RETHINKING LATIN AMERICA'S DEVELOPMENT STRATEGY

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While Latin America performed relatively well in the context of the global economic crisis, the reality is that the region has a growth problem. As the region recovers from the crisis and GDP growth rates approach the 4-5 percent range, central banks are worrying about inflationary pressures and beginning to discuss increases in policy interest rates to moderate aggregate demand. What this suggests is that potential GDP growth is too low in a region where poverty and unemployment are still major problems.

The growth problem is not new to Latin America. According to the historical databases constructed by Maddison (2003), per-capita GDP growth in Latin America has been systematically below that of the U.S. since at least 1700 (the only exception is the 1871-1929 period, when growth rates were slightly higher in Latin America). For example, between 1980 and 2000, average income per capita growth was only 0.4 percent in Latin America compared to 2 percent in the U.S. (See Table 1).

But the problem is not just in relation to the U.S. More worrisome is perhaps the evidence suggesting that the problem of economic divergence in Latin America relative to the rest of the world ─with the only exception of Africa─ has worsened in recent decades.

In fact, per capita income in Latin America relative to the United States, the G-8 and East Asia is low and has shown a declining trend. As much of the differences in income per capita are the result of differences in output per worker and labor market participation trends have been similar in Latin America relative to the rest of the world, it is useful to express comparisons using the latter measure. In 1980, output per worker in Latin America was roughly 35 percent of the U.S. level; it is now only 20 percent. In 1960, output per worker was more than one and a half times greater in Latin America than in East Asia; it is now 50 percent smaller (See Figure 1). These facts illustrate that Latin America has a growth problem.

To gain some understanding of the problem, economists usually apply a growth decomposition exercise that separates the contribution to growth of physical and human capital. The residual or the unexplained part is called total factor productivity, which is a measure of how efficiently the factors of production are used. It turns out that these decompositions systematically show that Latin America's low growth is essentially a total factor productivity (TFP) problem. As low TFP is more a symptom than a syndrome, the solution is more elusive than simply targeting physical and human capital investment.

In a recent paper, Blyde, Daude and Fernández-Arias (2009) calculate the TFP relative to the United States, the G8 and East Asia for each Latin American country.[1] Similarly to what the output per

[1] They use a perpetual inventory methodology (with a 7 percent depreciation rate) to compute capital stocks, and the methodology in Hall and Jones (1999) to compute human capital (taking the Barro-Lee schooling database and use rates

worker data shows, relative TFP has also been declining since the 1960s (see Figure 2). This pattern is present in almost every single country in the region (Figure 3). One interesting result that comes out of the decomposition exercise is that human capital per worker does not seem to be part of the growth problem. In fact, as shown in Figure 4, human capital per worker has been increasing steadily in most countries of the region. The gap in this regard vis-à-vis the U.S. is much smaller than in the other components of the production function.

Low TFP can be the result of many forces. One factor that has been singled out is the structure and composition of output in LAC. Latin America continues to be very dependent on primary commodities. Table 2 shows the results of estimating simple OLS regressions of the share of commodities in total exports on a time trend (plus a constant), using the share to total commodities but also seven categories which include petroleum, tropical exports, cereal exports, raw material exports, forest exports and animal exports. Although the coefficient on the trend variable has been negative and significant in the case of total commodity exports (with the only exception of Uruguay), the pattern is different for the specific commodities in some countries. For example, this is the case for some oil producers, like Argentina, Brazil, Colombia and Ecuador, where the share of petroleum exports in total exports has been increasing. This is also the case for forest products in some Caribbean nations.

Traditional views of development see commodities as homogeneous and "hence bereft of the benefits of Schumpeterian growth though expanding varieties" (see Mandel, 2009). In practice, endogenous growth theories based on upgrading varieties and qualities go beyond manufactures and can be extended to commodities. Therefore, contrary to conventional wisdom, some commodities are highly differentiated products. But this is not always the case.

Metals offer a good example of commodity industries that resemble many characteristics of the highly differentiated manufactured goods. At least in this case, it has been found that there is a high degree of intra-industry trade (i.e. trade of different varieties of the same commodity type). There is, therefore, room for commodities to differentiate themselves through quality and to fit the theoretical 'quality ladder growth models'. In fact, Mandel (2009) has found that changes in variety quality accounts for half the market share growth of the LAC metal exports to the U.S., and that LAC exporters are diversifying away from the low-value ores and concentrates and further involved in the intermediate and finished levels of processing.

