that South Korea had available, its process of development and structural change would not seem to be relevant for most of today's developing countries.

THE SOUTH KOREAN EXPERIENCE

That agriculture was neglected in the early stages of economic development in South Korea is commonly accepted by most scholars. Lie (1991) has argued as follows, "Given the constraints, most crucially of foreign exchange reserves, the state deliberately pursued a strategy of unbalanced growth" (p.38). This conclusion is supported by the work of Kihl and Bank (1981). Although the state pledged significant support for agriculture and farmers, this was not the priority of the state. During the first five-year plan (1962-1966) agriculture reserved 9.8% of overall investment resources for agriculture compared to a proposed target of 17%. During the second and third five-year plans this dropped to 6.4% and 8.9% of the total.

One can actually quantitatively measure a government's policy stance towards the agricultural sector relative to the nonagricultural sector. The nominal rate of assistance to agriculture (NRA_{ag}) is defined as the percentage by which government policy has raised the gross returns to farmers above what they would have been in the absence of government intervention. This involves policies aimed at altering the prices of outputs and inputs. If such policies lower the price of inputs and/or raise the price of outputs, the $NRA_{ag} > 0$ and one can characterize this as the protection or subsidizing of agriculture. Alternatively, if policy raises the price of inputs relative to

international prices and/or lower the prices of outputs below international levels, the $NRA_{ag} < 0$ and one can describe this as taxation of agriculture (Anderson, 2010).

Agriculture is also impacted by the policies that are applied to the nonagricultural sector. One can also calculate the nominal rate of assistance to non-agriculture (NRA_{nonag}). Then one can calculate the broadest measure of government policy towards agriculture which includes both NRA_{ag} and NRA_{nonag} . This is captured by the relative rate of assistance to agriculture (RRA) which can be written as

$$(1) RRA^t = 100[(1 + NRA_{ag}^t / 100) / (1 + NRA_{nonag}^t / 100) - 1].$$

If the NRA_{ag} exceeds the NRA_{nonag} , then the $RRA > 0$ implying that agriculture is being protected relative to international prices and relative to non-agriculture. Alternatively, if the NRA_{ag} is less than the NRA_{nonag} , the $RRA < 0$ implying that agriculture is in effect being taxed or exploited so as to favor the nonagricultural sector. Figure 4 presents data from Anderson and Nelgen (2011) for NRA_{ag} , NRA_{nonag} , and RRA for the period 1955 to 2011. As one can see, up until the early 1970s agriculture experienced significant periods in which policy in effect taxed agriculture for the benefit of non-agriculture. This represented the period during which unbalanced growth was pursued in South Korea. Thus agriculture was used to promote the nonagricultural sector, particularly manufacturing.

This is a type of policy that has been attempted by many developing countries. It was usually part of an import substitution strategy of economic development which involved policies that were aimed at exploiting agriculture via indirect taxation of agriculture and protection of modern sector activities such as manufacturing. Domestic production of manufactured goods would replace imports and ultimately the country would export these products in the international market. Most of these strategies failed in that it proved extremely difficult to make the shift to exports via a change in comparative advantage. South Korea was able to succeed in making this transition. Some of the explanation for this success was certainly the effectiveness of state policy in promoting growth and, in particular, exports of manufactured goods. South Korea is often used as an example of an effective development state (Amsden, 1989). However, it will be argued below that foreign aid in the form of food and agricultural raw materials was also quite useful in the process of structural change. Before proceeding one further observation concerning Figure Four needs to be noted. After 1975, policy towards agriculture became very protectionist in nature. That is, agriculture became heavily subsidized. One would think that this would have slowed structural change somewhat. It would be interesting to see if indeed this was the case. However, it should be pointed out that by the time the policy shift occurred the relative importance of the agricultural sector in the economy had already declined dramatically. Thus the shift in policy towards agriculture would have a much

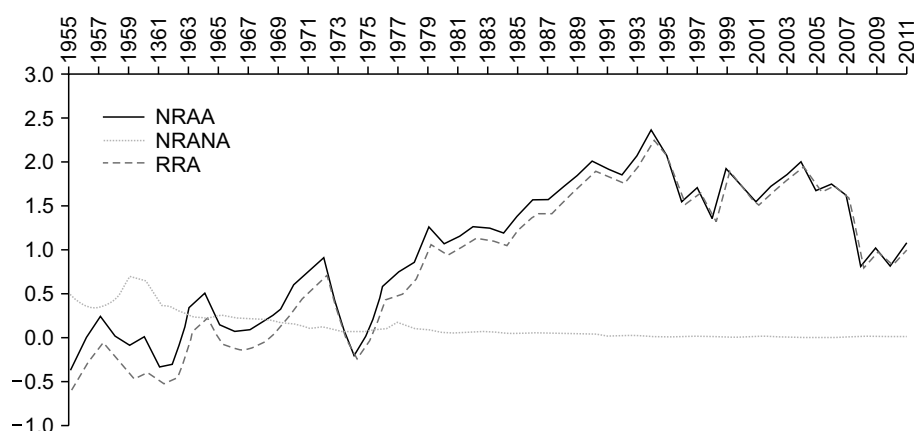


Fig. 4. NRA_{ag} , NRA_{nonag} and RRA: South Korea.

