

# A Reconsideration of Import Substitution

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## 1. *Introduction*

From the outset of widespread concern with the economic development of low-income countries in the late 1940s, much attention has been given to the role that international activities play in explaining growth or its absence. One of the earliest general strategies of development that directly involves international transactions is that usually called import substitution. Import substitution of one form or another prevailed in many developing countries during the 1950s and early 1960s. In the late 1960s and early 1970s a quite contrary approach, identified as outward (or export) oriented, became increasingly common.

This paper studies the import substitution story—why and how it came to be—and the rise of the outward-oriented approach—why and how it came to be and—temporarily at least—to win the battle between the two approaches. I then examine the doubts that have arisen with respect to the latter ap-

proach, and the nature of the new tensions that now exist with respect to an appropriate trade strategy.

The paper is organized as follows: after a preliminary definition of the basic notions, the next section reviews the rationale of the import substitution approach found in the 1950s and early 1960s. In Section 4, I examine the implementation of the import-substitution approach as generally practiced. This is followed by a summary of actual developments in a number of countries from 1950 to 1970, when import substitution was a widely followed policy. In Section 6 I briefly discuss the rise and early successes of outward orientation, then summarize developments in the post-1980 period, and discuss sources of difficulties with openness. There is a short concluding section.

The arguments of the paper are built around the notion that the primary sources of development are learning and knowledge accumulation. The principal reason for the failure of import substitution was that, as practiced, it created an environment that discouraged learning. The outward-oriented strategy, on the other hand, fails to appreciate that learning requires conditions that are essentially internal and dependent on the basic characteristics

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of the society. This failure means that outward orientation as such needs substantial qualification and redirection.

## 2. *Preliminary Notions*

Import substitution refers to a set of ideas about why mass poverty has prevailed and continues to prevail in many countries while other countries have grown rich, and about a general approach to the elimination of that poverty. The explanation of mass poverty is generally found in the structure of production—mainly the dominance of agricultural and mineral activities—in the low-income countries, and in their inability, because of their structure, to profit from international trade. To change this situation, the argument continues, the low-income countries (the South) must alter their structure—they must industrialize. To industrialize, given the existence of already industrialized and highly productive economies (the North), the countries of the South must protect their economies from imports from the North and concentrate on putting in place new activities that will produce an array of manufactured products currently imported. Thus would the structure of the economy be changed and, at some future time, make possible a foreign trade that contributes to the development objectives.

In the literature of development economics, import substitution is sharply contrasted with an outward- (or export-) oriented approach to development. In this approach, primary attention is given to the advantages of foreign trade in general and of exports in particular. Whether explicit export-promotion policies are required depends on the specific circumstances of the individual countries, but the basic notion is to keep the domestic economy open to foreign competition and foreign capital,

and to ensure that exports are in no way penalized, if not specifically encouraged. Structural change would then occur over time according to changes in the dictates of comparative advantage that are assumed to occur.

Over the last 15 or so years, the outward-oriented approach has gained dominance among academic economists and those in international organizations concerned with development. Many national aid agencies in the North have also become convinced of the validity of the outward-oriented approach. A number of countries have made noteworthy efforts to shift from an essentially import substitution approach to a more outward-oriented approach, other countries are trying to do so, and virtually all countries are being urged to do so by aid donors and advice givers.

In more recent years, evidence and argument have questioned this new orthodoxy. There is increasing doubt that growth is as simple as it appears in the export-oriented arguments, and renewed emphasis is being placed on more basic characteristics of an economy, especially entrepreneurship, institutions, and knowledge accumulation and application. Outward orientation is pushed hard by influential individuals and institutions at the same time that a strong revisionist movement is underway and gaining strength. A state of limbo exists with respect to trade strategy (and development strategy in general) that qualifies the simple, universal prescription of the last decade or so.

## 3. *The Beginning*

As colonial empires collapsed and the great differences in per capita income between North and South were recognized, the obvious question confronting the development economics community was how to go about raising incomes in

the South. Something fundamental was necessary. Three things seemed especially important in the early 1950s.

### 3.1 *Rejection of the Market Solution*

The view that a more or less free market would not solve the development problem was widely accepted. The problem was not market failure in the usual textbook sense (externalities, decreasing costs, etc.). Rather, the notion was that the division of labor between the rich countries and the poor ones seemed to doom the latter to permanent poverty. The most widely cited evidence was data purporting to show that the net barter terms of trade had turned against the developing countries over the decades prior to 1940. Raul Prebisch, Hans Singer, and others calculated many such series that seemed to show a secular deterioration in the terms of trade of the poor countries.<sup>2</sup> Prebisch's explanation that the gains from productivity growth in the North resulted in rising wages, not falling prices, due to the monopoly power of both labor and firms in the North, was widely accepted. In the South, dependent mainly on agricultural and mineral exports, there was lower productivity growth, and wages were held down by surplus labor, weak unions, and competition among exporters. The rewards of productivity growth in manufacturing activities were thus not available to importers of such products in the South.

Also cited as a source of difficulties were Engel curve arguments that the income elasticity of demand for agricultural products and raw materials in the North declines as incomes reach higher and higher levels. If exports lagged behind the growth of income in the South

for this reason, then import substitution of some kind must take place to protect the balance of payments, or growth would slow or stop. Widespread protection of agriculture in many rich countries exacerbated this effect. Added to all this was the argument that cyclical changes in the North resulted in reduced employment and income, and hence imports, rather than in falling product and factor prices, while in the South it was wages and prices that responded to downturns.<sup>3</sup>

The specific arguments about the terms of trade were buttressed by more general views that the market was an instrument that kept poor countries poor and rich countries rich. There were several reasons for such views. Men who led independence movements had lived their adult lives during two world wars and a devastating worldwide depression that severely penalized the South. Predictions in the mid to late forties were generally to the effect that the post-World War II world economy would resemble that of the 1930s.<sup>4</sup> Though the years 1870 to 1914 were fairly satisfactory, that period was hardly fresh in any decision maker's mind,<sup>5</sup> and at that date, Europe and the United States had

<sup>3</sup> This argument is most clearly worked out in various publications of the Economic Commission for Latin America, where Prebisch was the dominant figure in the early 1950s. It was widely accepted inside and outside Latin America in one form or another. See, for example, Prebisch (1950).

<sup>4</sup> There were articles in both professional journals and newspaper accounts that predicted a return to widespread depression after the huge war-time expenditures were reduced. No one foresaw that the quarter century from 1950 was to be the remarkable boom time that it turned out to be. It was, however, well into the 1950s before all European countries achieved the full convertibility of their currencies. An interesting question is why did some policy makers seem to catch on that the post 1950s were really different from what they were expected to be and others did not.

<sup>5</sup> W. Arthur Lewis (1978) is a fine study of these prewar decades.

<sup>2</sup> Singer (1950) and Prebisch (1950) are early statements of this position. There are many more.

been growing steadily for 50 to 75 years, while most of the rest of the world's population remained mired in severe and mass poverty.<sup>6</sup> In addition, the Keynesian ideas that even a perfectly functioning market may not ensure full utilization of resources were becoming widely accepted. The conclusion for many policy makers and professional economists was clear: the "structure" of the economies of the developing countries had to be changed in fundamental ways if they were to compete on equal terms in the world markets, and a market mechanism could not bring about this sort of structural change.

The Soviet Union's experience had yet to be understood very well, and many otherwise informed economists and political leaders were impressed by what evidence was available. The great evils of the Stalin era were not widely known. It was known, however, that growth during the 1920s and 1930s had been quite remarkable. The USSR's commitment to central planning and to large-scale, capital intensive industrialization was especially appealing to those countries that put great weight on becoming a world economic power.

India was such a country, and the Indian effort was widely regarded as a model by other developing countries in the 1950s. The defense of the investment in heavy industry rested on strong assumptions that there were economy-wide effects on productivity growth created by a domestic capital goods sector; furthermore, economic independence required a country to have its own large-scale capital goods sector.

This view of development was most clearly articulated by P.C. Mahalanobis

<sup>6</sup> Many things were of course happening in the South prior to World War I, especially in Latin America. The general statement in the text, however, holds.

of the Indian Statistical Institute,<sup>7</sup> who argued that the countries must not only change their structure, but must change it by creating a domestic heavy capital goods sector. The Indian Second Plan (1956–61) was greatly influenced by the Mahalanobis view. Wilfred Malenbaum (1962, p. 87) shows that the investment allocation for the second plan was virtually equivalent to that worked out by Mahalanobis in his operational research exercises (Mahalanobis 1955). In both, about one-third of total investment was allocated to "basic investment goods," about 18 percent to industrial consumer goods, and 17 percent to agriculture. Equally important, there was essentially no effort to allocate resources optimally in the usual sense. Other people showed that the objectives could have been achieved with less capital than the plan called for, and that more jobs could have been created.<sup>8</sup> Such findings were not looked upon as especially relevant (or accurate), given the assumed (but not measured) externalities and the importance of the economic independence objective.<sup>9</sup>

Mahalanobis' argument fit well with the structuralism of Prebisch and his Latin American colleagues. There it was widely assumed that factor prices, especially wage rates and the exchange rate, had little effect on the quantity of such factors demanded or on the choice of

<sup>7</sup> See in particular Mahalanobis (1955).

<sup>8</sup> Malenbaum (1962, ch. IV) is a good discussion of India's Second Plan and the role that Mahalanobis's work played. I have followed Malenbaum closely in these paragraphs. A more general (and later) study of the early plans is Bhagwati and Padma Desai (1970).

<sup>9</sup> The Indian economy performed well during India's first plan, but by the end of the second there were severe problems. The problems in the late 1950s were due in significant part to the difficulties in agriculture and in earning foreign exchange. Anne Krueger in Theodore Morgan et al. (1963) is a convenient early reference, along with Malenbaum and Bhagwati and Desai cited in the previous note.

production techniques; output and its composition were the determining factors. In Latin America more than elsewhere, the strong structuralist view prevailed that wage rates could be high in order to attack the poverty problem with no cost in terms of employment. Similarly, the exchange rate did not matter much for exporting, so its value could be set to achieve other objectives, such as inducing capital formation or dampening inflation.<sup>10</sup>

Given these arguments, many students and policy makers in much of the world believed that the appropriate strategy for development was to replace imports from the rich North with their own domestic production. Large-scale comprehensive planning, rather than the market, was assumed to be the appropriate instrument, even though the understanding of how to design and implement a plan was as primitive as was the understanding of growth.

### 3.2 *Key Role of Capital Formation*

These ideas put primary emphasis on capital formation as the source of growth. The most obvious difference between firms in rich countries and those in poor ones was the extent to which physical capital was available to work with the labor. There are virtually no data on capital/labor ratios for the early 1950s, but there is little doubt that this ratio was vastly higher in the North than in the South in virtually all sectors, except for foreign firms engaged in mining of one kind or another. Thus another policy objective was to accelerate the rate of investment. This view was supported by a now-famous Arthur Lewis statement: "The central

<sup>10</sup> Richard Eckaus (1955), a widely read paper, worked through many of the implications of this set of assumptions, particularly those that question the role of factor prices in the choice of technique.

problem in the theory of economic growth is to understand the process by which a community is converted from being a 5 percent saver to a 12 percent saver" (Lewis 1955, pp. 325–26).<sup>11</sup> The nearest thing available to a formal theory of growth was that of Roy F. Harrod (1939, 1949), in which the only specified source of growth was capital formation.<sup>12</sup> Harrod specified a simple relationship between increased output and increased capital—the incremental capital/output ratio (ICOR). This ratio was assumed to be constant due to technological factors. There were numerous estimates of the ICOR, and most plans made specific assumptions about its value for sectors and for the economy as a whole. Such estimates were widely used to determine the amount of new capital required to achieve a given growth target.<sup>13</sup> Most observers considered domestic saving the primary constraint, and the earliest arguments for foreign aid rested on the assumption that the savings of the poor countries had to be supplemented by foreign savings if acceptable growth rates were to be achieved.<sup>14</sup>

<sup>11</sup> Lewis added after a dash, "with all the changes in attitudes, in institutions, and in techniques which accompany this conversion." This part of the sentence is not famous, and in any event makes the first part of the sentence less clear cut. Lewis also defined the subsistence sector as "that part of the economy which is not using reproducible capital" (Lewis 1954, p. 149).

<sup>12</sup> Harrod (1939 and 1948) noted that in the original Keynesian formulation of income determination, investment was necessary to achieve full utilization of resources today, but this same investment added to the capital stock tomorrow, and therefore required an increase in output for full utilization of resources to continue.

<sup>13</sup> Benjamin Higgins (1959) and Harvey Leibenstein (1957) have good brief discussions of the ICOR and estimates of its value. There are also references to additional sources of estimates. Bela Balassa (1971, p 38) has estimates for a number of countries over the 1950s.

<sup>14</sup> Moses Abramovitz (1952) is a much wider ranging study of growth, its sources, and mechanisms than the Harrod formulation. Abramovitz

The allocation of capital within the boundaries laid down with respect to structural change was an important issue. In some instances, the ICOR estimates were used as a criterion; that is, invest where the ICORs are smallest. There were efforts to identify specific objectives to be served by the new investment: for example to raise the saving rate, increase exports, maximize an employment effect, meet certain regional objectives, etc. Evidently this way of thinking revealed further doubts about an effective market answer.<sup>15</sup>

The capital goods sector was small or nonexistent in the newly independent countries, and most capital goods had to be imported. An obvious way to encourage investment was to maintain an exchange rate that kept capital's domestic price low. This could be most easily done by maintaining an overvalued exchange rate (or, less frequently, multiple exchange rates). Overvalued exchange rates (relative to a free trade situation) appeared as a means to encourage investment.<sup>16</sup> This produced balance of payment pressures, and to

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explicitly excludes Harrod's model from his survey on the grounds that it is more nearly the requirements for continued growth at full employment than it is an explanation of the growth that has occurred. Bert Hoselitz, ed. (1960) has a number of chapters on growth theory in the 1950s.