However, product upgrades do not take place spontaneously. Given the long-run growth record and the limited progress in improving TFP, Latin America needs to strengthen its productive structure by fostering productive development policies (PDPs), which include policies related to the structure of production (commonly known as industrial policies). But more generally, productive development policies are aimed at the promotion of competitiveness and overall economic development, including education, health, infrastructure and investment, or business climate. To put it in terms of Rodríguez-Clare (2006), "the final objective [of PDPs] is to raise growth and improve the competitiveness of the overall economy while maintaining a rising trend in living standards."

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of return to education are 13.4 percent for the first four years of schooling, 10.1 percent for the next four years of schooling and 6.8 percent for education beyond the eighth year.

In the absence of market failures, free markets achieve an optimal allocation of resources. If market failures exist, however, there is a potential for industrial policies to achieve a better allocation of resources than the one that would be achieved by the market. Market failures that justify this type of interventions include market concentration, externalities, public goods and missing markets. Market power is a situation in which a market agent is able to set prices or quantities; an externality occurs when an agent's action affects third parties, but the action is not reflected in any price (no reward-punish incentive structure). Public goods are non-rival and non-excludable goods (the marginal cost of one additional unit is zero and provides benefits that no one can be excluded from enjoying); missing markets are cases in which the economy lacks certain key markets.

Hausmann, Rodrik and Sabel (2008) have classified market failures that developing countries face in three groups: self-discovery externalities, coordination failures and lack of public inputs. The first category refers to information externalities, which reflect the fact that developing countries might not be aware of the products that are potentially efficiently produced in their economies (because of lack of previous experience). If this is the case, firms have to engage in costly experiments to discover their potential advantages. Nevertheless, firms face no incentives in doing so because once they have discovered the country's advantage other firms will follow and benefit from the discovery without sharing the costs. In other words, the public-good nature of this type of knowledge reduces incentives to invest in the discovery of these products, given that other agents will copy the successful discovery.

Coordination failures reflect the fact that new activities might require simultaneous investment at different stages of the product chain. Unless there is coordination, no atomized agent has the incentive to invest in a specific stage of the production chain.

Public inputs such as institutions, infrastructure, certifications and standards among others are necessary to solve the self-discovery externalities and the coordination failures. As governments can be prone to information asymmetries that limit the ability to design and implement successful interventions, promoting public-private partnerships can be useful to initiate a dialogue process, so that the economy's potentials are discovered.

But all this sounds easy when in reality there are serious limitations to the ability of governments in designing and implementing industrial policies. Governments face constraints (informational, technical, etc.) when trying to achieve a better allocation of resources. If policymakers do not have adequate information on the structure of the economy and the agents' behavior, or if they do not process it in the right way, government-failures can compound the problems derived from market-failures. Second, governments should avoid by all means the misallocation of resources due to rent-seeking. Industrial policies, especially when they have a narrow focus of beneficiaries, increase the profitability of one firm, sector or industry, relative to others. Thus, firms, sectors or industries have the incentive to invest and engage in rent-seeking that may result in non-efficient and sub-optimal allocation of resources. Governments have to be aware of the cost associated with the PDPs. Even if there is an agreement about the benefits of a specific policy, it might be the case that it is too costly. Therefore, a cost-benefit analysis of policies should be taken into account before proceeding with PDPs.

Lastly, commodity dependence should not necessarily be regarded as a negative factor. As explained, commodity production has the potential to give rise to product upgrading and quality-differentiation through technological innovation. Countries have to move up in the ladder of product differentiation and value, but they should start with what they have now.

Latin America is in a unique position to begin a serious discussion about productive development policies. The fact that it was able to handle the crisis successfully has widened the policy space and has brought some sense of self-assuredness and confidence, which is a necessary ingredient for innovative thinking. Growth needs to be promoted by stimulating the development of new productive sectors and market niches, not too different from the ones existing today but with greater value added and growth potential.

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Table 1. The long run divergence: Average annual growth rate

	GDP		Population		GDP per capita		
	LAC	U.S.	LAC	U.S.	LAC (A)	U.S. (B)	A-B
1700-1820	0.77	2.67	0.55	1.94	0.22	0.73	-0.51
1820-1870	1.02	4.21	1.07	2.83	-0.05	1.38	-1.43
1871-1929	3.91	3.77	1.89	1.9	2.02	1.87	0.15
1930-1980	4.34	3.43	2.45	1.23	1.89	2.2	-0.31
1981-2000	2.34	3.06	1.99	1.07	0.36	1.98	-1.62

Note: Until 1870 exponential rates of growth of population weighted averages. After 1870 unweighted averages of country growth rates. Source: Maddison (2003:114) and Maddison (2003) data set. Taken from Przeworski and Curvale (2005).

