Import substitution versus

What have we learned from the experience of developing countries? Anne O. Krueger

In the 1950s and 1960s, there was considerable debate among academics and policy makers on the relative advantages of inward-oriented (or import substitution) policies and outward-oriented (or export promotion) policies, and on the effects of such policies on economic growth in developing countries. Essentially the argument for protection and inward orientation of the economy rested on the presence of imperfections in the market mechanism that made it difficult for developing economies to compete and to develop. Proponents of outward-oriented policies pointed to the costs associated with protectionist policies. Meanwhile, a number of developing countries proceeded either to abandon or substantially reduce their trade barriers and other controls on economic activity. The result was a spectacular growth of their economies, leading to the conclusion that outward-oriented policies had a dynamic effect on the domestic economy and helped accelerate growth rates (see table).

Three main points have emerged from the experience of the countries that opted for export-led growth. First, their remarkable rates of growth were associated with the rapid growth of exports; second, for all countries where it was possible to contrast performance before and after the policy changes, the growth rate clearly jumped sharply after adoption of the export-oriented strategies; and third, the sustained high growth rates indicated that outward-oriented policies created dynamic effects in the economies and did not merely produce static gains from improved allocation of resources.

This article examines the links between export orientation and general economic performance by contrasting inward- and outward-oriented strategies and attempts to explain the reasons for differences in performance of economies that adopted each strategy.

Defining export-led growth

The terms “export-led growth,” “outward oriented,” “export promotion,” and “export substitution” are all used to define policies of countries that have been successful in developing their export markets. While different countries have had different policies, their common features are that there is at least as much incentive to earn as to save foreign exchange and that incentives to export are fairly uniform and not discriminatory across commodity groups.

An export-oriented set of policies could be no more than the absence of policies that discriminate in favor of sales in the domestic market. The criterion for optimal allocation of resources is that the marginal rate of transformation of domestic production should equal the international marginal rate of transformation, in the absence of monopoly power in trade. One must bear in mind that developing countries, with their relatively smaller economies, are unlikely to have monopoly power in importing manufactured goods, which are most often the subject of protection. (The marginal rate of transformation is defined as the amount of one commodity that must be forgone in order to free resources to produce a specified amount of another commodity. One good (A) can be “transformed” into another (B), if production of the first is reduced and resources transferred to the production of the second good. The marginal rate of transformation shows how much extra output of B could be obtained by reducing the output of A by one unit.)

In principle, a government could protect some industries in the domestic market while providing sizable export subsidies to other industries. In practice, however, the scope for such two-way protection is limited, for a number of reasons: (1) protective devices or export subsidies are meaningful only if they discriminate against some other activities; (2) protection of a large number of activities is generally inconsistent with encouraging exports, because exporters of manufactured goods require relatively easy access to international markets for their inputs of raw materials and intermediate and capital goods; and (3) protection at the levels deemed necessary to induce import substitution usually requires a great degree of control (to prevent smuggling, false invoicing, etc.) to ensure that the domestic market is profitable enough, and to prevent export of the protected goods.

Thus most analysts would agree that an export-oriented strategy is one in which there is no bias of incentives toward production of import substitutes. Whatever incentives exist must favor production for export as much as, if not more than, production for the domestic market. Such a strategy generally entails less of a departure from free trade and equalized incentives than does an inward-oriented strategy.

A glance at some countries and territories that have been successful as exporters (at certain periods or consistently) indicates the range of policies followed. Singapore appears to have followed interventionist policies, while Hong Kong was genuinely laissez-faire, with Brazil, Korea, and Taiwan Province of China lying somewhere in between. Interventions generally were in the form of incentives rather than imposition of direct controls. Most successful exporters also provided incentives across-the-board instead of differentiating by commodity groups.
**export promotion**

**Salient characteristics**

The characteristics of import-substitution and export-oriented regimes vary widely according to local conditions, especially those prevailing in factor markets. Nonetheless, there are some fairly uniform features, and for present purposes a few stylized facts can be presented to highlight the differences between import-substitution and export-oriented regimes.

- **Import-substitution** regimes generally have strict and time-consuming licensing procedures for imports of manufactured producer goods; **export-oriented** regimes permit ready access to imports of intermediate and capital goods, at least to exporters.

- **Import-substitution** regimes are characterized, *inter alia*, by overvalued exchange rates (fostering excess demand for foreign exchange, which is held in check by the licensing process). Since domestic producers of import substitutes would receive a substantially lower price for their products in the world market than they do behind the wall of protection under the import-substitution regime, it rarely pays them to expand production beyond the demand of the domestic market; **export-oriented** regimes have fairly realistic exchange rates and provide at least as much, if not more, incentive to sell abroad as to sell domestically.

