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Trade and Growth: Some Recent Evidence

The famous economist Alfred Marshall said ". . . the causes which determine the economic progress of nations belong to the study of international trade." Yet over the course of this century numerous countries—including several in Latin America, as well as India—have turned away from foreign trade and tried to foster growth through strategies such as import substitution. More recently, however, the phenomenal growth of the outward-oriented economies of East Asia has led to a revival of interest in the relationship between trade and growth. Another reason economists have begun looking at this relationship is a resurgence of interest in theories of growth, which have led them to think about the sources of growth. The recent debate over NAFTA also has focused public attention on the issue. In this *Weekly Letter* I discuss some of the recent work that looks at the evidence for the relationship between trade and growth.

Why trade might matter

Traditional discussions of the role of trade have focused on the change that results in the level of an economy's output; typically, the analysis looks at the one-time reallocation of resources that occurs when the initially closed economy integrates with the rest of the world. Trade increases the size of the market, so that firms have more customers. As I will discuss below, this effect can be important for firms operating in small economies. More recently, the focus has shifted to the relationship between trade and the growth rate of the economy. For instance, Grossman and Helpman (1991) point out that integration with the world economy helps producers learn about new goods and techniques, and the resulting productivity gain in the research lab spurs innovation and growth. While this knowledge can be acquired in other ways, the contacts made through trade are likely to make learning easier. They also point out that trade introduces competition among innovators in different countries, and eliminates the redundancy in research that would occur if researchers in one country were not familiar with innovations in other countries. Since innovation is central to growth, increasing the efficiency of this process will help growth.

The arguments for the effect of trade on growth are not all one-sided; it is possible to imagine scenarios in which the opening of trade leads to a reduction in growth. For instance, Grossman and Helpman show that when economies are of different sizes, the opening of trade between these economies lowers innovation in the smaller economy by causing workers to move from research and development into manufacturing. This lowers the growth rate of the smaller economy. It is worth pointing out that even in this case consumers may be better off because trade leads to increased choice in consumption. In terms of the impact on the growth of the economy, though, it is useful to keep in mind that while trade is likely to help growth, one cannot *a priori* rule out the possibility that trade will harm growth.

Trade and growth in East Asia

The most striking evidence for the beneficial effects of trade on growth comes from the recent performance of the four East Asian economies of Hong Kong, Singapore, South Korea and Taiwan. Between 1965 and 1990, these four economies grew at average annual rates roughly between 6 and 8 percent, more than double the rate recorded by members of the Organization of Economic Cooperation and Development (OECD). By 1991, per capita GDP in Hong Kong and Singapore was above that of Spain and more than twice that of Portugal and Greece, which are the low income members of the OECD. Taiwan has pulled ahead of Portugal and Greece as well, while per capita GDP in South Korea has almost caught up with these two countries.

Various analysts have put forward a diverse list of explanations for this outcome, such as the role of Japanese colonial policies in Korea and Taiwan, or the contribution of U.S. aid and foreign capital. Nevertheless, most writers recognize the central role played by trade in the recent performance of these countries. Chow and Kellman (1993) state that ". . . in our judgment, the export drive of [these four countries] constitutes the major feature and causal factor explaining why [they] succeeded in . . . such a short time."

Helliwell (1994) looks at the performance of Asian economies and uses statistical analysis to show that Asian economies that were more open grew faster than Asian economies that placed restrictions upon trade.

One reason why trade has been central to these economies has to do with their small size: Hong Kong and Singapore are just cities. Without trade, firms in these countries would have had to operate in very small markets; this would have made it difficult, if not impossible, to achieve modern, large-scale methods of production. And the low income levels in South Korea and Taiwan prior to their industrialization also meant that domestic demand would not have been sufficient to allow large scale production. Turning to foreign markets, then, allowed firms in these economies to expand their markets and obtain beneficial scale economies.