Table 2. Linear regression model with time trend: Shares of commodities in exports (1962-2008)

	Estimated coefficient on the time trend in a time series univariate regression						
	Share of Comm Exports in Total Exports	Share of Petroleum Exports in Total Exports	Share of Forest Exports in Total Exports	Share of Tropical Exports in Total Exports	Share of Animal Exports in Total Exports	Share of Cereals Exports in Total Exports	Share of Raw Materials Exports in Total Exports
Argentina	-0.7146***	0.2140***	0.0458***	-0.0200	-0.6410***	-0.4493***	0.1359***
Belize	0.3188	0.5635	-0.0410**	-0.1855	0.0752	-0.0293	0.0050
Bolivia	-0.4425***	-0.1112	0.1162***	0.0501**	0.0049	0.5777***	-1.0802***
Brazil	-1.2330***	0.0589***	0.0657***	-1.2233***	0.0365**	-0.2212***	0.0480***
Chile	-0.3216***	0.0019	0.2377***	0.2680***	0.2522***	0.0151	-1.0978***
Colombia	-0.8005***	0.3658***	0.0129**	-1.5295***	0.1229***	-0.1159***	0.3433***
Costa Rica	-1.1458***	0.0013	0.0155***	-1.2049***	-0.0426	0.0518***	0.0306***
Cuba	-3.7376***	-0.1494**	0.1236	-7.7090***	0.1713	0.8599***	2.7955**
Dominica	-1.3316***	0.0001	0.0052	-1.5202***	-0.0003	-0.1961***	0.3835***
Dominican Republic	-3.3025***	0.2057	0.0344***	-3.0926***	-0.0109	-0.1722***	-0.2198***
Ecuador	-0.2575***	0.7422***	-0.0051	-1.5390***	0.4269***	0.0072	0.0028
El Salvador	-0.7644***	-0.0172	0.1563***	-0.7258***	0.0492***	-0.3015***	0.0746***
Grenada	-1.3920***	-0.0018	0.3409***	-3.1098***	0.5335***	0.8365***	0.0090
Guatemala	-0.5076***	0.1486***	0.0216***	-0.2499***	-0.1484***	-0.3163***	0.0369***
Guyana	-0.6193***	-0.0015	0.5916***	-0.3626*	0.6536***	0.2645**	-1.7650***
Haiti	-3.0645***		0.2336***	-1.9190***	-0.1150**	-0.2337***	-1.0372***
Honduras	-0.4411***	-0.0566***	-0.1405***	-0.3197***	0.0666	0.0152	-0.0279
Jamaica	-0.9557***	-0.0787***	-0.0029**	-0.2739***	0.0366***	0.0245***	-0.6614***
Mexico	-1.6869***	0.1133	-0.0001	-0.5490***	-0.3120***	-0.4783***	-0.4607***
Nicaragua	-0.0427	0.0058	0.0059	0.3579***	0.6261***	-0.9808***	-0.0603***
Panama	-0.2884***	-0.9576***	0.0674***	-0.3804***	0.7908***	0.0576***	0.0511***
Paraguay	-0.1227***	-0.0054*	-0.2983***	-0.2207***	-0.5234***	0.9070***	0.0117***
Peru	-0.6135***	0.0456	0.0321***	-0.1336***	0.0590***	-0.5893***	-0.0273
St. Kitts and Nevis	-3.5003***	-0.0087	-0.0016	-3.2405***	-0.0138	-0.2358***	0.0010
St. Lucia	-0.7240***	-0.0022***	-0.2109***	-0.0859	-0.0243***	-0.4423***	0.0417***
Vincent and the Grenadines	-0.9399***	-0.0338*	0.1194***	-1.4962***	0.0079	0.4341	0.0262***
Suriname	-3.6902***	-0.0177	-0.1790***	-0.0623*	-0.2375*	-0.2400***	-2.9711***
Trinidad and Tobago	-1.1662***	-1.8636***	0.0351***	-0.0711***	0.0029	0.0378***	0.6927***
Uruguay	0.8338***	0.0059	0.1656***	0.0550***	0.6402***	-0.0500	0.0171***
Venezuela	-0.5374***	-0.5529***	0.0095***	-0.0141***	0.0087**	0.0203***	-0.0089