- Generally, virtual prohibition of imports is needed to sustain import substitution; either imports are prohibited, or a wide range of tariffs is imposed on different products at a level high enough to make their import uneconomic. Under export promotion most incentives apply uniformly to all exporters and are based on either the value or value added of export sales.

- **Import-substitution** regimes are characterized by quantitative restrictions or prohibitive tariffs for many commodities; **export-oriented** policies normally avoid quantitative restrictions and use (generally low) tariffs with relatively simple procedures to permit exporters access to the international market at international prices for their inputs.

The chief rationale for import substitution in many developing countries is to stimulate industrial growth. The rate of industrial growth normally exceeds that of the rest of the economy under both import-substitution and export-oriented trade strategies. However, the industrial growth rate appears to be higher and output of primary commodities seems to grow more rapidly under export promotion than under import substitution.

Import substitution, which is rationalized in many countries as a means of reducing dependence on the international economy, actually seems to increase it as import-substitution activities are import-intensive and require both intermediate and capital goods from abroad to sustain production and growth. Thus, the economy becomes vulnerable to declines in availability of foreign exchange. By contrast, export promotion seems to reduce dependence, in the sense that foreign exchange earnings grow rapidly, markets become increasingly diverse and the economy increasingly flexible.

It is relatively easy to launch an import-substitution policy; initially simple and administratively straightforward regulations offering protection and prohibiting competitive imports provide adequate incentives for the few new investments. As investments multiply it becomes increasingly difficult and costly to monitor and sustain this strategy. On the other hand, starting an export-oriented growth strategy is difficult and requires a combination of policies and determination on the part of the government that is politically difficult to achieve. However, once started, an export-oriented growth strategy is more likely to be self-sustaining and gather momentum. The increasing supply of foreign exchange permits additional liberalization of the import regime. This strengthens the bias of the regime toward exports.

**What affects performance?**

Three sets of factors account for the difference in performance of economies under inward- and outward-oriented re-

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**Experiences of the successful exporters**

<table>
<thead>
<tr>
<th>Country/territory</th>
<th>Period</th>
<th>Real GDP (in percent)</th>
<th>Dollar value of exports (as percentage of GDP)</th>
<th>Exports</th>
<th>Investment</th>
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</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>1960–67</td>
<td>4.1</td>
<td>3.7</td>
<td>7</td>
<td>14</td>
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<tr>
<td></td>
<td>1968–73</td>
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<td>16.5</td>
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<tr>
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<td>9.2</td>
<td>99</td>
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<tr>
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<td>5.2</td>
<td>5.7</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>1960–78</td>
<td>9.6</td>
<td>28.4</td>
<td>29</td>
<td>35</td>
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<tr>
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</tr>
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<td>1960–76</td>
<td>8.7</td>
<td>20.9</td>
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<td>28</td>
</tr>
</tbody>
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1. In the last year of the period indicated.
gimes. Their relative and absolute importance probably varies considerably between countries, depending on local circumstances (such as size and resource endowment), and political and cultural differences that affect both the behavior of politicians and bureaucrats and the relations between government and business.

The three sets are: (1) technological factors; (2) economic factors; and (3) political-economic considerations. Technological factors cover the nature of production functions including the extent of indivisibilities and economies of scale, and the capital intensity of import-competing domestic production. Economic factors refer to such phenomena as people’s responses to incentives and direct controls, the impact of industry structure on behavior, and the flexibility of the economy. Political-economic considerations relate to the factors that influence decision makers in making or altering economic policies.

**Technological factors**

**Size of markets.** The small size of domestic markets in developing countries constrains their economic growth under import-substitution policies. Even some of the populous developing countries have markets, however measured, that are relatively small in contrast with the developed countries. Bangladesh, for example, has a nonagricultural income approximately 3 percent that of Sweden and less than 2 percent that of Canada, neither of which is regarded as an economy large enough to forgo the benefits of specialization and international trade. Despite a large population, the Indian market is estimated to be less than one quarter that of Germany’s, based on the value of industrial output.

Import substitution policies inherently tend to encourage expansion of any industry only up to the size of the domestic market (which itself may be smaller when commodities are higher priced), and the expansion of an activity beyond the amount sold in the domestic market is seldom profitable under import-substitution. In an outward-oriented economy, efficient activities can expand well beyond that point.