It turns out that firms in these economies used foreign trade for more than expanding the size of their markets. Indeed, a notable feature of the trade performance of these countries is that the nature of their exports has changed remarkably; specifically, the composition of exports from these countries has shifted from predominantly primary commodities, such as agricultural products and minerals, to technology-intensive products. For example, between 1965 and 1989, primary commodities as a share of merchandise exports fell from 49 percent to 17 percent in Korea, from 65 percent to 27 percent in Singapore, and from 55 percent to 5 percent in Taiwan. Using statistical techniques, Chow and Kellman show that while the four economies appear to have been relatively more efficient than other countries in exporting resource-based products and manufactured items such as textiles, clothing, and furniture in the mid 1960s, by 1990 they were more likely to have an advantage in nontraditional items such as electrical machinery.

This process of switching to more sophisticated products both helped and was helped by the process of industrialization. It has been shown that while the growth of manufacturing output in these countries led to an increase in the growth of manufactured exports (as might be expected), there also was feedback in the other direction: Growing exports of manufactured goods led not only to growing income but also to a structural transformation of the economy, helping the composition of domestic output evolve from agriculture and relatively simple manufactures to more sophisticated products.

Evidence from developed countries

The period after the Second World War was one of rapid growth in Europe. A recent study by Dan Ben-David (1993) provides evidence about the role played by trade in that process. While the author formally looks at the role of trade in eliminating income differences among members of the European Economic Community (EEC), his analysis is relevant to us because it tells us how trade helped low-income members of the EEC to grow and catch up with the high-income members during a period of rapid growth for most member countries.

Ben-David points out that a formal agreement creating the EEC was signed in 1957 by France, West Germany, Belgium, the Netherlands, Luxembourg, and Italy. The process of eliminating tariffs began in January 1959, with the bulk of integration among these countries taking place from 1959 to 1968. Over these ten years, the ratio of intra-EEC imports to GDP roughly doubled, from about 5 percent to 10 percent, while the corresponding ratio for imports from outside the EEC did not appear to have any trend. This increase in intra-EEC trade was accompanied by a marked decline in income differentials among member countries. As noted above, this convergence took place during a period of unusually high growth for nearly all the member countries. Italy, which was the poorest member of the EEC in 1957, grew at an average annual rate around 5.5 percent over the 1959–1968 period; growth in France and the Netherlands averaged around 4.5 percent, while Belgium and Germany grew at an average annual rate close to 4 percent.

It is natural to ask whether the rapid convergence during this period occurred because member countries were affected differentially by the Second World War and were gradually returning to relative income levels that prevailed prior to the war. Germany is the obvious example that comes to mind here. Ben-David presents data since the 1870s that excludes Germany and shows that the phenomenon of convergence observed after the 1950s is unique to this period; while relative income levels did fluctuate from 1870 to 1950, no tendency to convergence is evident in the data prior to the EEC treaty.

Recent research at the International Monetary Fund also finds evidence for the positive effects of trade. Coe and Moghadam (1993) show that over the 1971–1975 period trade within the members of the EEC contributed 1.3 percent annually to potential output growth in France, even after

accounting for labor input and the capital stock. Trade also contributed roughly 0.5 percent per year over the 1976–1991 period. They also discuss some other research which shows that similar, though smaller, effects can be estimated for Germany as well. Note that while this analysis shows that increasing the volume of trade among nations has a positive impact on the rate of growth, it does not establish that the effect on the growth rate is permanent.

Conclusions

Economic theory provides us with a number of reasons to believe that international trade can enhance growth. However, theory also suggests that trade can sometimes work in the opposite direction. The empirical evidence appears more sanguine. Studies of the rapidly growing east Asian economies demonstrate that the growth in trade has contributed both to economic growth and to the structural transformation of these economies. Looking at the experience of the developed economies during the 1960s and early 1970s provides supporting evidence for the expansionary role of trade as well; the removal of barriers to trade among these countries led to an expansion of trade and was accompanied by rapid growth.

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