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Trade and Economic Growth, Part I

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International trade — the essence of globalization — benefits the world economy as a whole. It allows people, regions and nations to specialize in the production of what they do best, to enjoy the economies of large-scale production and to buy more cheaply those things that others do best. Impediments to trade limit the benefits of trade.

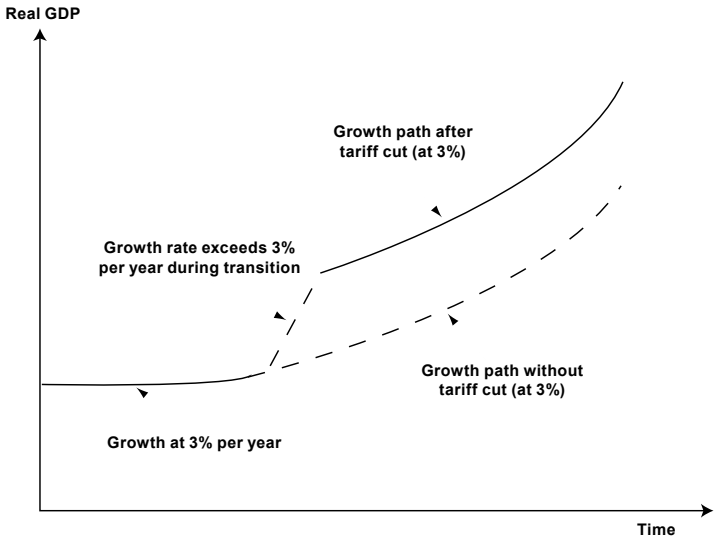
Freer trade — from reduced tariffs, regulations and restrictions — permits an economy to make better use of its resources but does not automatically give a country a new and much higher growth rate. Its main benefit is its effect on the level of output rather than on the long-term rate of growth. Trade liberalization stimulates growth and efficiency by allowing producers to exploit areas in which they have a comparative advantage over foreign producers and by reducing their real costs.

Comparative Advantage. One way that trade contributes to an increase in economic output is through comparative advantage, which creates more value with the same resources.

For example, in 1983 almost all cars in China were versions of the 1942 Pontiac sedan, for which the dies and machinery had been shipped to China decades earlier. These cars weighed about two tons and had a voracious appetite for fuel. Sprinkled in among these behemoths, however, were a few contemporary Toyotas. The Chinese realized that if they took the same value of resources used to make one of these big old cars, shifted those resources to produce textiles and shoes and then exported them, they could use the proceeds to buy two brand-new Toyotas for the same amount of resources it took to produce one gas guzzler.

Trade Liberalization. Countries can also become more efficient by reducing tariffs. For example, consider a hypothetical country with a 50 percent import tariff. Because of the tariff, a dollar's worth of import substitutes uses resources up to $1.50, while it takes only a dollar's worth of resources (devoted to exports) to buy an equivalent imported product. Lowering the tariff to 10 percent would reduce this inefficiency in resource use. The 40 cents of resources saved could be used to buy more imports or invested to produce more exports. With liberalization, the tariff-inclusive price of imports falls, and resources shift to export production.

Transition to a Higher Level of Gross Domestic Product Due to a Tariff Cut



Source: Arnold C. Harberger, *On the Process of Growth and Economic Policy in Developing Countries*, U.S. Agency for International Development, PPC Issue Paper No. 13, December 2005.

The tariff reduction's net benefit is the gain to trade minus the cost. For the first incremental increase in trade (at the initial tariff rate), the benefit exceeds the cost by 50 percent. For the final incremental increase in trade (after the tariff reduction), the excess benefit is 10 percent. The "average" net benefit is thus 30 percent [(50 percent + 10 percent) ÷ 2].

Let us assume that as a result of the tariff reduction, there is a spectacular increase in trade, with exports rising from 10 percent to 30 percent of gross domestic product (GDP). (Although this is a hypothetical case, such a large increase in trade is not unrealistic — see "Trade and Growth, Part II.") Applying the average net benefit (30 percent) to the

incremental increase in exports (20 percent of GDP), we obtain 6 percent of GDP as the overall benefit of the liberalization (30 percent x 20 percent = 6 percent).

Many people are shocked that such generous assumptions from major trade liberalization produce so small a net increase in GDP; but this benefit will continue indefinitely into the future as long as the liberalized policies remain in place. Consider:

- If the economy is not growing, the present value of all future years' gains from the tariff reduction would be 120 percent of the first year's GDP at a 5 percent discount rate. (Present value = annual increase in GDP ÷ discount rate.)
- If GDP is growing at 3 percent a year, the 6 percent benefit from the tariff reduction is bigger; at a 5 percent discount rate it rises to 300 percent of the first year's GDP. [Present value = first year's increase in GDP ÷ (discount rate – rate of growth of GDP).]

So the benefits are not as small as they may appear at first glance.

The important message in this analysis is that the liberalization has an impact on the *level* of GDP, or economic welfare, not on the *rate* of growth. The example assumes an instantaneous jump of 6 percent in GDP once the liberalization is instituted. More likely there would be a protracted transition period where the 3 percent growth rate would move to, say, 4 percent for 6 years, then revert to the 3 percent growth rate. So the rate of growth is not totally unaffected, but it changes only as a result of the transition from one level to another. [See the figure.] Thus, liberalization produces a modest spurt of growth as the economy goes from a lower to higher level of efficiency.

Real Cost Reduction via Free Trade. One of the most important sources of economic growth is the reduction of firms' real costs through increases in the productivity of labor and capital used to produce goods. Real cost reduction is a constant, never-ending objective of business people. Examples of real cost reduction include mechanizing loading, computerizing payrolls, downsizing operations or outsourcing goods and services.

Free trade can be a major catalyst for real cost reduction. Consider, for example, American investment in a manufacturing operation in China. Rather than further lowering China's already-low manufacturing costs, the investment allows the American firm to take advantage of those low costs. This represents a great cost saving for the American firm, compared to its alternative costs in the United States, and will be reflected partly in a high rate of return on the investment and partly in a significantly lower price for the product in the world market.

The increase in investment due to trade liberalization helps China's growth rate by contributing capital. The benefit for the American economy is more subtle. The deepest principle underlying the economics of international trade is that a country pays for its imports with its exports. So when production is shifted from the United States to China, the same U.S. consumption of the product can be obtained at a lower real cost to the economy. Instead of using $10 million worth of resources to produce one million units at a $10 cost per unit, the American economy can now obtain the same million units from China at $5 per unit.

The impact on the growth rate in China comes from an incremental increase in its capital stock, which adds to China's GDP and keeps generating output in future years, but does not cause further GDP growth each year.

On the American side, the potential gain of $5 million in GDP from releasing $5 million in resources to produce other goods will likely continue year after year for some time but will not mean a jump of an additional $5 million each year. Rather, the economy will gain year after year from what these $5 million of resources are able to produce.

Conclusion. International trade raises the *level* of GDP in both the importing and exporting country but not the *rate* of GDP growth. Competition typically stimulates real cost reduction, and thus we can expect that in the more competitive situation that prevails after a trade liberalization, people in the affected industries will probably work harder to reduce real costs than they would have under the umbrella of protection.

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