

THE LINKS BETWEEN ECONOMIC LIBERALIZATION AND PRODUCTIVITY GROWTH

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ABSTRACT

This is a literature review about the relationship between liberalization and productivity growth. Liberalization can make an economy more competitive, this in return can make the same economy more productive. This is of course a hypothesis rather than a fact . In this paper, we shed some light on these issues.

Key Notes: Trade liberalization, productivity growth.

ÖZET

Bu bir liberalleşmeyle verimlilik arasındaki ilişkiyi anlatan literatür tarama makalesidir. Liberalleşme bir ekonomiyi daha rekabetçi yapabilir, daha rekabetçi bir yapı da daha verimli bir ekonomik yapı çıkarabilir. Bu gerçeklikten öte bir hipotezdir. Bu makalede bu tür sorunlar üzerine ışık tutmaya çalıştık.

Anahtar Kelimeler : Liberalleşme, verimlilik artışı

I. Introduction

This descriptive paper contains a literature review of the links between economic liberalization in general (which includes trade, political, financial, and other types of liberalization) and productivity growth. Liberalization implies an increased role for market forces in the economy. There have been earlier studies, looking at the relationship between trade regimes and productivity growth. Those models did not analyze the relationship between liberalization and productivity growth per se.

This paper concerns the possible effects of liberalization on productivity growth.. Several studies have examined the effects of trade liberalization on total factor productivity growth for different developing countries such as India and Korea. Productivity growth is important since we might be curious of the sources of the growth. If the growth is mainly due to factor accumulation instead of productivity growth, then it might not be sustainable. Previous findings for the contribution of total factor productivity growth to total output growth have yielded contradictory results. Many developing countries grew via “factor

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accumulation”, instead of improved technological change via total factor productivity growth. It would be interesting and important to look at how much total factor productivity growth contributed to the total output growth in a particular country.

After the pioneering work of Hall (1988, 1990), there were many case studies, investigating the empirical relationship among trade liberalization, market discipline, and productivity growth, such as Tybout et al. (1991), Levinsohn (1993), Harrison (1994), Krishna and Mitra (1998), and Kim (2000). They were only investigating the effects of trade liberalization, not necessarily “liberalization in general” as mentioned before. Also, they examined the only private sector firms’ productivity growth, paying no attention to public sector firms. Some countries, such as India, Turkey, and Egypt, however, have had, until recently, before privatization, a huge public sector. Therefore, given sufficient data sets, the same kind of analysis can be extended to the public sector firms as well.

2. Links between Liberalization and Productivity Growth

In the first part of this section, I review the links between free trade and liberalization. In the second part, links between liberalization in general and productivity growth will be reviewed.

The traditional argument for gains from free trade is based on the concept of allocative efficiency. Exposure to international prices, in a perfectly competitive environment, tends to reallocate factors of production toward areas of comparative advantage. These gains in economic efficiency are well known. The recent emphasis on imperfectly competitive markets in international trade creates another argument for gains from trade: in a protected market dominated by a few domestic firms (usually the case for many developing countries), trade reform increases competition. According to Helpman and Krugman (1989), the impact of policy changes in the presence of imperfect competition is ambiguous. In the presence of imperfect competition, the marginal impact on welfare will depend on (Srivastava ,1996),

1. A volume-of-trade effect
2. A profit shifting effect
3. A scale effect
4. Efficiency effect

With respect to last effect(efficiency effect), Rodrik (1992a) illustrates the welfare effect of a change in trade policy with the expression

$$dW = \sum (p_j - p_j^w) dM_j + \sum (p_j - c_j) dQ_j + \sum n_j c_j [1 - (1/\theta_j)] dq_j + \sum Q_j c_{jt} dt_j$$

where $c_j(\mathbf{w}, x_j; t_j)$ is the average cost function for the representative firm

in sector J, \mathbf{w} is a vector of input prices, t_j is a technical efficiency parameter, $c_{jt} = \partial c(\cdot) / \partial t_j^{-1}$, n and q are the number of firms and firm-level output; Q and M are the sectoral output and imports; θ is the ratio of average cost to marginal cost and is a measure of scale economies; W is welfare measured in money units, and p^w, p are world prices and domestic prices, respectively. Only the first of the effects above exists in the traditional analysis, where the welfare gains come from increased imports since domestic prices are higher than international prices in the sector. Of course, this need not be true if there are production and consumption distortions.

Scale effects and profit shifting effects could conflict with the first effect if a sector has high profits margins and is not exploiting the economies of scale as occurred in many developing countries until they started liberalizing their trade policies. These effects are not directly related to the link between trade liberalization (or freer trade) and productivity growth. In this paper, I will discuss the theoretical arguments, generally made in the literature, linking liberalization to productivity growth.

2.1. Liberalization and Productivity

There are three categories of arguments linking liberalization to growth of productivity and output. This section draws heavily on Rodrik (1992b).

¹ This partial derivative is negative, showing that technological change decreases average costs.

X-efficiency

There are at least two types of arguments linking the reduction of X-inefficiency with liberalization. In the first of these, X-inefficiency is interpreted as managerial slack, and the popular argument is that a “challenge-response” mechanism induced by a more competitive environment will reduce this. Why work harder to improve productivity and cut costs if foreign competition presents little threat? In its simplest form, this type of argument relies on satisficing, rather than optimizing, behavior on the part of entrepreneurs, and requires further that domestic competition be not a severe enough threat to keep them on their toes.

This argument is not theoretically rigorous. A larger market share due to policy restraints, can increase the marginal benefit of a cost reduction for an individual firm. So, with optimizing behavior, it cannot be shown in general that protection weakens the pursuit of higher productivity.