*** p<0.01, ** p<0.05, * p<0.1

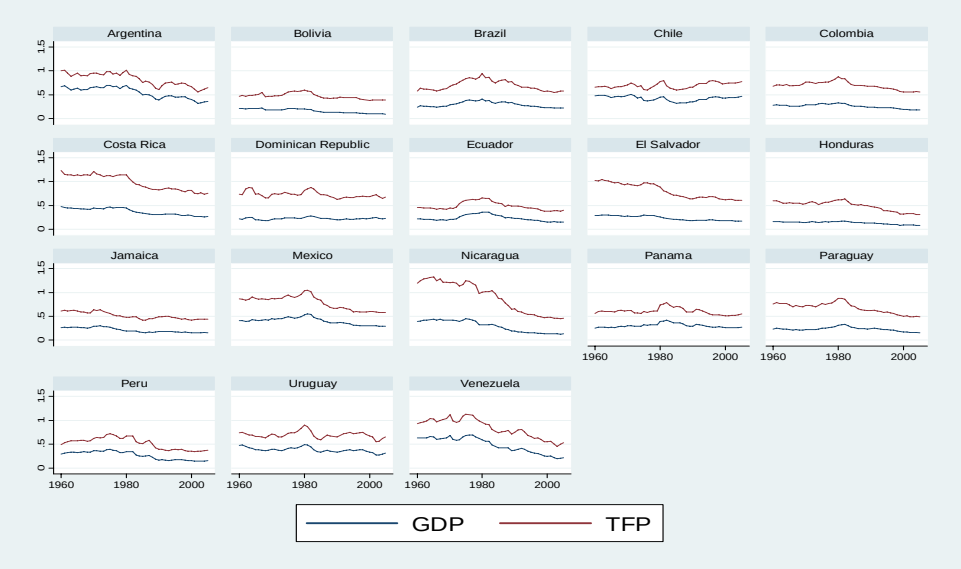
Figure 1. Relative GDP per worker: LAC vs. U.S., G8 and East Asia

Source: own calculations based on data from Blyde, Daude and Fernández-Arias (2009).

Figure 2. Relative TFP: LAC vs. U.S., G8 and East Asia

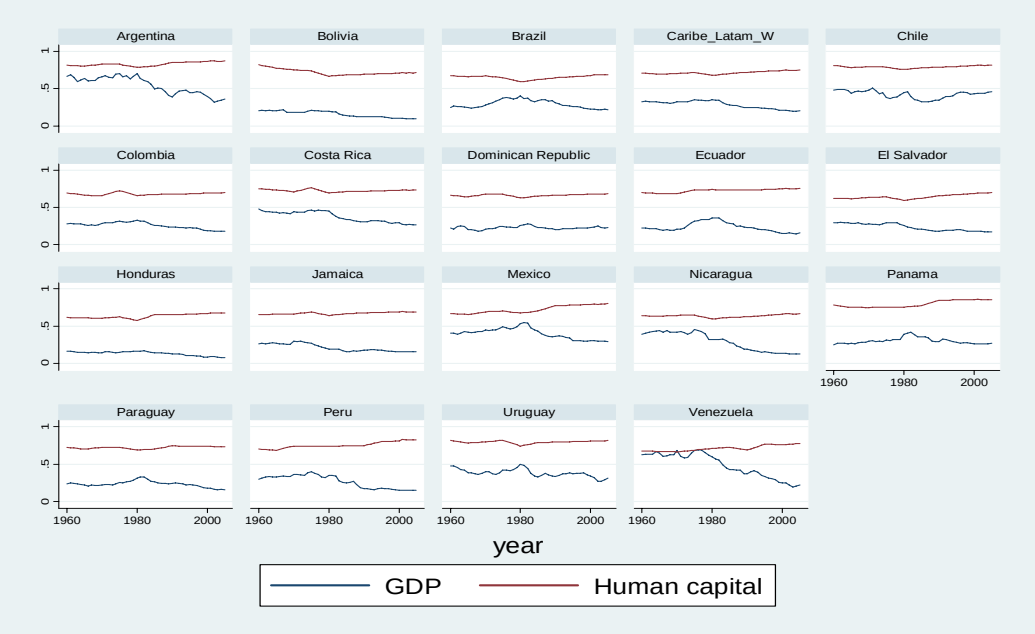
Source: own calculations based on data from Blyde, Daude and Fernández-Arias (2009).

Figure 3. GDP per worker and TFP relative to U.S.
Individual LAC countries



Source: own calculations based on Blyde, Daude and Fernández-Arias (2009)

Figure 4. GDP per worker and human capital per worker relative to U.S. values



Source: own calculations based on Blyde, Daude and Fernández-Arias (2009)