**Indivisibilities and economies of scale.** For processes and activities that are highly divisible and have constant returns to scale, the size of the production unit does not matter. There are other processes, however, where one or more indivisibilities are important, or where there are sizable economies of scale. Capital equipment (e.g., heavy presses) requires a substantial volume of production if it is to be fully utilized. Likewise, many processes or industries (e.g., fertilizer and tires) demand a minimum size for a plant to be efficient. Other processes do not allow production to be divided into numerous steps that can easily be changed. In most metal casting, pressing, and shaping activities, for example, the die or mold has to be changed whenever a new shape or form is to be produced. No intermediate alteration is possible. The longer the length of the production run for a given metal product, the smaller the fixed costs relative to variable costs.

Import substitution policies, because they generally restrict local industries to reliance upon sales in the domestic market, lead to short production runs and high average variable costs. An export-oriented strategy, however, permits a developing country, regardless of the size of its domestic market, to establish plants of economically efficient size and to maintain long production runs. Thus, the limitations of a small size of domestic market can be largely overcome, at least for traded goods, in an export-oriented economy. Under such a regime, producers in a small developing country can obtain specialized products, which are not produced domestically, at internationally competitive prices. By contrast, under import-substitution regimes, either there are substantial delays in obtaining items not domestically produced because of import licensing procedures and restrictions, or producers must obtain them from high-cost (possibly monopolistic) domestic sources.

**Factor intensities.** Developing countries are usually relatively well endowed with unskilled labor. The rate of human and physical capital formation (broadly defined) is the constraint upon expansion of the industrial sector in these countries. When the proportions of the human and physical factors employed differ significantly among industrial sectors, export promotion permits a more rapid growth of value added and employment of unskilled labor in industry for the same rate of human and physical capital formation. Under these conditions, the larger size of the international market encourages expansion of exporting industries that use relatively unskilled labor. Import substitution, however, limits the expansion of these industries to the rate of growth of domestic demand once production has expanded sufficiently to replace imports; thereafter growth of output is tied to increases in real income and demand (unless costs and prices are falling).

**Infant industry.** The infant industry argument has long been used to justify protection. Given the experience of the export-oriented developing countries, there are important grounds for believing that, if there are infant industries, once developed, they can—indeed should—be expanded well beyond the size of the domestic market. Restriction of their output levels to the quantities demanded in the domestic market would necessarily reduce the dynamic gains from development of the industry to far smaller magnitudes than would be possible if the industry could be induced to export. Viewed in this light, there is nothing in the infant industry argument that indicates that import substitution, or more generally protection, is preferable to an unbiased or export-oriented trade-and-growth strategy.

**Interdependence and quality.** Efficient production of most manufactured goods entails the use of a wide variety of inputs. As mentioned earlier, countries adopting inward-oriented trade strategies have generally (because of foreign exchange shortage and in order to enforce a degree of protection) required producers to obtain their intermediate inputs from protected domestic producers, if at all possible. When such protected producers have not maintained satisfactory standards of quality control, because of lack of competition, use of their products has raised costs and lowered the quality of output in other firms.

The demands for intermediate inputs are generally fairly specialized. This, in turn, has implied that there were few domestic producers of any particular item. Consequently, production stoppages (or even inadequate quality of inputs) in one sector of the economy very quickly affect other firms and industries. These phenomena, in turn, raise costs for users of the intermediate goods.

Under a liberal trade regime, exporters have access to international markets for their intermediate inputs. Their freedom of choice permits them to tap the cheapest and most reliable source, thus reducing their own production costs. That this may be important is suggested by the fact that in Korea, even with its relatively labor-intensive consumer goods exports in the 1960s, approximately 50 percent of the value of exports represented imports of intermediate goods and raw materials.

**Economic behavior**

The relatively small size of most domestic markets implies that, when industries are encouraged by protection, there will be either very few firms producing a given product or the firms will be very small. Any policy encouraging competition by increasing the number of firms in a given line of activity will result in the reduced size of each firm and hence loss of economies of scale. Moreover, many import-restricting mechanisms indeed preclude the entry of new firms and reduce the possi-
bility of competition regardless of the number in the industry. To cite but one example, a frequently encountered licensing mechanism allocates intermediate goods and raw material imports to firms in proportion to their share of industrial capacity or output. To the extent that outputs and inputs are in more or less fixed proportions to each other and resale of inputs is either costly or prohibited, these mechanisms tend to render market shares fairly rigid, thus inducing a lack of competition among firms. That, together with the small size of market and the limitation of expansion of individual industries to the rate of growth of the domestic market, generally implies that growth rates of most firms and industries will be fairly uniform. Hence, changes in shares would come about more slowly than they would in a more competitive environment. The absence of competition itself probably cuts down the extent to which individual entrepreneurs concern themselves with engineering and economic efficiency.