A more satisfactory theoretical argument for X-efficiency is provided by the possibility that liberalization may influence a manager’s choice between leisure and labour. Assume that reducing X-inefficiency requires some effort and diligence, which cuts some time for leisure. Protection increases the rents to entrepreneurs, who take some of their increased income in the forms of leisure. As the general effort declines, technical efficiency also declines. Liberalization would then reverse the process. This line of argument, however, is valid when income effect outweighs substitution effects, that is, when the labour supply curve is backward bending; as indicated before, the substitution effect will go in the other direction.

Macroeconomic instability

The second major line of reasoning relies on the evidence that inward-oriented regimes such as Turkey before the 1980s are prone to foreign exchange bottlenecks and stop-go macroeconomic cycles. This instability in macroeconomic variables and the consequent result for output periodically falling below and recovering from lower capacity utilization are certainly very important for the growth in measured productivity. In addition, overvaluation of domestic currency and the shortages of imported inputs restrict the exploitation of foreign markets since it restricts the benefits of scale economies. Although these arguments capture an important part of the truth, they say nothing about trade policy. Conceptually, any level of trade protection can be consistent with

macroeconomic stability, realistic exchange rates, and other policies. The view that restrictive and/or protectionist trade policy would lead to current account deficits can be confronted with examples of Taiwan and Korea in the 1960s. This view of “macroeconomic instability” stems from the literature on foreign exchange constraints, and states that in developing countries imported capital and intermediate goods are not perfectly substitutable with their domestically produced counterparts since imported capital and intermediate goods have new technology embodied in them. Restrictive policies, therefore, would lead to a less efficient performance than policies that increase the availability of imported capital and intermediate goods like export promotion policies. In this setting, exports are important only because they can create funding for imported capital and intermediate goods. Therefore, a policy that liberalizes trade can help the economy to avoid macroeconomic instability.

Scale Economies

This line of reasoning is based on the existence of a positive association between the growth of output and the growth of productivity, that is, expanding the market through trade should therefore increase productivity and lead to cost reduction. In other words, more open trade regimes, it is claimed, are conducive to lower average costs since domestic firms will take advantage of larger levels of outputs by participating in the world markets. As long as trade liberalization leads to an expansion of firms and sectors with increasing returns to scale, the traditional allocative efficiency argument can apply to enhanced productivity growth. But getting from one point to another can be somewhat problematic. If increasing returns to scale activities are predominantly located among import-competing industries, then opening these industries to trade might not expand these activities. One argument in this line of thinking is that protection increases profitability and attracts other firms in the industry. One possible result of this might be too many firms producing too many varieties of products. The hope for liberalization is that the ensuing competition and shake-up of the industry will lead to a more rational resource use, with fewer firms operating at larger levels of output and therefore higher levels of productivity. Rationalization requires free entry and exit. This assumption has a poor empirical relevance in many developing countries.

From the above, it is obvious that the impact of trade reforms on productivity, in an imperfectly competitive environment, is uncertain. And the firm and industry-based empirical evidence across different countries is also inconclusive.

The debate over the newly industrialized countries in East Asia has mainly centered around two related issues: the relationship between trade policy and total factor productivity. Some authors explained the “Asian Miracle” with increased total factor productivity. Others questioned this idea of increased total factor productivity, saying that all growth was coming from factor accumulation. The key reason for the debate on the first issue (trade policy) , is precisely the fact that there is no clear and general understanding regarding the dynamic benefits of trade liberalization. Until recently, there have been no rigorous theoretical models dynamically linking trade to growth. The traditional arguments for export-led growth include single and anecdotal examples about how international trade enhanced productivity growth by promoting innovation, cost cutting, and acquisition of new technology. Despite the intuitive appeal of these arguments, their theoretical foundations were not always so rigorous. Rodrik (1995) provides an overview and criticism of the export-led growth story.

Recently, however, some studies have made this link. The microeconomic foundations of this literature emphasize the potential gains from increased competition and exploitation of scale economies that could result from a liberalization policy. Increased competition and exposure to foreign markets make imitation and diffusion of improved technology easier. Then, there are macroeconomic arguments, as well, that link exchange rate policies to the exploitation of scale economies through increased exports and with better capacity utilization resulting from availability of imported inputs (Srivastava 1996).

In a recent paper on trade liberalization and growth in a cross-section of developing countries, Greenaway et al. (2002) test a dynamic model of growth in the context of several samples and , more importantly, several different measures of liberalization. Their results suggest that liberalization may impact positively on growth of real GDP per capita. The effect, however, would appear to be lagged and relatively modest. Their study points out the difficulty of finding an appropriate measure for liberalization as well. At the conceptual level, they define liberalization as tariff liberalization, a move towards relative price neutrality, and finally the substitution of more efficient for less efficient instruments, typically tariffs for quotas. In the empirical trade liberalization literature, different measures of liberalization have been used such as changes in nominal tariffs, relative price neutrality or changes in the degree of anti-export bias, some kind of index liberalization. All the measures mentioned above have some kinds of problems embodied with them. Changes in nominal tariffs have

the virtue of simplicity, but have some problems as well. For example, nominal tariffs might well be lowered but at the same time, anti-dumping measures or safeguard measures introduced. In terms of the degree of anti-export bias, there are extremely challenging data requirements, which limit their use. In terms of liberalization indexes, they are subjective. Therefore, empirically it is also very ambiguous to find and interpret the measures of trade liberalization.

3. Conclusion

In this literature review, we shed some light on the relationship between liberalization and total factor productivity growth. As is clear from the main body of the text that we are not sure whether liberalization increases the productivity under all circumstances. That is, theory does not provide us with a full fledged complete model that can help us understand all these issues. Therefore, the relationship between liberalization and productivity growth should be tested empirically for different countries/industries/contexts. This is a subject of a different paper.

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