<sup>15</sup> Examples of this approach are Hollis Chenery (1953), Walter Galenson and Leibenstein (1955), and Alfred Kahn (1951). One of the earliest texts on development, Gerald Meier and Robert Baldwin (1957, pp. 343 ff), is a useful general discussion. It was not until later that benefit cost studies using shadow prices became popular.

<sup>16</sup> The evidence on the overvaluation of the exchange rate usually took the form of estimates of domestic resource costs of production relative to import costs and to direct estimates of relative purchasing power. Less formally, estimates were made of the costs of specific items—for example, haircuts—in countries, and compared to the exchange rate. Black markets were common. That the exchange rates were overvalued in numerous countries in the 1950s and later is clear, but (as will be emphasized later) what the exchange rates should be is not.

counter these a variety of tariffs, import licenses, and exchange controls were put in place. Protection in many forms was afforded currently imported consumer durables (and now and then simple capital goods) behind which domestic production took place. Consumer goods (especially durables), rather than capital goods, were protected on the grounds that their costs of production in the developing country would be relatively less than those of capital goods, because production of the latter goods was assumed to be more capital intensive and to employ more complex technology. Where Mahalanobis' view strongly prevailed—India, Brazil, and possibly other large countries—domestic production of capital goods was encouraged by keeping out imports and by direct subsidies.<sup>17</sup> Even in such countries, however, attention was given mainly to protecting the domestic market from importation of consumer durables.

### 3.3 *Replicating the North*

A third issue refers to the notion of development that seemed to prevail in the newly independent countries. Higher per capita incomes were of course sought, but more generally the idea seemed to be to replicate the North. The very idea of import substitution implied this: keep out that which is now imported from the North and produce it at home. Lewis (1954), the most widely studied article of the time, implied this. Lewis' dual economy consisted of a small modern or capitalist sector and a large traditional sector.

<sup>17</sup> It is sometimes written that import substitution was adopted in order to correct balance of payment problems. This seems to me to be incorrect. There were controls of many kinds, but these did not originate to correct existing balance of payment problems. They emerged as a consequence of the particular approach to import substitution that was widely followed.

The former was similar to the economies of the North in terms of technology, the use of capital, and dependence on a market mechanism. In the traditional sector, labor productivity was much lower, the marginal product may have been zero, virtually no physical capital was available, growth was absent, and a conventional market mechanism was not in place. In particular, payments to labor were likely to equal its average, rather than marginal, product. Lewis argued that all new investment should be in the modern sector; labor would be pulled in from the traditional sector as needed, and the modern sector would expand while the traditional sector diminished. Eventually, the modern sector would encompass the whole economy, and the traditional, underdeveloped economy would have been made over in the image of the rich North.

Lewis placed primary emphasis on capital formation (as noted above); such a mechanism depended very directly on the capacity to import physical capital and to put it in place within a traditional society. The institutions, organizations, and values of the traditional sector were to be pushed aside if they impeded this process. It was therefore as much a theory of displacement as it was a theory of development, because the existing traditional economy was to be replaced with an imported one.<sup>18</sup> One might then say that this approach was "import oriented" as well as import substituting. This approach may be con-

trasted with that which seeks to create a sustained dynamism within the traditional economy. Lewis (and especially John Fei and Gustav Ranis 1964) emphasized the importance of agricultural development, but this emphasis was widely ignored.<sup>19</sup>

This way of thinking reflected considerable optimism: just get the investment rate up, import the capital (with its built-in technology) and soon the end of underdevelopment would be at hand. There was general optimism elsewhere as well. President Truman's inaugural address in January 1949 reflected the view that the North (especially the United States) could (and would) transfer physical capital and technical and administrative knowledge to the new countries so that they too could become modern, like the North. The idea that development was a simple matter easily executed with foreign aid was reflected in much of the popular writing and in many of the reports and studies of international and bilateral aid agencies.

These three areas of thought and policy describe what I believe to be the basic way of thinking that produced import substitution. Details of policy varied widely around the world, and the extent to which a particular country's decision makers thought along these lines depended on a great variety of additional factors.<sup>20</sup> There were many

<sup>19</sup> Creating a continuing dynamism within the traditional sector has been emphasized by several agricultural economists, for example Bruce Johnston, Vernon Ruttan, John Mellor, and others, and by sociologists and geographers interested in development. See, for example, Peter Berger and Michael Hsiao (1988). Albert O. Hirschman in numerous places emphasizes such a notion, for example in Gerald Meier and Dudley Seers (1984). Michio Morishima (1982) and Tessa Morris-Suzuki (1989, 1994) reflect this idea, as does Bruton (1985, 1997).

<sup>20</sup> Literature, in addition to that already cited, was generally consistent with this rationale. There were many guidelines for planning and for ensur-

<sup>18</sup> On the notion of development as displacement in Lewis and elsewhere, see Peter Gran (1980) and Marshall Wolfe (1976) and the literature cited there. In his book on growth (Lewis 1955, p. 80), Lewis notes that "backward" societies "can grow simply by modelling themselves on the more dynamic features of the more advanced." There are many arguments and illustrations in Lewis (1955) that suggest this notion of displacement.

country plans written in the 1950s, often with the help of foreign advisors and at the behest of lending agencies. Such plans were generally rather unsophisticated and were often mainly a list of public sector projects, but they did reveal the assumptions examined above. The United Nations, for example, published many studies of planning methods and techniques. The United Nations Commission for Asia and the Far East (1960) is a good example. Ian Little (1982, ch. 3) is a helpful brief survey of the general issues involved in planning and industrialization in these early years of development.

One can conclude with confidence that the import substitution strategy and its rationale, as described above, were widely accepted. There were two major dissenters: Gottfried Haberler (1950) and Jacob Viner (1952). Their basic position was essentially that free trade and full reliance on an international market was, without a doubt, the appropriate strategy. Their views had little impact in the developing countries themselves or in the academic development community in the 1950s as the development efforts began to take hold.

#### 4. *Approaches to Implementation*

The general rationale of import substitution created three broad policy issues: how to provide the protection that was deemed necessary, how to increase saving and investment, and how to go about the planning process. In none of

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ing "balance." Paul Rosenstein-Rodan (1943) and Ragnar Nurkse (1953) paid special attention to the role of government in ensuring balance in investment allocation. The former author argued also for the need for a "Big Push." Gunnar Myrdal (1956) argued that cumulative processes were dominant in the world economy, and so countries with a head start always had an advantage unless specific actions were taken. Leibenstein (1957) urged the idea of a "critical minimum effort," similar to a "Big Push."

these areas was formal textbook economics of much help. Reliable data about the newly independent economies were sorely lacking, and many off-the-cuff policy decisions had to be made in the face of abundant ignorance.<sup>21</sup>

There were more general problems as well. The understanding of the various forms of protection was quite primitive, even among academic economists. Ideas that became important 20 or so years later—value added protection, advantages of a fairly uniform tariff rate across the board, real exchange rates—were essentially unknown as the new countries and new leaders began their tasks. In many countries the planning agency had relatively little power and was often ignored by the old mainline ministries. There were numerous foreign advisors, many with little experience in planning. The lack of confidence in an international market mechanism was thus matched by wobbly understanding of how to plan, as well as by incomplete data and other materials necessary for effective planning.<sup>22</sup>

##### 4.1 *Planning*

In none of the developing countries could planning be completely controlled and implemented at the center. In-

<sup>21</sup> One of the earliest comprehensive studies of import substitution was conducted at Williams College in the late 1960s and early 1970s. The project produced more than 50 empirical and theoretical papers on the subject in general and on the experiences of particular countries. Bruton (1970) and John Sheahan (1973) are reviews of the findings of this project funded by the United States Agency for International Development. More influential was the study of Ian Little, Tibor Scitovsky, and Maurice Scott (1970). This work and the six country studies that were done in conjunction with it were extremely wide ranging and seminal. The project was sponsored by the OECD. See also Hirschman (1967).

<sup>22</sup> Albert Waterston (1965) is a good description of the problems of planning in the 1950s. There are many details and examples of country plans in this book.



deed this was explicitly recognized in most countries. Indian officials, for example, made it clear that they did not aim at eliminating the private sector, and this is more or less clear in most other plans.<sup>23</sup> Then the task of determining where to engage in direct physical planning and where to leave it to the private sector became evident. Bhagwati and Desai (1970, p. 5), for example, note that major irrigation projects would yield low returns unless feeder-channels to take water to the fields were also built. Could these be left to the farmers or must they be included in the plan? If the latter, the plan would be so detailed as to make implementation unlikely, and if the former, there would be heavy dependence on extension workers as well as on the farmers to get a very complex job done. Albert Hirschman (1967) found similar issues arising in Latin America. So, along with physical planning in which public investment played a significant role, an effective market was necessary to create signals and inducements that would lead the private sector to respond. The notion of a plan and market coexisting added to the complexities of policy making.

Despite these difficulties, planning became widespread over the 1950s. By the early 1960s virtually every developing country had something that was called a plan. The World Bank and the United States' and other countries' foreign aid programs pushed hard to get plans in place. In some instances a plan was necessary before loans and aid of various kinds were dispersed. Aid agencies often financed foreign advisors to help with the planning process.

The plans varied widely in terms of sophistication and detail. India, with its

highly competent civil service, was perhaps the most impressive at this time, but some other plans were often quite detailed. Almost all plans announced a growth (of GDP and some sectors) target and then allocated the anticipated investment among the sectors of the economy believed necessary to achieve the target. The ICOR was the basic instrument to determine the amount of investment needed to meet the targets. All plans concentrated attention on industrialization, some more than others, but in all the main idea was to change the structure of the economy in order to grow and to become more independent of other countries.<sup>24</sup> The size of the plan led to many disputes between optimistic planners (often including foreign advisors) and cautious finance ministers and central bankers. This issue had obvious links to the macro stability issue and to availability and acceptability of foreign aid.<sup>25</sup>

#### 4.2 *Other Instruments*

The import substitution idea, by its very nature, involved protection, and from the beginning of the 1950s virtually all developing countries began to put in place a variety of instruments to protect their economies from a large number of imports.

<sup>24</sup>All plans of course had something to say about agriculture and about rural development in general. The general thrust of the documents however was clearly to industrialize. Waterston (1965, ch. III) has a number of quotations from various plans that make this point and the "control of economic destiny" point quite unambiguously.

<sup>25</sup>The two-gap model that distinguished between a domestic saving and a foreign exchange constraint became popular and had implications for foreign aid. The chief architect of the two-gap model was Chenery, who collaborated with numerous others. The main paper is Chenery and Alan Strout (1966). There were numerous papers prior to this one. This model added import coefficient fixity to production coefficient fixity of the Harrod model.

<sup>23</sup>See Waterston (1965) and Malenbaum (1962) for more detail on this point.

*Tariffs.* Tariffs were levied on a rather ad hoc basis. In many instances, nominal tariff levels appeared to be determined simply by what was deemed necessary to allow an activity into existence. The consequence was that a great hodgepodge of rates appeared, with virtually no evidence of any consideration of costs or efficiency. Effective rates of protection (ERPs) began to be calculated in the late 1960s, and these were generally higher, sometimes much higher, than nominal rates. That ERPs usually exceed nominal rates reflects the escalation of nominal rates from lower to higher levels of fabrication in manufacturing activities. There were numerous negative rates, and the variance of rates in a given country among activities was high.<sup>26</sup> Negative rates were found most frequently on traditional exports, further dampening the inducement to export.<sup>27</sup>

Though the estimated values of the ERPs applied mainly to the 1960s, their implications were not clear until they became widely known around 1970 or so. Even then, most authors were careful to point out the grave difficulties that had to be faced in interpreting the results. There were ubiquitous data problems, several possible formulae, assumptions about substitution possibilities, indirect taxes, and so on. Despite these difficulties, it was widely believed

<sup>26</sup> There are now many estimates of effective rates of protection. The first ones to attract widespread attention were those in Little, Scitovsky and Scott (1970) and Balassa and Associates (1971). These volumes made clear the high values of the rates of protection and their great variance among the sectors of a country. I think that it is fair to say that most members of the profession were surprised at these results.

<sup>27</sup> Negative value added at world prices for some activities was found in a number of countries. When they were first found, they attracted considerable attention, even excitement. This excitement died down rather quickly. Bhagwati and Desai (1970, pp. 363 ff) discuss the many reasons why negative value added at world prices might appear.

that ERPs had important effects on what was imported and what was not, and hence on the allocation of investment.<sup>28</sup> Since the array of rates showed very little evidence of an economic rationale, but were deemed important in allocation decisions, the conclusion was obvious: new investments were being made in a haphazard way from the standpoint of customary economic arguments.