Source: This figure was constructed by the author utilizing data located at www.worldbank.org/agdistortions.

smaller effect on the structural change process.

As was pointed out in the previous section of this paper, an unbalanced growth strategy emphasizing the non-agricultural sector runs into several difficulties. First, it draws resources out of the sector, agriculture, which has the existing comparative advantage and thus has a negative impact on foreign exchange. Second, much of the foreign exchange earned will have to be utilized to pay for imported food and raw materials. This will sharply reduce the ability to import intermediate goods necessary for the expansion of manufacturing. This will tend to inhibit the development of comparative advantage in nonagricultural activities such as manufacturing. However, aid that provides access to food and agricultural raw materials solves this problem by allowing foreign exchange to be used to import intermediate goods for manufacturing. This in turn will allow for the development of comparative advantage in this sector.

The provision of foreign aid to South Korea thus played a crucial role in the process of structural change (Cathie, 1989). Table 2 presents data on total aid and food aid. A number of conclusions can be drawn from the information provided. Food aid was an important component of total aid and represented a large share of total imports and of GDP. The time period covered is from 1953 to 1973. Thus the initial period of the development process was bolstered via imports of food which cost the South Korean government very little. Thus foreign exchange was not used for the importation of food, but instead was used to promote the importation of intermediate goods via government regulation of the allocation of foreign exchange.

The savings in foreign exchange are illustrated by the data provided in Table 3. The first column shows total food grain imports for South Korea and the second column shows the food grain imports that resulted from foreign aid in the form of food grains (PL480 grain). As can be seen, for most of the period under consideration, food aid made up a substantial part of total food imports. Thus significant foreign exchange was saved by the

Table 2. Foreign Aid to South Korea

Year	Total Aid (millions of \$)	Food Aid (% of total aid)	Food Aid (% of imports)	Food Aid (% of GDP)
1953	201.2	--	--	--
1954	179.9	19.0	14.0	1.0
1955	236.7	20.3	14.0	1.3
1956	329.4	22.1	18.8	2.4
1957	382.9	32.1	27.7	3.3
1958	321.3	32.6	27.6	2.9
1959	249.5	14.6	16.0	1.6
1960	268.8	22.3	16.4	1.9
1961	215.2	36.1	23.5	2.3
1962	223.5	33.5	16.6	2.1
1963	255.8	38.9	17.1	2.6
1964	159.2	50.7	18.9	2.0
1965	176.8	43.2	16.2	1.7
1966	173.2	30.1	6.9	1.0
1967	229.7	37.3	8.2	1.6
1968	197.5	31.5	4.1	1.1
1969	239.6	76.7	9.5	2.7
1970	181.8	64.6	5.6	1.5
1971	185.9	87.5	6.5	2.0
1972	241.4	74.0	7.5	2.0
1973	92.0	90.1	5.3	1.6

Adapted from: Cathie (1989: 135).

Table 3. The Role of PL 480 Food Aid in Grain Imports (\$Million)

Year	Total grain imports	PL 480 grain imports
1955	6.4	-
1956	31.2	20.0
1957	84.3	33.0
1958	51.1	46.9
1959	17.5	4.3
1960	20.6	19.2
1961	n/a	22.6
1962	40.1	34.4
1963	107.2	62.6
1964	60.8	28.0
1965	54.4	29.7
1966	61.3	11.2
1967	76.6	7.9
1968	129.3	27.3
1969	250.3	31.6
1970	244.8	33.0
1971	304.0	18.0
1972	282.7	-
1973	444.1	-

Source: Lie (1991: 41).

utilization of food aid. This was critical in terms of being able to provide foreign exchange for the import of intermediate goods necessary for the growth of the manufacturing sector. Also note that beginning in the late 1960s, food aid as a share of food grain imports began to decline as foreign aid in this form from the U.S. began to decline. Thus foreign exchange problems began to become a real constraint on rapid growth in manufacturing.