When industrial growth is based upon the competitive international market, firms can be of optimal economic size without regard to the size or price and demand characteristics of the domestic market. Low-cost firms in individual industries can expand at their desired rate, unconstrained by availability of raw material or the price elasticity of domestic demand for the product. This leads to greater reduction of costs and expansion of output than that observed under protection. Moreover, industries with comparative advantage can increase their shares of industrial output at a more rapid rate when they can profitably export than when their growth is restricted to their shares of the less dynamic domestic market.

Thus, to the extent that competitive markets induce lower-cost activities in individual firms, there is a presumption that an export-oriented trade strategy will induce greater economic and engineering efficiency. For any given distribution of costs within an industry, the possibility of exporting permits more rapidly changing market shares. Finally, changing individual industries’ shares of industrial output can further accelerate the average rate of increase of factor productivity and of the industrial sector.

**Policy formulation**

Government policy instruments that seek to regulate and control through negative means (e.g., import restrictions) are less likely to achieve the intended results than those that create incentives for particular types of economic activities. Nonetheless, there seems to be a widely present temptation for politicians to regulate economic activity rather than to create incentives.

There are obvious limits to the extent to which quantitative controls can be imposed in an export-oriented regime. Since exporters must have ready access to the international market for their inputs, provision of that access substantially reduces the scope for quantitative restrictions upon any category of imports. If quantitative restrictions are highly restrictive, the reward for evading them will be substantial. Their enforcement is possible only with fairly detailed scrutiny of all incoming goods. That scrutiny, in turn, is inconsistent with the ready access required for exporters. Thus, the fact that some imports are intermediate goods used by exporters imposes a limit on the level of protection accorded to any productive activity through quantitative import restrictions. (Of course, imports of luxury consumer goods do not fall in this category.)

Export-oriented policies by their nature reward those who export and do not discriminate among exportables. Since rewards are based upon performance, which in turn is highly correlated with the social profitability of the activity, there is a greater inherent tendency toward less variability in incentives under export promotion than under import substitution.

The feedback to policy makers on the negative effects of policies is much stronger under an export-oriented policy stance than it is under import substitution. For example, an overvalued exchange rate is much more clearly reflected in lagging exports under an outward-oriented policy than would be evident through rising premiums for import licenses under import substitution. It is quite possible that the constraints upon the nature of policies that can be followed, and the quicker feedback to policy makers on the effects of their policies, are at least as important in explaining the success of outward-oriented regimes as are the economic and technological factors considered above. However, quantifying their role would provide a significant research challenge.

One other potentially important, but probably unmeasurable, aspect of feedback should be noted: under import substitution and direct controls over imports, firms have built-in incentives to misrepresent their activities in ways that will induce the receipt of more import licenses and other permissions and privileges. Government officials naturally suspect information presented to them, and thus require verification or check producers’ claims before acting on their applications. Under an export-oriented regime with a fairly realistic exchange rate, the incentive to misrepresent performance is far smaller, as is the scope for doing so: surrender of foreign exchange proceeds is sufficient proof of exports.

**Overview**

The growth rates of the outward-oriented countries certainly suggest that something more than the direct impact of exports was at work in accounting for the superior growth performance of these countries. When one examines critically some of the bases upon which that superior performance may have rested, most of the factors earlier thought to have justified protectionist regimes in fact become arguments for intervention supporting exports instead of production for a protected domestic market.

Whether that “something more” is because export-oriented regimes are de facto closer to the optimal allocation of resources under free trade or whether their superior performance is the result of their ability to capture the dynamic gains associated with an export-oriented strategy is still an open question. What seems certain is that the existence of dynamic factors in no way creates a presumption that growth induced via protection of the domestic market will be in any way superior to growth under neutral or outward-oriented trade strategies.

Insofar as the superior results achieved under export orientation have been the result of the behavioral differences rather than the technological factors discussed earlier, the fact of openness itself, rather than of export growth, is a critical ingredient for rapid increases in output and productivity. This consideration is significant in evaluating the prospects for future growth of developing countries in the context of a potentially slower expansion of world trade: if it is openness itself that conveys benefits due to competition and the nature of policy instruments employed, the gains from export orientation will be almost as great (provided the world economy remains open) with slower growth of world trade as with more rapid growth.