A particularly interesting point about the ERP picture as it evolved is that a number of countries, later achieving outstanding success, showed the same sort of protection picture as did later failures. An obvious example is Taiwan. As late as 1966, Taiwan's ERP for consumer goods was higher than that of the Philippines and vastly higher than that of Mexico. For the whole of the manufacturing sector, Mexico's rate (in 1960) was also much lower than that for Taiwan, and that for the Philippines only slightly higher. Average values for the entire manufacturing sector are sometimes misleading, as often there will be negative values for certain categories which offset very high values elsewhere in the sector. Little (1982, p. 136 ff) argues that estimates of ERP do conform to what one would expect: lower levels and variance of ERPs for the North and for most of the more strongly performing countries. Evidently the role of ERPs is still ambiguous.

Protection provided by nominal and effective tariff rates was supplemented by numerous quantitative and direct controls on the availability of foreign exchange. These were often imposed as a quick fix to the balance of payments problems that emerged as the import substitution (IS) policies continued, rather than as a means of implementing the basic objectives of the import sub-

<sup>28</sup> Max Corden (1971) studies the various issues associated with ERPs, and Little (1982, pp. 136 ff) is a good, brief summary.

stitution strategy. Import licenses were widely used to ensure that products deemed essential for consumption or for creating new productive investment were available. To some extent these direct controls followed from the plans, and yet in most instances their design and execution added to the distortions.

*Exchange Rates.* The other major policy instrument was the exchange rate. Attention has been called to the widespread practice of overvaluation of domestic currency (relative to a free trade situation) in order to keep the domestic price of capital low and, in some instances, to dampen inflation. The other factor affecting the exchange rate was the frequent evidence of Dutch Disease. Many countries had one or two major export items, and when the world markets for these products were favorable, an exchange rate that protected the balance of payments made it difficult to export other (than the major) items and especially to develop new, nontraditional exports. An overvalued exchange rate added to the difficulty of effecting the Hirschman kind of linkages, as it was so cheap to import that producers spent their time and energy trying to get foreign exchange rather than searching for ways to produce with domestic resources.

The overvalued exchange rate was defended, not only as a subsidy to capital formation, but also on the grounds that the economy would grow into the higher rate as the productivity of capital and labor increased. A failure of productivity to grow meant, among other things, that the exchange rate remained overvalued, and exporting continued to face an extra high hurdle.

### 4.3 *Further Sources of Distortions*

There were numerous sources of misleading price signals. Interest rate subsidies were prevalent and negative real

rates common. They too were defended as an encouragement to investment.

A source of distortion not directly concerned with trade, but highly relevant to the form that investment took, had to do with wage rates. In a labor surplus economy, most models keep real wage rates constant until full employment is approached. In fact, wages tended to rise, especially in the formal sectors. In most instances the increases were attributed to the usual array of institutional factors that can push wages up beyond what the market alone would dictate.<sup>29</sup> Especially in Latin America, wage rates were raised or allowed to rise as a matter of government policy aimed to affect the distribution of income. In some countries, wages in the domestic economy were affected by the strong possibility of external migration. The Middle East in the 1970s became the prime example of this kind of effect on wages. In Egypt, for example, skilled labor—plumbers, electricians, carpenters, etc.—could find jobs in the Gulf countries at 10 to 20 times their wage in Egypt. In such an environment, the right wage for such labor in Egypt is not immediately evident. There were some examples as well in parts of Latin America and South Asia.

There were two main indicators of distortions in the use of capital: underutilization of the capital stock, and the failure of favorable investment rates to make a significant dent in widespread underemployment. The latter result was explained in large part by the capital intensity of the capital imported from the North, combined with the general inability of people in the South (and the lack of incentives) to adapt the imported technology to the domestic fac-

<sup>29</sup> Lewis (1979) notes that his original model is most in need of modification in the assumptions with respect to wages and the movement of labor from the traditional to the capitalist sector.

tor supply situation. Some prevailing ideas—the Harrod model, the input-output models, the two-gap notion—implied that adaptation was not feasible. This failure of employment in productive sectors to grow was a prime factor in the continued prevalence of large-scale severe poverty.

The emergence of underutilization of capital was more perplexing. The small capital stock relative to labor and other resources was widely deemed to be the principal explanation of the low labor productivity in the South. And, as just reviewed, a principal objective of policy was to increase the rate of capital formation, yet underutilization of existing capital appeared increasingly common.<sup>30</sup> Explanations were in terms of the unavailability of intermediate goods and of appropriately qualified labor; limited demand for specific outputs; hoarding in anticipation of changed government policies; the practice of importing capital when one received permission or foreign exchange rather than when one genuinely wanted the capital; the practice of granting import licenses based on installed capacity; protection and subsidies for capital goods that could make investment profitable at low utilization rates; and foreign aid that often supplied capital that had few links with the needs of the economy. A situation in which capital formation was being pushed hard while widespread underutilization of existing capital prevailed clearly represented a severe and costly distortion.

#### 4.4 *Agriculture*

There was particular difficulty in appreciating a role for agriculture in the

<sup>30</sup> Gordon C. Winston was perhaps the first to note that capital was in fact widely underutilized and that such underutilization had important implications for growth and growth policy. Winston (1974) is his major paper on the subject, and there were a number of papers previous to it.

general IS package. Agriculture, much the largest sector in most countries, was expected to decline in relative terms. It did not seem generally appreciated that a sluggish agricultural sector would almost inevitably penalize the growth of nonagricultural sectors. New manufacturing activities could not export, in part because of the policies just reviewed, and so had to depend on domestic demand which in turn was heavily dampened by the slow growth of the largest sector. There was widespread “squeezing” of agriculture in order to finance the new manufacturing activities. Squeezing was done by price controls on many basic food items and by other forms of taxation. Part of the rationale of controlling food prices was to help prevent living costs (and hence wages) from rising in urban centers where the new activities were concentrated. The confusion about a role for agriculture was especially damaging, and I return to it later.<sup>31</sup>

*A Brief Summary.* The picture described above became known as the import substitution syndrome. That syndrome included reliance on a central planning effort of greatly varying efficacy; a set of nominal tariffs and ERPs that generally showed little economic rationale; quotas; exchange controls; overvalued exchange rates that contributed to unemployment and underutilization of capital in capital-scarce economies, and penalized exporting; and, in many countries, a difficult wage-setting situation. In most countries, agriculture was also penalized in one way or another. The justification for all this seemed to be the assumption that once the structure of the economy was changed, learning would occur automatically and resolve the difficulties. Learning, however, proved more difficult.

<sup>31</sup> It is useful to note again that Lewis (1954, 1955) and Fei and Ranis (1964) gave a great deal of attention to agriculture.

TABLE 1  
GROWTH RATES BEFORE AND AFTER 1950

	Average Annual Rates of Growth								
	GDP		Physical Volume of Agriculture		Dollar Value of Exports		Nonresidential Gross Investment Rates		
	1913–50	1950–60	1950–68	Prewar to 1945–50	49/51–64/66	1913–37	1950–67	1950	Average 1950–66
Argentina	3.0	3.1	3.0	.1	.1	1.6	.4	14.7	14.3
Brazil	4.6	5.8	5.3	1.3	4.0	.4	1.2	11.3	12.5
Ceylon	n.a.	3.6	3.6	2.0	2.5	2.1	.3	7.1	10.0
Chile	2.1	3.5	4.0	1.8	2.0	1.1	7.1	9.6	11.7
Colombia	3.7	4.6	4.6	4.1	2.4	4.1	1.5	11.4	12.9
Egypt	1.6	5.4	5.2	1.0	3.1	1.0	.6	10.2	11.5
Ghana	3.8	4.8	3.9	n.a.	4.8	3.6	2.2	7.4	13.1
India	1.2	3.7	3.8	–.1	2.5	–.1	1.9	7.4	11.2
Malaya	4.3	2.3	4.1	2.3	2.6	4.2	.7	5.0	10.3
Mexico	2.6	6.1	6.2	3.6	5.6	1.6	4.7	10.8	13.2
Pakistan	1.2	2.7	4.1	.4	1.9	–.1	1.2	4.8	9.9
Peru	3.2	5.1	5.4	2.1	2.9	3.2	8.6	11.0	15.3
Philippines	2.2	4.8	5.2	1.1	3.1	4.9	5.4	7.4	10.7
South Korea	n.a.	6.1	7.1	–2.1	5.0	4.3	16.8	5.7	8.8
Taiwan	2.7	7.7	8.7	–.4	5.3	6.8	13.4	9.8	12.2
Thailand	n.a.	6.0	6.5	2.7	4.5	2.4	4.9	11.9	13.9
Turkey	n.a.	5.8	5.5	1.7	4.4	.7	4.1	6.9	10.0
Venezuela	n.a.	7.6	6.3	n.a.	5.4	8.0	5.5	20.0	21.1

Source: Maddison (1970).

## 5. *Development in the Fifties and Sixties*

### 5.1 *Evidence of Success*

Despite increasing distortions in the economies, there were important developments in the two decades after 1950. The stagnation that characterized the interwar period was broken. Data from Angus Maddison (1970), shown in Table 1, permit a comparison of the 1950s and 1960s with prewar years for a number of variables. The rates of growth of GDP are markedly higher after 1950, except for Argentina and Malaya, com-

pared to the interwar decades. In many cases the differences are substantial and are not obviously associated with the extent of commitment to import substitution. Investment rates are higher, except in Argentina. Even agriculture, generally penalized in one way or another, grew faster in all countries except Argentina and Colombia, although often the differences were small.

Exports are more mixed. There were eight countries in which the dollar value of exports grew faster—sometimes much faster—than during the

interwar years, while in other countries growth was slower. This picture is about what was anticipated by most observers at the outset of the import substitution effort. Maddison (1995) provides data for the years 1950–73 for more countries, but the picture is about the same. Nine African countries averaged 4.5 percent per year over the period, and seven Latin American countries averaged 5.2 percent.

Life expectancy at birth rose in most countries, and infant mortality fell. Literacy rates rose, infrastructures (roads, irrigation facilities, schools) were developed. In some countries the Green Revolution took a firm hold. Manufacturing increased as a proportion of GDP and imports began to change to reflect the import substitution objective of importing capital goods while producing consumer and simple capital goods at home. An index in Little, Scitovsky, and Scott, (1970, p. 245) shows that manufactured exports from all developing countries increased from a base year of 100 in 1953 to 283 in 1965. The experience of these years, often identified as the easy stage of import substitution, created considerable hope among economists and country leaders as well.

This array of achievements was significantly higher than anyone anticipated in the early 1950s.<sup>32</sup> The first *World Development Report* (1978, p. 3) stated that, on the basis of modest evidence, growth in the 1950s and 1960s was “a substantial improvement of the historical record.” Indeed, one can go further and say that if the rates of growth of GDP and levels of investment

that were in fact achieved had been anticipated in the early 1950s, most economists at that time would have believed that the major development problems of most countries would be solved by 1975.

During the 1960s, however, price distortions became increasingly evident, and the publication of the multi-country studies of Bela Balassa and Associates (1971) and Little, Scitovsky, and Scott (1970) were especially clear on the extent and nature of these distortions. Both sets of studies gave attention to the exchange rate, and both allowed some protection (or subsidy) for the development of domestic industry. Both noted that agriculture was being penalized, although they were cautious about attributing the penalty to the broad strategy of import substitution.

That exports were penalized was also recognized, and arguments were presented to the effect that foreign trade had dynamic as well as the textbook static allocation effects. These arguments were quite vague and cautious, little advanced beyond those of Haberler and Viner previously referred to. Little, Scitovsky, and Scott (1970, p. 345) state that “it is not suggested, of course, that a country should export for exports’ sake,” and add (p. 346) that they believed that export pessimism “has been greatly overdone.”

These studies are also cautious about generalizing about policy. In referring to agriculture, for example, Little, Scitovsky, and Scott (p. 349) state that “somehow a balance has to be struck between drawing some resources from agriculture, and not discouraging output too much.” They emphasize that agriculture development is not simply a matter of price incentives. These are quite qualified conclusions, and in light of the developments over the previous

<sup>32</sup> In an article that attracted considerable attention, Rosenstein-Rodan (1961) made projections for 66 developing countries for the following 15 years. Of these, 17 were deemed correct and 43 proved too low. See David Morawetz (1977, pp. 21 and 85). Morawetz also cites other projections that more often than not proved below the rates actually achieved.

two decades, not the all-out attack on import substitution that came later. Nor was there a strong condemnation of a significant role for government at this time. The *World Development Report* for 1978 was not really critical of the strategy and the policies, and in several instances expressed considerable sympathy for the approach.

### 5.2 *Emerging Problems*

The collections of Balassa and Little et al. made abundantly clear that import substitution policies had created major distortions and had thereby resulted in a misuse of resources.<sup>33</sup> So it was increasingly evident that something needed fixing. Two other sources of concern appeared in the early 1970s and suggested that there were other things that needed fixing as well.

The first, already referred to, was that the demand for labor in the new activities was growing more slowly than the rates of growth of output and investment had led most observers to expect. As a consequence of the slow growth of employment (and other things), poverty was alleviated only modestly, or, in some instances, worsened.<sup>34</sup>

The second concern had to do with productivity growth. At the end of the 1960s, the role of productivity growth had begun to be appreciated more fully, as the Solow residual became more

widely understood and estimates of its value increasingly available. Angus Maddison (1970) provides a number of estimates of total factor productivity (TFP) growth for 18 non-European developing countries for the decade 1950–60. The average rate was .27 percent per year. If Taiwan's 3.30 percent is removed from the list, the average falls to less than .10 percent per year (Maddison 1970, p. 53). There were many negative rates as well. Later estimates of TFP growth (e.g., Chenery, Sherman Robinson, and Moshe Syrquin 1986, pp. 20–22) showed rates somewhat more favorable for the developing countries for these decades, but well below those of the North. Understanding of the role of TFP growth was only beginning in 1970, but the low estimates were recognized by many as evidence that import substitution was not proceeding as it was originally expected to do (Bruton 1967). Economists for the most part, however, could say very little at that time about the origins of productivity growth.

