Productivity from the Bottom Up: Firms and Resource Allocation in Latin America

Consider a leading sports team. To succeed, it must be staffed with good players and they must be placed in the right positions. Just like a successful sports team, the productivity of an economy depends on two basic factors: the productivity of its firms (the players) and the allocation of its available resources (labor and capital) among its firms (the positions). And just as a team full of stars can play poorly if players are assigned to the wrong positions, aggregate productivity depends on much more than the productivity of individual firms. Of course, it would be difficult to put together a successful team—or economy—with weak or inexperienced players.

The findings presented in this chapter suggest that, first, the quality of players in Latin America varies widely, with a few very productive firms and many firms of extremely low productivity. If anything, the region suffers from a deficit of firms with medium levels of productivity. There is also a strong relationship between productivity and size: the more productive firms tend to be larger. This implies that many resources are locked up in very small—often one-person—firms, of very low productivity. If Latin American countries had the same share of medium and high productivity firms as the United States, the region’s productivity and gross domestic product (GDP) would nearly double. In contrast, attempting to increase aggregate productivity by increasing the productivity of the weakest and smallest firms would seemingly yield very low returns in terms of aggregate productivity unless somehow, enormous increases in the productivity of the weakest firms could be attained.

Second, not only is Latin America a region of mostly weak players, but it also makes poor use of existing resources (labor and capital). With existing
technologies, productivity and GDP in the region could grow at a rate of 40–60 percent depending on the country, simply by reassigning labor and capital more efficiently across existing firms.

The great dispersion in firms’ productivity and the inefficient use of available resources prompts a number of questions. What explains the low proportion of firms with medium levels of productivity? How can highly efficient firms coexist with firms that are much less efficient at producing similar goods? How could the region make better use of existing resources? What is the role of market and government failures in explaining productivity and resource allocation across Latin American firms?

**Productivity beyond Technology**

Typically, economists estimate aggregate productivity growth as the portion of GDP growth that cannot be explained by either the accumulation of physical and human capital or the growth of employment. This unexplained portion reflects how well countries are able to extract more output out of a given set of inputs. However, since this method calculates productivity as a residual, productivity becomes—in Robert Solow’s words, “a measure of our ignorance.” Since Solow’s seminal work fifty years ago, this residual has often been treated as a measure of technology, with technological change considered the main determinant of productivity growth.

In recent years, however, a number of new studies, mostly for developed economies, are beginning to look beyond aggregated figures to better understand what drives this residual. Using microdata from individual establishments, this research has shown that behind the aggregate figures of productivity lies a wide dispersion in productivity levels across firms, even within narrowly defined industries producing rather homogenous goods (Eslava et al. 2004; Foster, Haltiwanger, and Syverson 2008; and Syverson 2004, 2008). This implies that low productivity countries may have firms that manage to achieve levels of efficiency comparable or close to those of the world frontier in that industry. Indeed, the heterogeneity of productivity within each country is much greater than the dispersion in productivity across poor and rich countries (Banerjee and Duflo 2005).

The wide dispersion in firms’ productivity prompts a number of new insights. The most obvious one is that since aggregate productivity is given by the average productivity of all firms weighted by firms’ size, low productivity economies are those in which there are either a large number of low productivity firms, or for some reason, high productivity firms are small, and thus they have little weight in the aggregate. This in turn raises the question of what determines the mix of firms that operate in