

Comment

Daniel E. Ortega: Most economists are likely to agree with Paul Krugman’s assertion that “productivity isn’t everything, but in the long run, it is almost everything” (Krugman 1994). That idea has been underscored in the Latin American context in both policy and academic circles (Restuccia 2011). There is little doubt that providing a sustainable solution to the region’s social ills requires a significant increase in the amount of output that each worker produces in a given amount of time. The question, of course, is how to do it.

Christian Daude’s paper provides a useful overview of methods that seek to quantify the role of observable and mostly measurable factors such as physical capital and labor in explaining output per worker, and as a residual, also the role of technology—which includes, of course, many things. The main conclusion of the paper is that functional form assumptions about the technological frontier—and the allowance for cross-country heterogeneity in access to technologies in a general sense—have sizable effects on the estimated weight given to factors in explaining output per worker. The author suggests that the standard development accounting exercises understate the role of factors and overstate the role of total factor productivity (TFP), especially so once a measure of the quality of education is included as a complement to quantity measures alone. Finally, the paper suggests that these types of analyses need to be undertaken on a country-by-country basis, as the quantitative results may differ significantly between countries.

Certainly, efforts to better understand the sources of Latin America’s low output per worker relative to that of the United States are important for gaining a general picture on the likely bottlenecks for economic development. However, and this is recognized to some extent in the paper, there are tight limits on how much guidance can be obtained for policy analysis. The large differences in the contribution of TFP to output per worker between several Central American countries underscore both the relevance of country-specific analyses and the limits of the methodology to guide understanding of the

causes of low productivity. The main problem is that the levels as well as the quality of human and physical capital are outcomes in themselves, just as much as output per worker or per hours worked, and it is very difficult to know how much of each is determined by the level or trend of the others. The challenges in identifying the relationship between factors and productivity go beyond their likely reverse causation; the key identification hurdle in this case is one of omitted variables.

Although it is reasonable to assume that countries' technological possibilities differ, it is much less clear that the data envelope used in the paper provides an adequate measure of the differences. The interpretation is that whatever constraints a country faces that make it underperform relative to others are part of the efficiency gap that it must overcome. However, the nature of the constraints that each country faces may be different, and their true potential output may therefore also be different. It may well be the case that for the same capital-labor ratio in 1980, Ecuador's potential output was lower than Brazil's;¹ so, even though it would appear that Ecuador was less efficient in 1980 than Brazil, it could be exactly the opposite. The problem is that the data envelope—which for each level of capital-labor ratio compares the best performer in the sample with the rest—gives no insight into the reasons for such differences and therefore very little insight into what might be done to overcome them.

That in Nicaragua TFP accounts for 60 percent of output per worker but only 40 percent in El Salvador or that the shares are 30 percent in both economies does not really tell us much about whether we should pay attention to the quality of education, to the maintenance of public infrastructure, or to financial constraints that may be limiting the private sector's access to new machines. These issues are not resolved by making the TFP or efficiency gap estimations more flexible or sophisticated. In fact, even though these alternative methods may suggest a larger or smaller contribution of factor accumulation to productivity, it turns out that TFP/efficiency, the "measure of our ignorance" (Abramovitz 1956), invariably represents upward of 30 percent of the output gap with respect to the United States. So the real challenge faced by the less developed countries in the world is to answer the "how" question: how can we make our workers produce more given a certain amount of capital? Are there better ways of organizing production within and across

1. Note in figure 7 in the paper that Ecuador and Brazil had similar capital-labor ratios in 1980 but that Brazil had much higher output per worker.

firms? Is there something specific in each country or even city that could make it easier and more attractive to set up high-growth firms?

There is little question that productivity is the main challenge for Latin America. The problem is that we do not really know much about how to increase it. Do we need more capital? Probably—but for that, we need better financial markets; and for that, we need stronger conflict-resolution mechanisms and more trustworthy institutions; and for that, we need a better trained and socially valued civil service. Do we need more employable workers that firms can hire and keep out of the informal sector? Yes. But that requires enough available jobs to make it worthwhile for youngsters to stay in school and invest in developing their skills, but job availability, in turn, is related to the high costs of training workers on the job, which deters firms from offering such vacancies. So we may be trapped in a low-productivity, high-informality equilibrium, wherein labor market skills depreciate rapidly in the informal sector and potential employers do not invest in new machines and organizational capital due to the low quality of the labor force and lack of financing. Of course, these are central questions in development economics, and we need to bring to bear all the tools that we have available in order to answer them.

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