### 5.3 *Africa*

African countries need a special comment. The physical and human capital available to the Sub-Saharan African countries at their independence was, in general, much less than that available to developing countries elsewhere. Literacy rates were much lower, the labor force was less experienced and less trained, saving and investment rates were lower, infrastructure—roads, power facilities, institutional developments—were much less extensive and markets less complete. The new states were often ill-defined as to geographic boundaries and extent of governance. Ethnic, language, and tribal diversity was (and remains) rich with opportunities and dangers. Since most African countries did not achieve their political

<sup>33</sup> This feature of import substitution was appreciated much earlier by Prebisch. Prebisch (1964) emphasized the pressing need for import substitution in Latin America, and favored an attempt to produce internally all imports that were not deemed essential, but then stated that "the criterion by which choice was determined was based not on considerations of economic expediency, but on immediate feasibility, whatever the cost of production" (p. 71). Santiago Macario (1964, p. 61) spoke of the "extemporaneousness" of protection in Latin America.

<sup>34</sup> Hans Singer (1970) was among the first observers to call attention to these features of the growth that was taking place.

independence until the late 1950s and early 1960s, less attention was given to them than to Latin America and South and East Asia in the literature of the 1950s and 1960s.<sup>35</sup>

Most of the smaller African states did not actively pursue an import substitution (or any other) strategy. An array of import substitution measures did appear in some of the larger African countries (Kenya, Zimbabwe, Ivory Coast, Nigeria) in the 1960s, but such measures seemed even more ad hoc than in other parts of the developing world. The anticipated structural changes showed few signs of occurring. Roger Riddell (1990, p. 38 ff) argues that import substitution did not fail in Africa, rather it was never really tried.<sup>36</sup> In the 1960s and 1970s, there was substantial public sector investment in manufacturing in many African countries, often with the direct involvement of foreign firms and the World Bank. Such investments later became sources of difficulties of many kinds—balance of payments problems, budget deficits, and productivity growth in particular. (Jeffrey James 1995 has a good summary of these issues and additional literature citations.)

Professional economics did not offer the Africans much help as they became independent. The first two *World Development Reports* (1978 and 1979) for ex-

ample, supported short-lived protection (exact form not specified), infrastructure investment, and labor-intensive production. The 1979 *World Development Report* (p. 69) added: “Technologically more sophisticated products may need to await the development of adequate supplies of skilled labor and technological capacity.” A brief sentence urges incentives to keep agriculture growing in order to provide demand for locally produced manufactured products. Other conventional sources of economic analysis and prescription were equally sweeping and truistic.

In the late 1950s, the 1960s, and the 1970s, for the most part, African countries grew more slowly than most other developing countries. There were important exceptions however. Kenya, Nigeria, Tanzania, Ivory Coast, and Malawi were countries that did reasonably well over these years. It is difficult, however, to attribute their success to their foreign trade strategies. Botswana, a small country in terms of population, achieved extra-high growth rates, largely, but not entirely, as a consequence of its diamonds. Some other countries, however, more or less collapsed in the 1970s, and toward the end of that decade difficulties for almost all African countries were severe indeed. Many countries experienced falling GDP per capita.

One could point to external conditions for the difficulties of the 1970s: the oil price increases, the breakdown of the Bretton Woods agreements, the slowdown in the growth of the West (especially in the last half of the decade), and the decline in foreign aid. All of these events affected all developing countries, but African countries were least equipped to deal with them. It did seem that African countries were different in some fundamental way from Latin American and Asian

<sup>35</sup> Neither Little et al. (6 countries) nor Balassa (7 countries) included an African country. The later Bhagwati/Krueger studies included Ghana among its 10 countries, and the still later Krueger/Bhagwati studies on employment had 2 African nations among their 10. Juergen Donges (1976) study of 15 semi-industrialized countries included no African countries.

<sup>36</sup> The World Bank's *World Development Report* for 1987 shows Cameroon and the Ivory Coast as “moderately outward oriented” during 1963–73, but no African countries were so classified during 1973–85. Kenya, Madagascar, Nigeria, and Senegal were classified as “moderately inward oriented” in the later period and five other African countries as “strongly inward oriented.”



countries.<sup>37</sup> In particular, simply getting prices right and opening the economy did not appear adequate, even to many who believed that was all that was needed in other developing countries. Africa above all needed to find an effective way to get agriculture growing sharply.

#### 5.4 *What Was Learned During the Fifties and Sixties*

Despite evidence of some success, the profession had begun, by 1970 or so, to have doubts about the development process that seemed underway. Something was wrong, and certain ideas and assumptions, accepted uncritically in the 1950s, began to be questioned. Severe distortions, modest headway in reducing underemployment, poverty, and inequality, and little evidence of productivity growth were incompatible with long-run development. A number of specific changes in prevailing views surfaced. The following are the most important.

1. Much of the world was experiencing a boom of remarkable proportions in growth of output and especially of international trade. The 1950s and 1960s turned out to be not remotely like the 1930s, and inflation became much more of a concern than recession or deep depression. The main effect of these boom decades was to undermine the argument that developing countries could not export.

2. Economic agents at all levels turned out to be more responsive to price incentives than was thought to be the case at the beginning of the 1950s.

3. The assumption of fixed production coefficients (ICORs, input-output ratios, the Harrod model, the two-gap

idea, etc.) was proving exceedingly damaging. This development was due to accumulated empirical evidence on input combinations,<sup>38</sup> and to the increasing awareness of the neoclassical growth models of Solow, Swan, and Meade that provided convincing alternatives to the fixed coefficient models.

4. Physical planning was not preventing bottlenecks and misallocations. The failures of the Soviet system were also becoming appreciated in many places.

5. Numerous studies convinced most observers that the strong views of the 1950s that the terms of trade had deteriorated for the developing countries had to be significantly qualified.

6. Imports rose faster than expected, and hence balance of payment problems were widespread, and "economic independence" was even lower than before 1940. The faster growth of imports was due mainly to the demand for capital goods and intermediate goods to support the new industries.<sup>39</sup>

7. The work of Abramowitz, Kuznets, Denison, and Solow on the sources of growth made it increasingly clear that simply more physical capital was not sufficient for sustained growth. The productivity of resources had to increase if growth was to be maintained.<sup>40</sup>

8. The transfer of technological, administrative, and marketing knowledge was proving to be much more complex than was expected in the early 1950s. With fixed production coefficients and imported physical capital, it was diffi-

<sup>38</sup> The Constant Elasticity of Substitution production function made it easy to estimate the elasticity of substitution.

<sup>39</sup> The import intensity of import substitution was first made clear in Carlos Diaz-Alejandro (1965). This rapid growth of imports led to an emphasis on saving foreign exchange, a practice that caused more problems than it solved.

<sup>40</sup> The conclusion that productivity growth was key to the rapid growth in East Asia has recently been questioned by a number of economists. I discuss this in a later footnote.

<sup>37</sup> Tyler Biggs, Manju Shah, and Pradeep Srivastava (1995) is an especially useful study of the difficulties that African firms have in increasing the productivity of their resources.

cult to understand why productivity could be lower in one country than another, and why it would not grow equally fast in all countries. The term "infant industry" implied that simply getting older and larger would result in increased productivity, but this was not happening.

9. Items 7 and 8 provided strong evidence that indigenous learning processes generally were not emerging in the import substituting countries. The (implicit) assumption that simply changing the structure of an economy would also change its capacity to learn and to accumulate knowledge was evidently incorrect. The task was much more complex.

This set of ideas and circumstances created a different theoretical and policy-making environment from that prevailing in the 1950s and early 1960s, and implied a strategy quite different from that which had led to the earlier policies. Thus a new approach had to be determined. It became quickly evident that changing basic policies from those in effect for some time is more difficult than making a policy on a virtually clean slate (as had been possible at the time of independence for many countries), simply because new policies may well harm existing interests, including those of some government leaders, who will, where possible, fight any change. The task for the policy makers was thus to move away from import substitution toward an unclear alternative in the context of pressure groups that often supported the status quo.

#### 6. *Korea and Taiwan and the Rise of Outward Orientation*

That the import substitution syndrome could not produce sustained growth was generally recognized by 1970, but the only alternative was to

eliminate distortions and maintain a high investment rate. It was the increasing awareness of the Taiwanese and South Korean successes that led to the emergence of a new development strategy built around exporting.

#### 6.1 *The Role of Taiwan and South Korea*<sup>41</sup>

The exceptional performance of the Republic of Korea and Taiwan in the 1960s had, by 1970 or so, attracted the attention of the development community. Their growth rates of GDP increased markedly in the 1960s relative to the 1950s: from about 6.5 percent to over 10 percent in Taiwan, and from 4.4 to 9.1 in Korea. These increases were much larger than those for any other country. Employment growth and poverty alleviation were also proceeding much better than in most other countries. Taiwan and Korea had made marked policy changes in the late 1950s and early 1960s that reduced distortions and encouraged firms to export. Exports had responded remarkably well. In both countries the rate of growth of exports exceeded that of GDP during the 1960s, and this strong growth was largely among nontraditional products and services. By the early 1970s or so, Taiwan and Korea were widely thought to be market-driven economies with minimal government, though this view began to be disputed early on.

The remarkable growth and export performance of Taiwan and Korea in the 1960s after their changed policy,

<sup>41</sup> Hong Kong and Singapore are generally added to Korea and Taiwan in discussing the rise of an outward orientation strategy. These two city states were, in my view, different enough from the other two that it is misleading to include them in the present kind of study. The main way that Singapore and Hong Kong were different is that, as small city states, they had essentially no alternative to openness and trade. Some brief references are made, but in general I will not consider them.

combined with evidence from other countries (e.g., Brazil and Colombia at certain times) that manufactured exports were generally feasible, produced the great interest in outward orientation and export promotion. It was not, so far as I can ascertain, any sort of new theoretical developments or insights that emerged independently of events.<sup>42</sup> The view that both were essentially market economies lent additional support to the view that markets do work in developing countries and that planning does not.

Through most of the 1950s, Taiwan used trade and exchange rate policies to limit external competition. There were tariffs, a fairly high set of ERPs, and multiple exchange rates, most of which represented an overvaluation. All foreign exchange had to be turned over to the Central Bank, and demand for foreign exchange greatly exceeded supply at the prevailing exchange rates. Public sector imports were given a preference relative to private sector requests. The import substitution syndrome appeared in full regalia.<sup>43</sup> Then in the late 1950s Taiwan began to dismantle this array of controls, to establish a single exchange rate at a realistic level, and to encourage exporting in a number of other ways.

The Korean conversion story is similar.<sup>44</sup> The 1950s were characterized by marked inflation and balance of payment problems. An objective of the

overvalued exchange rate was to help bring inflation under control, as well as to subsidize investment. The high tariffs, quotas, and other interventions in foreign trade were then necessary to protect the balance of payments. There were some efforts to encourage exports in the 1950s, but these were modest.

The big change for Korea began in the early to mid-1960s. A unified exchange rate was put in place at a devalued level compared to the 1950s, and further export incentives were introduced. These included preferential access to funds; tariff exemptions on intermediate and raw materials, and capital goods; reduction of direct taxes on profits from exporting; and other inducements that made firms eager to try to export. The export incentives seemed stronger in Korea than in Taiwan, but it is difficult to be sure, since the exchange rate matters so much.<sup>45</sup>

Such policy changes in the late 1950s and early 1960s convinced many observers that the two countries were reducing distortions, moving toward getting prices right, and—most evident of all—were exporting. In order for exporting to take off the way it did, there had to be a strong response from domestic output. That response was forthcoming to a remarkable degree. A major question is simply: how were these two countries able to emerge from a decade of import substitution policies to suddenly become able to expand exports at such a high rate? Several factors were at work.

The rapid rate of growth of world trade was generally acknowledged to be

<sup>42</sup> The notion of trade as an engine of growth was of course an old topic, but not directly related to the strategy controversy.

<sup>43</sup> There are many books and articles on this early stage of Taiwan's development. Robert Wade (1990); Fei, Ranis, and Shirley Kuo (1979); Ranis in Walter Galenson (1985); and Kuo and Fei in Galenson (1985) are convenient sources that review the earlier decades.

<sup>44</sup> Chong-Hyun Nam in Takatoshi Ito and Krueger (1995), Westphal in Balassa and Associates (1982), and Westphal (1978) are good general discussions.

<sup>45</sup> It may be that export incentives simply offset contrary incentives already in existence in Korea, and did not really result in favoring exports over producing for the domestic market. It does seem however, as Nam (in Ito and Krueger 1995) argues, that the array of inducements did more than offset other biases in the economy and constituted a net positive inducement to export.

a necessary, but insufficient, condition for Korea and Taiwan's success in exporting. During the first half of the twentieth century, Japan ruled Korea and Taiwan very firmly. However unpleasant the experience was for the people of these countries, it left both countries with a major accumulation of human and physical capital. A long list of observers (Ho, Barclay, Ishikawa, Ranis, Pack and Westphal, Wade, Kohli) has emphasized that the Japanese created infrastructure of all kinds, expanded irrigation facilities, spread the use of fertilizers, and organized farmers into co-ops to facilitate the spread of knowledge and partly to keep the farmers under control (Wade 1990, p. 77). Manufacturing was strongly supported, and Koreans and Taiwanese were trained as industrial workers at most layers of management. A small number of Taiwanese and Koreans became managers, technicians, professionals, and entrepreneurs. As Japan prepared for war, it used these areas as sources of supply, not as markets as was conventional practice with most colonial powers.

