The determinants of economic growth

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Opinion

Ever since the days of Adam Smith, economists have struggled to understand the process of economic growth. While this effort has produced a better understanding of the determinants of growth, many puzzles remain unsolved. At the beginning of the 21st century it has become evident that there is no "cookbook recipe" solution that generates economic growth. Rather, the process of economic growth is quite complex, involving the interplay among many factors that must be present if a country is to succeed.

A survey of recent research in this area indicates that the story of economic growth revolves around four main themes. First, the accumulation of capital — financial, physical and human — is important, but it only accounts for a fraction of the variation across countries in income per capita levels and their rate of growth. Evidently other factors are also at play.

The second factor is the efficiency with which inputs are utilized in the production process. Economists refer to this element as total factor productivity (TFP). Differences in TFP growth play a major role in accounting for the observed cross-country variation in income per worker and patterns of economic growth. However, the determinants of TFP growth constitute one of those puzzles that remain unsolved in this field. What we do know is that TFP growth appears to be largely a function of technological progress and innovation. Therefore, technological development must be at the heart of any strategy to sustain economic growth over the long term.

Third, the degree of openness to the world has become increasingly important because knowledge flows across national borders and foreign trade and investment affect the incentives to innovate, to imitate, and to use new technologies.

Finally, during the past two decades economists noted that countries that start with similar labor and capital endowments can follow dramatically different developmental paths, even after accounting for differences in investment, trade patterns, and technological change This puzzle led some scholars to hypothesize that differences in growth rates across countries are caused by differences in institutional structures, because institutions affect incentives to innovate and develop new technologies, the incentives to reorganize production in order to exploit new opportunities, and the incentives to accumulate capital.

How does Puerto Rico fare across these four dimensions?

In terms of physical capital accumulation, Puerto Rico has made enormous gains during the last fifty years. The public sector has spent a massive amount of resources in roads, ports, sewers, electric power lines, telephone service and other physical infrastructure. While in terms of human capital the progress has been truly remarkable. For example, in 1950 the average Puerto Rican had 3.7 years of schooling, compared with 11 years in 2000. However, several challenges remain: most of Puerto Rico's physical infrastructure is showing its age and there are signs that the quality of its education is not up to par.

The story with regards to TFP is not as good. During the 1950-75 period, Puerto Rican TFP experienced growth at a healthy clip. Since 1975, TFP has grown at a less rapid pace and by some measures it was negative during the 1990-2003 period. The reasons for this slowdown are not entirely clear, but it is worthy of note that it coincided with an explosion in government transfers and a substantial increase in government payroll. However, further research is needed to fully understand the behavior of Puerto Rico TFP growth.

In terms of engagement with the world, Puerto Rico historically has been an open economy and currently it is one of the most open to trade, as measured by the ratio of the sum of exports and imports to GDP and by the amount of foreign direct investment it receives. However, we have not been sufficiently assertive in our engagement with the world. Puerto Rico has not used its industrial incentives aggressively to promote the transfer of foreign knowledge to local resources, to license new technologies, or to bring R&D operations to the island.

Finally, Puerto Rico experienced a period of substantial economic and political institution-building during the 1940s and 50s. Many of the formal rules and regulations, as well as many of the organizations, that currently govern economic life in Puerto Rico all came into being during this period. By and large, this institutional framework provided the right incentives for economic growth in Puerto Rico during the 25-year period between 1950 and 1975.

However, institutions that are good for one period are not necessarily good for another. From an economic perspective, good institutions ensure at least two desirable outcomes: first, they guarantee that there is relatively equal access to economic opportunity, what is commonly referred as a "level playing field"; and second, they ensure that those who provide labor and capital are appropriately rewarded and their property rights are protected. Puerto Rico may be reaching the outer limits of its institutional framework, as the economic playing field is increasingly tilted in favor of those with political connections and the providers of both labor and capital are concerned about the protection of their respective rights. Simply put, our institutions have to evolve in order to restore economic growth in Puerto Rico.

In conclusion, Puerto Rico needs to improve its education and its physical infrastructure; to promote R&D and innovation; and to substantially overhaul its economic and political institutions. The Puerto Rican economy.probably can continue to crawl along in the absence of these policy changes, just as a Boeing 747 four-engine jet plane can fly with only three or two functioning engines, but its performance will be considerably less than optimal. In that case, it should not be surprising if it turns out that our economic growth is not sufficient to support the quality of life that all Puerto Ricans deserve and desire.

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