It must also be pointed out that foreign aid also provided crucial raw materials for the expansion of manufacturing, specifically cotton. It must be remembered that initially it was the textile industry that expanded very rapidly absorbing significant amounts of labor from the countryside. Table 4 presents data on textiles produced for export, total exports, and textiles as a share of total exports. As can be seen, textile production grew very rapidly from 1953 to 1974. Perhaps more importantly, textile exports as a share of total exports also increased quite dramatically. Thus the initial expansion of manufacturing and the initial impulse towards structural change involved textile production.

The main raw material for textile production was, of course, cotton. This raw material was not produced in South Korea. Thus expansion of textile production required the importation of large quantities of cotton. This would have absorbed a large share of available foreign exchange and hindered the development of comparative advantage in textile production. Cathie (1989) estimates, utilizing available data, that the U.S. provided \$1.8 billion dollars of textile related aid composed of raw materials and equipment related to textile production.

The overall conclusion is that the unbalanced growth process pursued by the state was made possible by the availability of food and raw materials (cotton) through aid. This allowed for the rapid expansion of manufactur-

Table 4. Textile Production, Total Exports, and Textiles as a Share of Exports

Year	Textiles (millions of \$)	Total Exports (millions of \$)	Textiles As a Share of Total Exports
1953	2.5	39.5	6.5
1954	2.5	24.2	11.1
1955	2.2	17.6	12.6
1956	2.7	25.1	11.0
1957	3.2	21.5	15.1
1958	0.9	16.4	5.6
1959	2.1	19.1	11.3
1960	3.8	31.8	11.9
1961	4.1	38.6	10.6
1962	7.6	54.8	13.8
1963	17.6	86.7	20.2
1964	32.7	118.8	27.5
1965	54.5	174.9	31.1
1966	79.6	247.6	32.1
1967	124.5	320.3	38.8
1968	190.3	455.2	41.8
1969	249.3	622.6	40.0
1970	330.2	835.2	39.5
1971	467.5	1067.6	43.7
1972	660.2	1632.6	40.4
1973	1236.6	3225.3	38.3
1974	1428.0	4456.2	32.0

Adapted From: Cathie (1989: 173).

ing and thus rapid structural change in the South Korean economy. However, because agriculture was indirectly taxed in this unbalanced growth process the household income gap between urban and rural households increased dramatically (Ho, 1981). By the early 1970s this unbalanced growth strategy had reached its limits. At this time the U.S. began to end its direct commodity aid. The state now had to change its strategy so as to expand agricultural production to prevent the drain of foreign exchange in order to import food. As presented in Figure 3, policy in South Korea began to alter so as to eliminate the indirect taxation of agriculture by suppressing agricultural prices. As food aid declined the prices of agricultural goods rose relatively rapidly and the real wholesale price of food rose quickly. Prior to the early 1970s the costs of food had been stabilized. Data utilized by Frank, Kim, and Westphal (1975) show that between 1953 and 1970 the wholesale real price of food remained relatively unchanged. However, in the early 1970s the real wholesale price of food rose by 36%. Thus government policy now focused on raising agricultural growth via investment and the diffusion of high yield seed varieties. The 1970s represented a return to a more balanced growth path.

SUMMARY

South Korea was able to achieve rapid structural change and economic growth in the postwar period. Economists have often pointed to this experience and sought to draw lessons for today's developing countries. The argument has often been that a strong development state was able to coordinate the rapid expansion of manufacturing resulting in the rapid growth of manufactured exports. This drew labor rapidly out of the agricultural sector resulting in a structural transformation of the society and economy. Agriculture, at least initially, was utilized to provide the labor for this transformation and was indirectly taxed and neglected.

The hypothesis proposed in this paper is that South Korea was able to initially pursue such an unbalanced growth strategy because of the availability of commodity foreign aid which allowed significant amounts of food and cotton to be imported without having to utilize large amounts of foreign exchange. Thus complex intermediate goods could be imported to promote productivity growth in manufacturing. Initially, it was textiles that played a lead role in the transformation process. The inflow of cotton via foreign aid allowed the raw material for the production of textiles to be attained without significant cost. Thus the first two decades of structural change and rapid economic growth were at least made easier to attain as a result of foreign aid.

Again, this is not to deny that South Korea's state seemed particularly effective in terms of orchestrating economic growth, especially in manufacturing. However, using the South Korean experience as a model would seem to be dangerous. Most of today's developing economies do not have access to other sources of food and raw materials via foreign aid to allow for a successful rapid shift to manufacturing. The level of provision of such aid to South Korea is not likely to be replicated in today's political climate. Developing a comparative advantage in various non-agricultural sectors would seem to be very difficult to do without dramatically raising agricultural productivity. Thus South Korea does not seem an appropriate model for today's developing countries.

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