A great deal of collective learning was passed on to successive generations over this period, which made the people of these two areas exceptionally well equipped to respond to opportunities created by the changed policies and the booming world market.<sup>46</sup> Thus the quality of the labor force was very different from that in other developing countries at the time, and, in particular, unskilled labor was much more effective than that in other parts of Asia, in Africa, and in most of Latin America.<sup>47</sup>

<sup>46</sup> Collective learning is a term used by Hayek and developed with considerable illumination in the work of Douglass North. See especially North (1994).

<sup>47</sup> Krueger (1995, p. 23) has the following footnote: "It is widely recognized that an outer-oriented trade strategy cannot succeed unless

This well-developed human capital was, it now seems, an important factor in the capacity of Korea and Taiwan to create, borrow and adapt from the North increasingly productive technologies.

Human capital was not Japan's only legacy. There were institutional developments (e.g., the Bank of Korea, some R&D establishments in agriculture, organizational techniques, etc.) that significantly enhanced the capacity of Korea and Taiwan to respond quickly to opportunities. Park Chung Hee, the president of Korea at the outset of its great growth sprint, attended Japanese military academies in Manchuria and in Tokyo prior to World War II. Especially in Manchuria, he learned about the Japanese state's involvement in economic development.<sup>48</sup> The statement sometimes made that Korea and Taiwan became newly industrialized countries in a matter of three or four decades is quite misleading.

The Japanese had broken up or prevented the emergence of powerful vested interests among landowners and business leaders. Land reform in particular in the late 1940s and early 1950s in both Korea and Taiwan made it easier for governments to act independently, and so a development state could proceed very much as such.<sup>49</sup>

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development of infrastructure (ports, roads, railroads, electric power, communications), increasing educational attainments, and a number of other policies are conducive to growth." This statement would mean that as of 1960 very few developing countries could have succeeded with an outer-oriented set of policies. It may be noted that Koreans and Chinese have long put great emphasis on literacy. The achievement of widespread literacy was not the main creation of Japanese occupations nor of the determination to grow after 1950.

<sup>48</sup> Mark L. Clifford (1994) and Atul Kohli (1994) discuss the impact of Park's Japanese military experience on his ideas of development.

<sup>49</sup> Mancur Olson (1982, ch. 4) makes a similar argument in explaining the rapidity with which Japan and West Germany recovered from their defeats in World War II.

From 1950 in Taiwan and 1960 in Korea, a political leadership fully committed to strong economic performance was firmly in place. This was probably not the case in any other developing country. Foreign aid was substantial in both places. Koreans in particular learned from U.S. army engineers in the 1950s, and this learning was highly relevant in the success of the Koreans in bidding for big construction jobs in the oil-rich Middle East later on. The Taiwanese were able to exploit the significant "Overseas Chinese Network" in many respects.<sup>50</sup>

## 6.2 *Minimal Government*

That distortions result in a level of output below that technologically possible was textbook stuff in the 1960s. In the textbooks, distortions were corrected by government regulations and other policies. It was generally believed that the costs of such distortions—Harberger triangles—were modest, and there appeared no compelling evidence that they penalized growth. Still, the distortions had become so severe that many observers were convinced that growth was in fact being penalized.

The governments of developing countries were inexperienced and staffed largely by ill-trained, ill-prepared people. By 1970 or so it was also clear that government policies were themselves the sources of many of the distortions and other market failures. The idea of the government correcting market failures then seemed illogical. There was increasing evidence that import li-

censes, investment permits, government contracts, and similar devices created lucrative rents for those fortunate enough to obtain them. It was potentially profitable for a firm to allocate resources to try to obtain the rights that would in turn permit the capture of these rents. The cost of the resources allocated to rent seeking must then be added to the traditionally recognized costs of monopoly and other distortions. Krueger (1974) made a convincing case that the costs of rent seeking were significant enough to matter. Costs of rent seeking plus the costs of distortions themselves, plus the limited ability of most bureaucracies to design, administer, and implement sensible plans and controls, offered strong evidence that the government was part of the problem rather than part of the solution. Whatever market failures were, they were minor compared to government failures. Thus the idea of minimal government began to attract widespread favor. Such a view was quite different from that which prevailed in the 1950s and 1960s.

The rent seeking notion elicited a considerable literature, and (among other things not linked directly to development) led to a broader notion that came to be identified as the New Political Economy. This notion disputed the traditional idea that the government was an entity independent of the rest of the economy and could thereby be trusted to act in the national interest by correcting market failures. Rather, the government must be seen as having its own agenda, seeking to maximize its own welfare, and unable and unwilling to take a disinterested and informed stand on economic matters. Rent seeking and the New Political Economy led to an obvious policy: minimize the role (and size) of government and make extensive use of the market. This policy

<sup>50</sup> The Overseas Chinese now constitute a major player in East Asian (and world) economic matters, and did so to a lesser extent in the early 1960s. This role is hardly clear, and is worth more attention than it has received. See papers by Gordon Redding and by Gary Hamilton in Tu Wei-Ming (1996) for helpful summaries of this role. A more complete analysis of this role is Redding (1993).

was supported by the belief in many places that Korea and Taiwan were essentially free-market economies. The obvious question about minimizing government was, simply, who would bring it about. If the government profited from being the government, then it was unlikely that it would minimize itself.

### 6.3 *Lessons from Taiwan and Korea*

The remarkable success of Taiwan and Korea over several decades raised the question of the extent to which their experiences offered a blueprint for development in other countries. Attention was focused on the role of exports, the package of policies actually employed, and the role of government.

The numerous advantages of a strong export performance are generally appreciated: exports facilitate employment of a country's most plentiful resources and the exploitation of any economies of scale, they help prevent balance of payment problems and the stop/go situation that such problems often create, subject the exporting firm to international competition, and give an unambiguous focus to policy making. For the development objective, the main role of exports is its possible contribution to the acquisition of new technical knowledge and the consequent increase in productivity through contact with foreign importers combined with the pressures of strong competition. These latter arguments apply largely to nontraditional exports. Korea and Taiwan had shown that such exports were possible and apparently had such consequences in their economies—and could have similar effects in other countries.<sup>51</sup>

The transferability of aspects of Ko-

<sup>51</sup> A question arose whether or not the world could (or would) absorb the exports of all developing countries were they to achieve rates of growth equal to those of Korea and Taiwan. See William Cline (1982) and the comment by Ranis (1985).

rea and Taiwan's policy packages, other than encouraging exports, was less clear. Dani Rodrik (in Jere Behrman and T. N. Srinivasan, Vol 3B, 1995), Alice Amsden (1987 and 1989), Larry Westphal (1990), Howard Pack and Westphal (1986), and John Helliwell (1992) review the disputes with many additional citations. Two points stand out. The policy instruments used in Korea and Taiwan have been generally the same as those used in other developing countries—import quotas and licenses, export subsidies, public ownership, tax holidays.<sup>52</sup> The second point follows: the main difference seems to be the manner of implementation and monitoring, rather than the policies themselves. Effectiveness of application seemed to be such that they worked well in some countries, and not in others. The World Bank (1993) recognizes this point, and concludes from it that other countries therefore should rely primarily on the market.<sup>53</sup> The basic conclusion of this volume (and numerous others) was that government activity that interfered with the market should be abandoned.

The third issue refers to the role of government more generally. The significant role of government in development in Taiwan and Korea since the 1950s was emphasized in a number of early studies. (See Charles R. Frank et al. 1975; Westphal 1978; and Leroy Jones and Il Sakong 1980). Even so, the profession at large seemed reluctant to acknowledge such a role. Why did it take western economists so long to ap-

<sup>52</sup> Ann Harrison (1991) surveys a great number of regressions involving growth and openness (measured in a variety of ways) and finds that country dummies are generally significant over time even after accounting for policies, labor, education, etc.

<sup>53</sup> The Bank's position seems to be that if the government withdraws from economic activity, a well-functioning market will emerge more or less automatically.

preciate the governments' roles? Two reasons stand out. First, the rise of rent-seeking and the New Political Economy made it difficult for western economists to see the complex way in which these governments did intervene in a way that facilitated the achievement of development objectives rather than penalizing them.<sup>54</sup> Little's statement (in Galenson, ed. 1979, p. 480) seemed to reflect a common view: "apart from the creation of [these neo-classical conditions] it is hard to find any good explanation for the sustained industrial 'boom' in Taiwan."

The second reason refers to the nature of the role of government in the two countries. The idea that the Taiwanese and Korean governments simply corrected market failures of the textbook sort is quite inadequate. The government and the private sector are more intertwined, more intermeshed than fits well with western textbook analysis. In particular, it was difficult to appreciate how government could enforce the discipline and induce the effort in private sector firms that is usually assumed to be the consequence of competitive markets. Imports did not offer competition, but discipline was afforded by the state. Such conventional terms as mixed economy or neoclassical synthesis do not capture the basic features of the role that the government has played in these countries. The form of the intermeshing has its roots deep in institutional and historical argument that also fits poorly into conventional formulations. Michio Morishima (1982), Shigeto Tsuru (1993), Tessa Morris-Suzuki (1989), and Christopher Howe

(1996) are especially helpful in defining the role of the state in Japan.

There is another more positive aspect of the government role in development. Ranis (in *African Development* 1991, pp. 128–29) emphasizes that "what happened in Taiwan was not Mandarins sitting around saying this is what we have to do now. There was a lot of bumbling and stumbling and going back and forth." Morishima (1982, p. 71) states that in Japan "there was never an accurate blueprint for the Meiji Revolution; the revolutionaries learnt what the issues and solutions were by repeating the process of trial and error and approached the correct ones step by step." Pack and Westphal (1986, p. 99) emphasize the flexibility and responsiveness with which Korean decision makers approached their tasks; decision making "has generally been able to elicit, digest, and act on information uncovered in the process of implementing previous decisions." When a policy works, pursue it; when it fails, change it. That a government makes mistakes is inevitable. That it does not learn from those mistakes means that it needs to find ways to learn. Government learning, not government minimizing, is the object.<sup>55</sup>

A detailed comparison of Korea and Taiwan with other developing countries is not appropriate here, but a few observations may identify some key differences. At the outset of India's independence, its bureaucracy was firmly in place and strongly based on its British heritage. The government was run by a well-established party "imbued with

<sup>54</sup> Ya-Hwei Yang (in Ito and Krueger 1993) provides some empirical evidence that the preferential policy for strategic industries has not significantly improved the investment, financial situation, and operational performance of firms in Taiwan in the early 1980s. Yang is careful to emphasize the limitations of the study.

<sup>55</sup> Gustav Ranis (in William Beranik Jr. and Ranis 1978, pp. 15 ff) cites evidence from several sources that the Meiji government made substantial mistakes in its early attempts to imitate Western-style agriculture and manufacturing technologies. Turnkey projects in the public sector also proved largely failures. See Kuame Jomo (1994) for further elaboration.

Gandhian austerity and devotion to the cause of a united and prosperous India" (Vijay Joshi and Ian Little 1994, p. 8). Nehru was a Fabian socialist with deep links to British ideas, institutions, and ethos, all quite alien to the real India, the India of villages, of illiteracy, of castes, of hopelessness. He thus had a strong suspicion of markets and foreign trade, and great confidence in the ability of an elite to plan and govern. Stumbling and bumbling in search of the right strategy was not an approach that made sense to Nehru and his elite bureaucracy because they knew the right answers from the outset of independence.

In Africa, states were just beginning to be states, and there was little or no heritage of producing, marketing, or technological learning, and essentially none of economic management and policy making. In Latin America there was a heavy dose of foreign capital, and a domestic economic organization dominated by a powerful landowning class that shaped national policy to a significant degree. It is easy to appreciate the great appeal of structuralism there.

There were thus huge differences between Korea, Taiwan, and Japan, and the rest of the developing world in the years 1950–70 with respect to a great variety of characteristics with implications for the kind of policies that could be implemented, or even perceived, and that would be effective. That a single policy package would fit all the countries is unlikely—except that of learning from one's mistakes.

### *7. The New Orthodoxy: Outward Orientation and Minimal Government*

The lessons learned from the import substitution experience and from the stories of Taiwan and Korea pointed to a new strategy. The central notions

were a return of confidence in the market combined with a strong commitment to exporting nontraditional products and to liberalizing imports. Emphasis was placed on elimination of price distortions, recognition of the power of comparative advantage, privatization of virtually all public firms, acceptance—even encouragement—of private foreign investment, maintenance of price level and balance of payments stability, and becoming internationally competitive. The view that an effective market mechanism would appear if the government simply removed itself from the economy was implicit in many formulations even though evidence to support the view was rarely offered.

Some of the learning, however, was not included in the new orthodoxy. Recognition of the deep-seated difficulties of the international transfer of technical and other knowledge and of the fundamental role of searching and learning by firms and governments, of a necessary role for agriculture, of the role of initial conditions and hence of history and institutions, and of the fact that effective implementation of policies is as important as the choice of policies—these are all missing. Ideas of economic independence (including ambivalence toward foreign direct investment) to accompany political independence, so important in the import substitution approach, are given no attention by the new orthodoxy.

Along with the World Bank, the International Monetary Fund and the United States Agency for International Development became strong advocates of outward orientation. The influential weekly, *The Economist*, pushed (and pushes) hard for the approach, as do a significant number of university and think tank figures. It is much less clear how committed the government policy



TABLE 2  
GROWTH RATES AFTER 1970

	GDP			Agriculture		
	1970-81	1980-90	1990-94	1970-81	1980-90	1990-94
Low-Income Countries	4.5	5.8	6.2	2.3	3.5	2.8
Excluding India and China	3.6	2.9	1.4	2.3	2.0	1.5
Middle-Income Countries	5.6	2.2	.2	3.0		.9
Lower Middle	5.6	2.2	-2.3	3.2		
Upper Middle	5.6	2.2	3.4	2.6	2.5	.9
	Industry			Merchandise Exports		
	1970-81	1980-90	1990-94	1970-81	1980-90	1990-94
Low-Income Countries	3.6	7.4	11.4	-.7	5.7	9.1
Excluding India and China	3.2	2.7	-.7	-.8	1.0	2.6
Middle-Income Countries	6.8		1.3	4.1	3.5	7.0
Lower Middle	7.4			3.0		
Upper Middle	4.5	2.1	2.6	7.0	3.5	7.8

Sources: 1970/81 *World Development Report*, 1983.  
1980/90 and 1990/94 *World Development Report*, 1996.

makers in developing countries were (and are) to the new ideas. Leaders are hesitant to reduce their chances of receiving aid from international agencies, but there is considerable evidence that many leaders find outwardness arguments unconvincing, and drag their feet when urged to implement opening and liberalizing policies.<sup>56</sup> This state of affairs has led to outward orientation being identified as the “Washington Consensus,” suggesting a position held in Washington D.C., but much less so elsewhere—except here and there.

### 7.1. *The Development of the Washington Consensus*

By the 1970s the distortions and anti-export biases were beginning to have an effect, yet growth rates on the average

<sup>56</sup> Some older policy makers recall being directed to develop a formal plan in order to qualify for assistance and subsequently being directed to rely on the market to qualify.

held up reasonably well in this decade. Merchandise exports for low-income countries, an exception, did decline sharply in this decade relative to the 1960s. Table 2 shows the well-known fact that many countries suffered sharp declines in rates of growth and even in their levels of income during the 1980s. A number of factors contributed to these unfortunate circumstances. The second oil price increase, the ensuing debt crisis in many countries, and the recession and high interest rates in the United States all had adverse effects on most developing countries, especially the lowest-income ones. The latter countries—minus China and India—averaged 2.9 percent annual growth in the 1980s compared to 3.6 in the previous decade, and growth rates in the middle-income countries fell by over 50 percent. Agriculture and industry growth rates also fell sharply, while exports for the low-income group picked up a bit.

This general picture continued into the 1990s.

There were, however, important and illuminating exceptions. China and India, long committed to a severe form of import substitution, achieved sharp increases in their growth rates of GDP, agriculture, industry, and exports. Both countries put in place a number of policies that significantly opened their economies in the late 1970s and early 1980s. Chile and Turkey also opened significantly in the 1970s and 1980s, and manufacturing exports and GDP (to a lesser extent) in both countries responded. Other countries that did little toward opening up did less well. The Ivory Coast, Kenya, Nigeria and other African countries, and Latin America (save Chile) showed sharply reduced rates of growth in almost all aspects of their economies. The Korean government's experiment with heavy chemicals and industry—and its subsequent backing away—also suggested to many the advantages of a market driven, open economy.<sup>57</sup> There was the emergence of Malaysia and Thailand as newly industrialized countries, and their great success seemed to be a consequence of their openness, especially their unqualified acceptance of foreign direct investment. The success in these two countries, and in Korea and Taiwan, in meeting employment and poverty alleviation objectives added further support for the effectiveness of the new orthodoxy. Arguments were offered that the open economies rode the oil price increases and other international dislocations more effectively than did the countries dominated by the import substitution approach.

<sup>57</sup> Korea's experience with heavy chemicals and industry is open to much dispute. See Joseph Stern et al. (1995) for a general review, and the contributions of Rodrik and Wade in Fishlow et al. (1994) for more specific questions and discussion.

During the 1980s, the outward orientation arguments became more unqualified and less hesitant compared to earlier, more cautious statements. The *World Development Report* of 1987 was especially fervent and aggressive in defending outwardness and in condemning import substitution, while the 1991 report was only a bit less so. The 1987 report, for example, classified 41 countries into strongly and moderately outward oriented and strongly and moderately inward oriented. There were only three countries—Korea, Singapore, and Hong Kong—classified as strongly outward oriented. (Taiwan was not included in the 41-country sample.) In these three countries, real manufacturing value added averaged 15.6 percent growth from 1963 to 1973. Moderately inward and moderately outward oriented each averaged 9.5 percent and strongly inward, 5.3. The rates for the years 1973 to 1985 were all lower, but showed similar differences among the categories of countries. The implication that (presumably) the Bank wished to convey was that if a country shifted into the strongly outward-oriented category, it too would achieve manufactures and other growth rates similar to those of Korea, Singapore, and Hong Kong.<sup>58</sup>

A large number of books and articles with carefully constructed and empirically supported arguments appeared to show that outwardness produced unambiguously superior economic performance to its counterpart.<sup>59</sup> The World

<sup>58</sup> This exercise by the World Bank has been criticized often, but the evidence and accompanying arguments have been widely cited.

<sup>59</sup> In Ito and Krueger (1995, p. 24), Krueger writes that "having agreed that outward orientation is a necessary condition for economic growth, analysts have then considered the extent to which it was sufficient." Krueger adds immediately that it was not sufficient and that a "high rate of investment, provision of infrastructure, a well-functioning labor market, and the overall policy framework conducive to efficient production were

Bank's *East Asian Miracle* (World Bank 1993) may be looked upon as a culminating statement of the great power of an outward-looking approach to generate and maintain growth. Many observers, and the World Bank as an institution, became convinced that exporting and minimal government explained the successes of Taiwan and Korea and then those of Malaysia and Thailand, and that such a strategy would perform the same "miracle" for all other developing countries.<sup>60</sup> These later writings placed heavier emphasis than did earlier literature on exporting as the great source of dynamism, and "export led growth" became a key phrase. The problem with import substitution seemed now to be less with distortions as such than that it created biases against exporting. This shift of emphasis away from the costs of distortions to the gains from exports began in the mid-1970s. See for example Balassa's contribution in Balassa and Associates (1982) and Westphal (1978, 1990). The shift seemed to be a response to overwhelming evidence that Korea and Taiwan pursued policies that had significant distorting effects (in the conventional sense), but had achieved remarkable rates of growth of exports, as well as employment, distribution, poverty alleviation, and other objectives that Washington economists emphasized.

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clearly major contributing factors." That anyone could think that outward orientation was a sufficient condition is puzzling, and once the other items are added to the list, the role of outwardness becomes very blurred.

<sup>60</sup> *The East Asian Miracle* also emphasized the role of human capital in the East Asian success stories. As already noted, this volume agreed that the governments of the various East Asian countries played important roles, but recommended against significant government intervention in other developing countries. Extended reviews of *The East Asian Miracle* by several authors are Albert Fishlow et al. (1994), Amsden, ed. (1994), and Ranis (1995).

## 7.2. Problems with the New Orthodoxy

A literature of doubt and questioning of the New Orthodoxy gained strength from the mid-1980s. This literature is rarely a defense of import substitution as originally practiced. Rather, it is a critical evaluation of the arguments of the outward-oriented approach and of the analyses of what had actually taken place in Korea, Taiwan, and other successful countries. Almost all components of the outward-looking package are under attack.

*The Role of Exporting.* There is general agreement that nontraditional exports have numerous advantages, and few observers recommend policies that dampen inducements to export.<sup>61</sup> The more complex issue is to understand the way in which exporting and domestic learning interact. Studies of knowledge accumulation—especially the ideas of tacit knowledge, on-the-job learning, learning by doing and by using—combined with studies of technological change in individual firms and industries offer strong evidence that simply exporting is not sufficient to result in or to substitute for the creation of a strong indigenous learning process.<sup>62</sup>

<sup>61</sup> Rodrik (in Fishlow et al. 1994) speaks of "export fetishism," and argues strongly that the World Bank's *The East Asian Miracle* fails to make a convincing case that exporting has played as strategic a role in East Asian development as the study claims.

<sup>62</sup> There is a great literature on these matters. Howard Pack (in Chenery and Srinivasan, Vol. 1, 1986) and Evenson and Westphal (in Behrman and Srinivasan, Vol. 3A, 1995) are excellent surveys with many references.

There are several empirical studies that show that total factor productivity (TFP) growth in Korea, Taiwan, and Singapore has not been higher or even as high as in other developing countries. See Alwyn Young (1995) and Yuan Tsao (1985) as examples. Estimates of TFP growth are open to many doubts, and other investigators, Pack in Helleiner, ed. (1992) and World Bank (1993) show much higher rates for Taiwan and Korea. More fundamentally, the rapid rates of growth of capital required the accumulation and use of much new

An idea, implicit in many outward-oriented arguments, is that firms in a developing country can “leapfrog” from a technology vintage that is well within the technology frontier to one that is on the frontier, and thereby become immediately internationally competitive, so that conventional Heckscher–Ohlin arguments apply. The evidence against such an argument is strong. After detailed studies of numerous manufacturing activities in South Korea, Taiwan, Hong Kong, and Singapore, Michael Hobday (1995, p. 200) concludes that “TNCs [transnational corporations] and local East Asian firms engaged in a painstaking and cumulative process of technological learning; a hard slog, rather than a leapfrog.”<sup>63</sup> The achievement of the hard slog in turn requires consideration of more fundamental aspects of a society—entrepreneurship, institutions, values, social incentives, commitment to growth, and a variety of other factors that define a society. These characteristics vary hugely among the countries of the developing world.

Similarly, the basic question about the contribution of TNCs to the sustained, independent growth of their host countries is the extent to which their presence contributes to the in-

igenous learning efforts of national firms. Several observers (e.g., Morris–Suzuki in Shojiro Tokunaga ed. 1992) emphasize that the dependence on foreign investment in Malaysia and Thailand over the last decade or so has resulted in favorable growth rates, but question whether this foreign investment is leading to strong indigenous learning capacity by national firms. Foreign investment with few technological and other spillovers onto national producers may help short-run problems, especially unemployment, while creating longer run, more intractable ones. (See Kunio Yoshihara 1988, and Lall 1984 and 1996, for examples and further discussion.) The basic objective is not to attract foreign investment as such, but to create an internal social and economic environment within which the national knowledge-accumulating process profits from the presence of foreign firms.<sup>64</sup>

*Importing.* These issues have direct relevance for import policies. The Washington Consensus seems to oppose (arguments are not always completely clear and there are differences among advocates) any import controls or other forms of protection. Reform packages almost always include “import liberalization” as a significant component. Protection under import substitution created a great number of problems, but once the leapfrog process is recognized as not possible, then some form of protection for learning is necessary. Korea and Taiwan (and Japan) have always had numerous forms of protection that (along with government influence) induced learning. The major policy issue

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knowledge. Firms do not move along a well-established isoquant as the capital–labor ratio rises. They must find their way by developing and applying new knowledge that enables the full exploitation of the new resources. Whether TFP growth took place is one thing, whether learning and knowledge accumulation did is another. The latter must have occurred in the East Asian countries. See Richard Nelson and Pack (1996) for further development of this point.

<sup>63</sup>Hobday’s study illuminates well the link between exporting and domestic learning capacity. There are numerous other studies: Rodrik (in Fishlow et al. 1994, and Helleiner 1992), Sanjaya Lall (1984), Amsden (1989), Wade (1990), and others. There are many different nuances and insights among these authors, but the underlying theme in all of them is the importance of domestic learning and knowledge accumulation.

<sup>64</sup>The differences between development in Korea and Taiwan and that in Malaysia and Thailand are especially revealing of the issues reviewed here. In addition to the citations in the text, see Danny M. Leipziger, ed. (1997) and Bruton et al. (1992).

then is to design protection measures that induce learning rather than the easy life.<sup>65</sup>

*Right Prices.* To define right prices in a context where learning and productivity growth are the basic objectives (rather than the allocation of given resources with given technology) requires new considerations (Helleiner 1995; Stiglitz 1987; Chenery and Srinivasan 1988 Vol. 1; and Amsden 1989). Especially important are the exchange rate and the wage rate. The overvalued exchange rate is condemned, but the most frequently identified alternative is a “realistic” exchange rate. In the presence of large-scale capital movements, worker remittances, Dutch disease, and productivity growth, an exchange rate that simply protects the balance of payments is almost certainly wrong from the standpoint of more fundamental objectives.<sup>66</sup> Similar difficulties arise with respect to wage rates where factors such as labor migration, international capital movements, and institutional pressures complicate the task of finding the right wage rate.<sup>67</sup>

*Employment and Poverty Alleviation.* Studies of the effect of openness on employment and poverty alleviation, once it is fully established, are less available. The evidence that Korea and Taiwan have been highly successful in these re-

gards, largely because productive employment has grown so strongly, is widely accepted. This success, for reasons examined above, is often explained by their initial conditions—long commitment to education, social cohesion, capacity to learn in general and especially to adapt imported technologies to local conditions, and a strong government pushing economic growth. Other countries with different conditions are expected to face different hurdles in solving these problems in an open economy. The transition to an open economy has also proved costly in terms of employment and poverty relief in several countries.<sup>68</sup>

*The Role of Government.* “Minimal government” and “market friendly” are not illuminating notions. Similarly, “rent seeking” is much more complex than the Washington Consensus implies. (See, for example, John Toye 1987, and Paul Mosely et al. 1991). The role that government can play depends—more than is the case for most issues—on the institutions, the history, and the culture of the community. That some governments are deadly, that many are inept and uncaring is widely recognized, but there is much that only a government can do. So learning is as crucial a notion for governments as it is for firms and households. The question is how can a government learn, not how can it be minimized.<sup>69</sup> One specific role for government is the design and implementation of an effective agriculture policy. A strongly performing agriculture sector is essential, and there are few examples of success stories in agri-

<sup>65</sup> Staffan Linder (1961) argues that a country cannot export new products successfully until it has produced them for the home market. This argument, frequently found in the literature, is still generally applicable, although there are exceptions, especially where TNCs are involved. Firms must produce before they can export, and they have to learn to produce.

<sup>66</sup> The exchange rate may be used as an instrument of protection and export promotion. Max Corden (1985) argues that Japan did this after 1953. See Bruton (1997, ch. 8) for more discussion of the advantages of an “undervalued” exchange rate.

<sup>67</sup> Freeman (1993) is a valuable discussion of wage issues and their relevance to development strategy.

<sup>68</sup> See, for example, Hans Singer and Sumit Roy (1993), Kunibert Raffer and Singer (1996), Giovanni Cornia et al. (1987), Morrison (1994), and earlier discussions in Paul Streeten (1973).

<sup>69</sup> The *World Development Report* for 1997 treats the role of government in detail, and in a much more cautious and probing way than its previous reports have done.

culture that do not involve a strong role for the government.

These theoretical complexities have added to the problems for empirical research. A review of the empirical work relevant to the role of trade orientation and growth is not part of the present effort. There are many such surveys. In addition to Sebastian Edwards's *JEL* survey (Edwards 1993), papers by Levine and Renelt (1992), Levine and Zervos (1993), Harrison (1991), Rodrik (in Behrman and Srinivasan Vol. 3B, 1995), Pack (in Chenery and Srinivasan Vol. 1, 1988), Tybout (1992), Havrylyshyn (1990), and Helliwell (in Pasinetti and Solow, eds. 1994) are especially helpful in surveying the existing empirical work.<sup>70</sup> The final paragraph in Edwards (1993, p. 1390) is, in my view, a legitimate evaluation of the state of play with respect to empirical work on exports and distortions and economic performance. Edwards argues that economists often ask too much of the available data, and try to extract information that simply is not there. He argues that cross-country aggregate data sets have little information about trade policy and growth. Cross-country regressions on aggregate data cannot reveal much about historical factors at work nor about the microeconomics of innovation, trade, and growth. Studies of historical episodes look more promising, and there, as noted, the role of trade seems less strategic and less powerful.<sup>71</sup> Finally, one may note that empirical work has not been able to solve the di-

<sup>70</sup> Levine and Zervos (1993) is valuable because it is a good clear statement of the dangers of using cross-country regressions as if they met the necessary assumptions of formal statistical and econometric theory.

<sup>71</sup> I think it is fair to say that those who are convinced of the power of the outward-oriented strategy find the empirical evidence more convincing than indicated in the text. This is not meant to be unkind, but simply to reflect the inadequacy of both theory and measurement on the subject.

rection of causation question: Does growth cause exports or do exports cause growth?

## 8. Conclusion

It remains correct to say that outward orientation is still urged strongly on all developing countries by powerful institutions and well-placed individuals. Why? One may speak of an easy stage of outward orientation as well as of import substitution. In an economy in which there are great price distortions, underutilized capacity, rampant inflation, and large balance of payment problems, correcting these problems may well produce quick increases in output and measured factor productivity. Such an easy stage can continue for some time, especially if world trade is booming. But what happens after this easy stage of outward-orientation reform has exhausted its momentum, and something more fundamental has to come into play? What is it that is more fundamental?<sup>72</sup> If, in all countries, distortions are eliminated—if all prices are right—the government's role is minimal, no inflation exists anywhere, saving and investment are at least 15 percent of GDP, and world trade is booming, would all countries grow at the same rate as Korea and Taiwan have in recent decades? The answer surely must be no.<sup>73</sup>

<sup>72</sup> The following statement from Krueger (1995, p. 13) is of interest: "It was not until the 1980s that experience was to demonstrate that the problems confronting developing countries were fundamentally more deep-seated than that of stop-go cycles and that foreign exchange shortage was more a symptom than a cause of the problem." Krueger, one of the strongest proponents of outward orientation, does not expand on what she means by "fundamentally more deep-seated." Landes (1990) and Olson (1996) probe more deeply in search of the more fundamental source of success and failure.

<sup>73</sup> It is doubtful that many people would argue that all countries would grow as fast as Korea and Taiwan. At the same time, there is, in much of the

This second question leads to a more general question: Why did per capita GDP not begin to grow in Latin America, Africa, and Asia 150 years ago when it began to grow in Western Europe, Northern America, and Australia? Or why did economy-wide growth not take hold in periods of commodity booms in presently less-developed countries? So far as I know, no one explains these failures in terms of import substitution.<sup>74</sup>

Import substitution and outward orientation offered easy solutions to the development problems. Import substitution as implemented failed, and the justifications for outward orientation (as usually presented) are being increasingly undermined.<sup>75</sup> The findings reviewed in this paper suggest strongly that no quick and easy fixes to development problems are available. To accept learning and knowledge accumulation both as the bottom line of growth and as having roots deep in the ethos and history of a society requires that explanation and policy prescription probe these precincts that are so alien to mainstream thinking. This is the great message of the histories of technical knowledge accumulation and of the stories of the failures of import substitution and outward orientation reported herein.

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literature, strong criticism of countries that have not grown as fast as these two countries. Such a position tends to defeat efforts to understand exactly what makes a particular economy grow.

<sup>74</sup> There are many arguments of course as to why the rest of the world did not begin to grow when the West did, but an import substitution policy does not seem to be one of them. As noted earlier growth picked up in almost all countries during the heyday of import substitution.

<sup>75</sup> Robert Solow (in Fuhrer and Little 1996, p. 298) quotes Charles Schultz as saying that there was nothing wrong with supply-side economics that dividing by 10 could not cure. A similar observation holds with respect to any simple once-and-for-all solution of the development problem—except here one should probably divide by 25.

## REFERENCES

- ABRAMOVITZ, MOSES. "Economics of Growth" in BERNARD F. HALEY, ed., *A survey of contemporary economics*. Vol. II. Homewood, IL: Richard D. Irwin, 1952, pp. 132–81.
- African development: lessons from Asia*. Proceedings of a Seminar on Strategies for the Future of Africa. Washington, DC: Winrock International Institute for Agricultural Development, 1991.
- AMSDEN, ALICE. *Growth and stabilization in Korea*. Helsinki: Wider Institute for Development Economics Research, 1987.
- . *Asia's next giant: South Korea and late industrialization*. New York: Oxford U. Press, 1989.
- . ed. "The World Bank's 'The East Asian Miracle': Economic Growth and Public Policy," Special section of *World Devel.* Apr. 1994, 22(4), pp. 614–70.
- BALASSA, BELA AND ASSOCIATES. *The structure of protection in developing countries*. Baltimore: Johns Hopkins U. Press for the World Bank and the Inter-American Development Bank, 1971.
- . *Development strategies in semi-industrial economies*. Baltimore: Johns Hopkins U. Press for the World Bank, 1982.
- BEHRMAN, JERE AND SRINIVASAN, T. N., eds. *Handbook of development economics*. Vols. 3A and 3B. Amsterdam: Elsevier Science Publishers, 1995.
- BERANIK, WILLIAM, JR. AND RANIS, GUSTAV, eds. *Science, technology, and economic development*. New York: Praeger Publishers, 1978.
- BERGER, PETER L. AND HAIN-HUANG, MICHAEL HSIAO, eds. *In search of an East Asian development model*. New Brunswick and Oxford, Transaction Books, 1988.
- BHAGWATI, JAGDISH N. AND DESAI, PADMA. *India, planning for industrialization*. Oxford: Oxford U. Press for the OECD, 1970.
- BIGGS, TYLER; SHAH, MANJU AND SRIVASTAVA, PRADEEP. *Technological capabilities and learning in African enterprises*. World Bank Technical Paper Number 288. Washington, D.C.: World Bank, 1995.
- BRUTON, HENRY J. "Productivity Growth in Latin America," *Amer. Econ. Rev.*, Dec. 1967, 57(5), pp. 1099–116.
- . "The Import Substitution Strategy of Development: A Survey," *The Pakistan Devel. Rev.*, Summer 1970, 10(2), pp. 123–46.
- . "The Search for a Development Economics," *World Devel.*, Oct./Nov. 1985, 13 (10/11), pp. 1099–124.
- . *On the search for well-being*. Ann Arbor: U. of Michigan Press, 1997.
- BRUTON, HENRY J. ET AL. *The political economy of poverty, equity, and growth: Sri Lanka and Malaysia*. New York: Oxford U. Press for the World Bank, 1992.
- CHENERY, HOLLIS B. "The Application of Investment Criteria," *Quart. J. Econ.*, Feb. 1953, 67(1), pp. 76–96.

- CHENERY, HOLLIS B. AND STROUT, ALAN M. "Foreign Assistance and Economic Development," *Amer. Econ. Rev.*, Sept. 1966, 56(4), pp. 674-733.
- CHENERY, HOLLIS; ROBINSON, SHERMAN AND SYRQUIN, MOSHE, eds. *Industrialization and growth*. New York: Oxford U. Press for the World Bank, 1986.
- CHENERY, HOLLIS B. AND SRINIVASAN, T. N., eds. *Handbook of development economics*. Vols. I and II. Amsterdam: North Holland, 1988, 1989.
- CLIFFORD, MARK L. *Troubled tiger*. Armonk, New York: M. E. Sharpe, 1994.
- CLINE, WILLIAM. "Can the East Asian Model Be Generalized?" *World Devel.*, Feb. 1982, 10(2), pp. 81-90.
- CORDEN, W. MAX. *The theory of protection*. Oxford: Clarendon Press, 1971.
- . *Protection, growth and trade*. Oxford: Basil Blackwell, 1985.
- CORNIA, GIOVANNI; JOLLY, RICHARD AND STEWART, FRANCES, eds. *Adjustment with a human face*. Vol. I. Oxford: Clarendon Press, 1987.
- DIAZ-ALEJANDRO, CARLOS F. "On the Intensity of Import Substitution," *Kyklos*, 1965, 18(3), pp. 495-511.
- DONGES, JUERGEN B. "A Comparative Survey of Industrialization Policies in Fifteen Semi-Industrialized Countries," *Weltwirtsch. Arch.*, 1976, 112(4) pp. 626-59.
- ECKAUS, RICHARD S. "The Factor Proportions Problem in Underdeveloped Areas," *Amer. Econ. Rev.*, Sept. 1955, 45(4) pp. 539-65.
- EDWARDS, SEBASTIAN. "Openness, Trade Liberalization, and Growth in Developing Countries," *J. Econ. Lit.*, Sept. 1993, 31(4) pp. 1358-93.
- FEI, JOHN C. H. AND RANIS, GUSTAV. *Development of the labor surplus economy*. Homewood, IL: Richard Irwin, 1964.
- FEI, JOHN; RANIS, GUSTAV AND KUO, SHIRLEY. *Growth with equity*. New York: Oxford U. Press for the World Bank, 1979.
- FISHLOW, ALBERT ET AL. *Miracle or design? Lessons from the East Asian experience*, Washington, DC: Overseas Development Council, 1994.
- FRANK, CHARLES R., JR.; KIM, KUANG AND WESTPHAL, LARRY. *Foreign trade regimes and economic development: South Korea*. New York: Columbia U. Press for the NBER, 1975.
- FREEMAN, RICHARD B. "Labor Market Institutions and Policies: Help or Hindrance to Economic Development," *Proceedings of the World Bank Annual Conference on Development Economics*, 1992, pp. 117-45.
- FUHRER, JEFFREY C. AND LITTLE, JANE S., eds. *Technology and growth*. Boston: Federal Reserve Bank of Boston, 1996.
- GALENSON, WALTER, ed. *Economic growth and structural change in Taiwan*. Ithaca: Cornell U. Press, 1979.
- . ed. *Foreign trade and investment: Economic development in industrializing Asian countries*. Madison: U. of Wisconsin Press, 1985.
- GALENSON, WALTER AND LEIBENSTEIN, HARVEY. "Investment Criteria, Productivity, and Economic Development," *Quart. J. Econ.* Aug. 1955, 69(3), pp. 343-67.
- GRAN, PETER. "Islamic Roots of Capitalism," *International Journal of Middle East Studies*, July 1980, 11(2), pp. 511-26.
- HABERLER, GOTTFRIED. *International trade and economic development*. Cairo: National Bank of Egypt, 1950.
- HAMILTON, GARY G. "Overseas Chinese Capitalism," in WEI-MING TU, ed., 1996, pp. 328-42.
- HARRISON, ANN. "Openness and Growth." Working Paper 809, Office of the Vice President, Development Economics, World Bank, Washington, DC, 1991.
- HARROD, ROY F. "An Essay in Dynamic Theory," *Econ. J.*, Mar. 1939, 49(1), pp. 14-33.
- . *Towards a dynamic economics*. London: Macmillan and Company, 1949.
- HAVRYLYSHYN, OLI. "Trade Policy and Productivity Gains in Developing Countries," *World Bank Res. Observer*, Jan. 1990, 5(1), pp. 1-24.
- HELLEINER, GERALD K., ed. *Trade policy, industrialization, and development*. Oxford: Clarendon Press, 1992.
- . *Trade, trade policy and industrialization reconsidered*. Helsinki: World Institute for Development Economics Research, World Development Studies 6, 1995.
- HELLIWELL, JOHN F. "Trade and Technical Progress." NBER Working Paper 4226, 1992.
- HIGGINS, BENJAMIN. *Economic development*. New York: W.W. Norton & Company, 1959.
- HIRSCHMAN, ALBERT O. *Development projects observed*. Washington, DC: Brookings Institution, 1967.
- . "The Political Economy of Import Substituting Industrialization in Latin America," *Quart. J. Econ.* Feb. 1967, 82(1) pp. 1-32.
- HOBDAY, MICHAEL. *Innovation in East Asia*, Aldershot: Edward Elgar, 1995.
- HOSELITZ, BERT F., ed. *Theories of economic growth*. Glencoe, IL: Free Press, 1960.
- HOWE, CHRISTOPHER. *The origins of Japanese trade supremacy*. Chicago: U. of Chicago Press, 1996.
- ITO, TAKATOSHI AND KRUEGER, ANNE O., eds. *Trade and protection*. Chicago: U. of Chicago Press, 1993.
- . eds. *Growth theories in light of East Asian experience*. Chicago: U. of Chicago Press, 1995.
- JAMES, JEFFREY. *The state, technology and industrialization in Africa*. New York: St. Martin's Press, 1996.
- JOMO, KUAME S., ed. *Japan and Malaysian development*. London: Routledge, 1994.
- JONES, LEROY P. AND SAKONG, IL. *Government, business, and entrepreneurship in economic development*. Cambridge: Council on East Asia Studies, Harvard U., 1980.
- JOSHI, VIJAY AND LITTLE, IAN M. D. *India: Mac-*



- roeconomics and political economy 1964-1991. Washington, DC: World Bank, 1994.
- KAHN, ALFRED E. "Investment Criteria in Economic Development," *Quart. J. Econ.* Feb. 1951, 65(1). pp 38-61.
- KOHLI, ATUL. "Where Do High Growth Political Economies Come From? The Japanese Lineage of Korea's Development State," *World Devel.*, Sept. 1994, 22(9), pp. 1269-93.
- KRUEGER, ANNE O. "The Political Economy of the Rent-Seeking Society," *Amer. Econ. Rev.* June 1974, 64(3), pp. 291-303.
- . *Trade policies and developing nations*. Washington, DC: Brookings Institution, 1995.
- LALL, SANJAYA. *Learning from the Asian tigers*. New York: St. Martin's Press, 1996.
- LALL, SANJAYA ET AL. "Exports of Technology by Newly-Industrializing Countries," Special Issue of *World Devel.*, Dec. 1984, 12(5/6), pp. 471-660.
- LANDES, DAVID S. "Why Are We So Rich and They So Poor," *Amer. Econ. Rev.*, May 1990, 80(2), pp. 1-13.
- LEIBENSTEIN, HARVEY. *Economic backwardness and economic growth*. New York: John Wiley and Sons, 1957.
- LEIPZIGER, DANNY M., ed. *Lessons from East Asia*. Ann Arbor: U. of Michigan Press, 1997.
- LEVINE, ROSS AND RENELT, DAVID. "A Sensitivity Analysis of Cross-Country Growth Regressions," *Amer. Econ. Rev.*, Sept. 1992, 82(4), pp. 942-63.
- LEVINE, ROSS AND ZERVOS, SARA J. "What We Have Learned About Policy and Growth from Cross-Country Regressions," *Amer. Econ. Rev.* May 1993, 83(2), pp. 426-30.
- LEWIS, W. ARTHUR. "Economic Development with Unlimited Supplies of Labor," *Manchester School*, May 1954, 22(2) pp. 139-91.
- . *The theory of economic growth*. London: George Allen and Unwin, 1955.
- . *Growth and fluctuations 1870-1913*. London: George Allen and Unwin, 1978.
- . "The Dual Economy Revisited," *Manchester School*, Sept. 1979, 47(3), pp 211-29.
- LINDER, STAFFAN B. *An essay on trade and transformation*. New York: John Wiley, 1961.
- LITTLE, IAN M. D. *Economic development*. New York: Basic Books, 1982.
- LITTLE, IAN; SCITOVSKY, TIBOR AND SCOTT, MAURICE. *Industry and trade in some developing countries*. London: Oxford U. Press for the OECD, 1970.
- MACARIO, SANTIAGO. "Protectionism and Industrialization in Latin America," *Econ. Bull. for Latin America*, Mar. 1964, 9(1), pp. 61-102.
- MADDISON, ANGUS. *Economic progress and policy in developing countries*. London: George Allen and Unwin, 1970.
- . *Monitoring the world economy*. Paris: Development Centre, OECD, 1995.
- MAHALANOBIS, P. C. "The Approach of Operational Research to Planning in India," *Sankhya*, Dec. 1955, 16(1, 2), pp. 3-120.
- MALENBAUM, WILFRED. *Prospects for Indian development*. London: George Allen and Unwin, 1962.
- MEIER, GERALD M. AND BALDWIN, ROBERT L. *Economic development*. New York: John Wiley and Sons, 1957.
- MEIER, GERALD M. AND SEERS, DUDLEY, eds. *Pioneers in development*. New York: Oxford U. Press, 1984.
- MELLOR, JOHN W. *Agriculture on the road to industrialization*. Baltimore, Johns Hopkins U. Press, 1995.
- MORAWETZ, DAVID. *Twenty-five years of economic development*. Baltimore: Johns Hopkins U. Press for the World Bank, 1977.
- MORGAN, THEODORE; BETZ, GEORGE W AND CHOUDHRY, NANKA K., eds. *Readings in development economics*. Belmont, CA: Wadsworth Pub. Co. 1963.
- MORISHIMA, MICHIO. *Why has Japan succeeded?* Cambridge: Cambridge U. Press, 1982.
- MORRISON, CHRISTIAN, ed. "Adjustment with Growth and Equity," *World Devel.*, Nov. 1994, 19(11), pp. 1483-651.
- MORRIS-SUZUKI, TESSA. *A history of Japanese thought*. London: Routledge, 1989.
- . *The technological transformation of Japan*. Cambridge: Cambridge U. Press, 1994.
- MOSLEY, PAUL J; HARRIGAN, JOHN AND TOYE, JOHN. *Aid and power: The World Bank and policy based lending*. London: Routledge, 1991.
- MYRDAL, GUNNAR. *Economic theory and the underdeveloped regions*. London: G. Duckworth & Co., 1956.
- NELSON, RICHARD R. AND PACK, HOWARD. "Firm Competencies, Technological Catchup, and the Asian Miracle." Paper presented at conference in honor of Gustav Ranis, Yale U., New Haven, 1996.
- NORTH, DOUGLASS C. "Economic Performance Through Time," *Amer. Econ. Rev.*, June 1994, 84(3), pp. 359-68.
- NURKSE, RAGNAR. *Problems of capital formation in underdeveloped countries*. New York and Oxford: Oxford U. Press, 1953.
- OLSON, MANCUR. *The rise and decline of nations*. New Haven: Yale U. Press, 1982.
- . "Big Bills Left on the Sidewalk: Why Some Nations are Rich and Others Poor," *J. Econ. Perspectives*, Spring 1996, 18(2), pp. 3-24.
- PACK, HOWARD AND WESTPHAL, LARRY E. "Industrial Strategy and Technological Change," *J. Devel. Econ.* Mar. 1986 22(1), pp. 87-128.
- PASINETTI, LUIGI L. AND SOLOW, ROBERT M., eds. *Economic growth and the structure of long-term development*. London: St. Martin's Press for the International Economic Association, 1994.
- PREBISCH, RAUL. *The economic development of Latin America and its principal problems*. Lake Success, New York: United Nations Department of Social Affairs, 1950.
- . *Towards a dynamic development policy for Latin America*. New York: United Nations, 1964.

- RAFFER, KUNIBERT AND SINGER, HANS W. *The foreign aid business*. Cheltenham, UK: Edward Elgar, 1996.
- RANIS, GUSTAV. "A Comment," *World Develop.*, Apr. 1985, 13(4) pp. 543-45.
- . "Taiwan as a Classic Model of Asian Development Success," in *African Development: Lessons from Asia*, 1991, pp. 23-48.
- . "Another Look at the East Asian Miracle," *World Bank Econ. Rev.*, Sept. 1995, 9(3), pp. 509-34.
- REDDING, S. GORDON. *The spirit of Chinese capitalism*. Berlin and New York, Walter de Gruyter, 1993.
- . "Societal Transformation and the Contribution of Authority Relations and Cooperation Norms in Overseas Chinese Business," in WEI-MING TU, ed., 1996, pp. 310-27.
- RIDDELL, ROGER C. *Manufacturing Africa*. London: James Currey, 1990.
- ROSENSTEIN-RODAN, PAUL N. "Problems of Industrialization of Eastern and Southeastern Europe," *Econ. J.*, June-Sept. 1943, 53(2), pp. 202-11.
- . "International Aid for Underdeveloped Countries," *Rev. Econ. Statist.*, May 1961, 43(2), pp. 107-38.
- SHEAHAN, JOHN. "Import Substitution and Economic Policy: A Second Review." Research Memorandum No. 50. Center for Development Economics, Williams College, Williamstown, MA., 1972.
- SINGER, HANS W. "The Distribution of Gains between Investing and Borrowing Countries," *Amer. Econ. Rev.*, May 1950, 40(2), pp. 473-85.
- . "Dualism Revisited: A New Approach to the Problems of the Dual Society in Developing Countries," *J. Devel. Studies*, Oct. 1970, 7(1), pp. 60-75.
- SINGER, HANS W. AND ROY, SUMIT. *Economic progress and prospects in the third world*. Aldershot: Edward Elgar, 1993.
- STERN, JOSEPH J. ET AL. *Industrialization and the state: The Korean heavy chemical industry drive*. Cambridge; Harvard Institute for International Development and Korean Development Institute. Distributed by Harvard U. Press, 1995.
- STIGLITZ, JOSEPH E. "Learning to Learn, Localized Learning and Technological Progress." Princeton U., Department of Economics, Reprint No. 7, 1987.
- STREETEN, PAUL, ed. *Trade strategies for development*. London: Macmillan Press, 1973.
- TOKUNAGA, SHOJIRO, ed. *Japanese foreign investment and Asian economic independence*. Tokyo: U. of Tokyo Press, 1992.
- TOYE, JOHN. *Dilemmas of development*. Oxford: Basil Blackwell, 1987.
- TSAO, YUAN. "Growth without Productivity: Singapore Manufacturing in the 1970s," *J. Devel. Econ.*, 1985, 19(1), pp. 25-39.
- TSURU, SHIGETO. *Japan's capitalism: creative defeat and beyond*. Cambridge: Cambridge U. Press, 1993.
- TU, WEI-MING, ed. *Confucian traditions in East Asian modernity*. Cambridge: Harvard U. Press, 1996.
- TYBOUT, JAMES. "Linking Trade and Productivity: New Research Directions," *World Bank Econ. Rev.*, May 1992, 6(2), pp. 189-211.
- UNITED NATIONS, COMMISSION FOR ASIA AND THE FAR EAST. *Programming techniques for economic development*. Bangkok, United Nations, 1960.
- VINER, JACOB. *International trade and economic development*. Glencoe, Illinois: Free Press, 1952.
- WADE, ROBERT. *Governing the market*. Princeton: Princeton U. Press, 1990.
- WATERSTON, ALBERT. *Development planning*. Baltimore: Johns Hopkins U. Press, 1965.
- WESTPHAL, LARRY E. "The Republic of Korea's Experience with Export-led Industrial Development," *World Devel.*, Mar. 1978, 6(3), pp. 347-82.
- . "Industrial Policy in an Export Propelled Economy: Lessons from South Korea's Experience," *J. Econ. Perspectives*, Summer 1990, 4(3), pp. 41-60.
- WINSTON, GORDON C. "The Theory of Capital Utilization and Idleness," *J. Econ. Lit.*, Dec. 1974, 12(4), pp. 1301-20.
- WOLFE, MARSHALL. "Approaches to Development: Who Is Approaching What?" *CEPAL Rev.*, 1976, pp. 131-71.
- WORLD BANK. *The East Asian miracle*. New York: Oxford U. Press for the World Bank, 1993.
- YOSHIHARA, KUNIO. *The rise of ersatz capitalism in South East Asia*. Singapore: Oxford U. Press, 1988.
- YANG, YA-HWEI. "Government Policy and Strategic Industries: The Case of Taiwan," in TAKA-TOSHI ITO AND ANNE KRUEGER, eds., 1993, pp. 387-408.
- YOUNG, ALWYN. "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience," *Quart. J. Econ.*, Aug. 1995, 118(3) pp. 641-81.