Economic Integration and Industry Competitiveness in Latin America

(Key Words: Economic integration, total factor productivity, competitiveness, trade policy, regional growth)

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Abstract

There are large differences in gross domestic products by sectors among Latin American countries, and the majority of these differences are due to the value of industrial and service sectors. The structural reforms in countries of Latin America has broadly focused in the five major areas comprising international trade, financial markets, labor markets, and the generation and use of public resources. Consequently the financial development has improved, especially the depth of financial intermediation, private sector participation in banking, and the size and activity of stock markets. The economic integration and structural reforms in Latin America considered that import substitution in manufacturing sector would be synonymous with industrialization, which in turn was seen as the key to development. As far as the efficient generation and use of public resources are concerned, much has been done to make the value-added tax system efficient and to privatize public enterprises. In response to the liberalization of economies, which has been followed by a significant increase in their imports, was found primarily due to lower inflation, lesser government intervention, and fewer trade barriers. International trade has been the key indicator of the overall economic growth of Latin American countries. The paper reviews the approach to trade policy in early development research and evolution of thoughts integrating the economic and structural reforms in Latin America. The reference period for analysis of spatial and temporal data is 1950-2003. The aspects of trade and growth and problems of Balance of Payments and their relation with macroeconomic policy have also been discussed in the paper. Further, this paper analyzes economic integration between two economies: one central, with a large local market, and the other peripheral, with a small local market. Each economy has an imperfectly competitive manufacturing

sector. It has been observed in the discussion that the trade liberalization creates a strong incentive for the imperfectly competitive industry to concentrate in the central region, near the large market. Additionally, the role of supporting policies to assure the success of trade liberalization is analyzed in the paper.

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Sustainable development is a prime global concern. It was emphasized that the business sector will only be more effective if it incorporates into its policies social and environmental responsibilities. Poverty and environmental damages affect the business sector and thus, need to be resolved and prevented to create a good and prosperous business environment. It is also noticed that the global competitiveness is a key element to survive in business and it is a task that the business sector along with governments have to confront. Since the latter half of eighties and all through the decade of 90's issues of reforms have swept the economies of Latin America and Caribbean countries. The development strategy has been based extensively on the policies of the import substitution and strong intervention of the state in production of goods, functioning of the marketing and redistribution of income. The economic reforms in a country have a complex and multi-dimensional process that involves the development and implementation of many public policies at intermediate levels during the reforms. The economic reforms thus will not have a constant speed and will often be subject to modifications in the policies that brings changes in the performance and structure of economic activities. The economic reforms can be assessed by examining their corresponding policy measures and implications. However, all economic progress may not interpret as an outcome of the reforms. The growth and development may result slower in a country or region in a normal process than stirred process of reforms. After years of poor economic management, many Latin American and Caribbean countries are experiencing a process of structural reforms that places them on a path to a superior

economic performance (Easterly 1997). Two basic principles identify this process of economic reforms - fiscal and monetary discipline, and reliance on market forces to determine the allocation and distribution of resources.

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Process of Economic Reforms

The structural reforms have been initiated in the macro areas including economic activity, international trade, financial markets, generation and use of public resources, governance, and labor markets. It has been observed in the previous studies that the economies that have advocated for open international trade have gained higher rates of growth influences by the higher rate of investment and factor productivity (Edwards, 1992, Harrison 1997).

Trade leads to specialization and contributes to the total factor productivity (TFP) and offers comparative advantages for the other countries. It also expands potential markets that allow the domestic companies to take advantage of economies of scale and diffuse technology, innovation and managerial practices through close alliances with the foreign firms. The TFP growth rates in the long run are faster for the countries that exhibit more open and less distorted international trade sector. The TFP growth improves after the reforms on trade liberalization. Chile has been more benefited from trade liberalization as compared to other countries (Mexico) in the region because of faster rate of economic and structural reforms. Chile pioneered the trade liberalization in the 70's and has also led process all through the 80's and early 90's. Bolivia, Mexico, Venezuela, Brazil (to a lesser extent) experienced the trade reforms considerably during the late 80's and all other countries in the Latin America and the Caribbean (LAC) region began the trade reforms process in early 1990's. Brazil and Venezuela liberalized their tariff administration and Argentina, Colombia and Peru have also been dynamic in conducting the trade liberalization process. The task of liberalization of international trade has been achieved through a balanced reduction of all trade restrictions, sharp decrease in tariff and para-tariff and reduction of non-tariff barriers. The non-tariff barriers have been even withdrawn in the Chile and Peru in the process of liberalization.

Although the processes of structural reforms throughout the region have shared the same principles, they have differed in their time of initiation and in the breadth and depth of their specific reforms. Regarding the time of initiation, Chile was the pioneer of market-oriented reforms in the mid-1970s. In the mid-1980s and after a macroeconomic crisis

topped by hyperinflation, Bolivia took important steps in ensuring fiscal and monetary stability, and soon after it liberalized its financial system and trade regime. This pattern of crisis followed by economic reforms was repeated in Mexico in the late 1980s, in Argentina, Peru, and Nicaragua in the early 1990s, and, more recently, in Brazil, El Salvador, and Venezuela. Colombia and Costa Rica stand out as cases where structural reforms were not implemented in a crisis environment. The process of structural reforms has also been heterogeneous in other related aspects. While the region as a whole has advanced in certain reforms areas more than in others, the sequencing, depth and contents of the reforms have differed from country to country. Improving economic integration is only a part of the measures that a government should adopt to improve increases in real GDP per inhabitant and in socio-economic welfare.

The reduction in the average level and dispersion of tariff and para-tariff charges as well as the sharp reduction of non-tariff barriers is where reforms have been the deepest and most generalized in the region. These policy changes have brought about a marked increase in the trade intensity of the reforming economies[1]. For the early reformers, among them Bolivia, Chile, Costa Rica, and Mexico, the expansion of international trade as a share of GDP, occurred mostly in the 1986-89 period. In the 1990s, the Argentina, Brazil, Paraguay, and Uruguay constituents of MERCOSUR experienced very high growth rates of the volume of trade. Whereas Colombia, Mexico, and Peru saw their respective trade shares increase rapidly (surely as result of the liberalization process) in the oil-exporting economies of Ecuador and Venezuela the improvement was not as large, despite a liberalization program similar to those of the former countries (especially

Colombia). However, the tariff and quantitative restrictions often impede the process of trade liberalization. The higher is the average level of dispersion of tariffs and para-tariffs in terms of custom duties and taxes; more is the distortion of international trade. The measure that may be applied to evaluate the level of tariffs and para-tariffs is the weighted average rate of tariff and para-tariff charges that is used to weigh their respective shares in regional or global imports (Pritchett and Sethi, 1993). The trade reforms in the LAC countries seeded the privatization concept. Consequently Mexico during 1987 and Argentina during 1991-92 had showed *ad hoc* steep rise in the basic economic indicators as a result of the privatization programs. A study on diffusion of technology via international trade from industrial countries to Latin America evaluate the role that international trade within the region plays in this process of technology diffusion. The estimates of the study suggest the existence of trade-related technology diffusion from the North. The results are robust for different specifications of the model. Evidence is also found suggesting that trade among the Latin American countries serves as an additional mechanism by which the technology from the industrial countries is indirectly diffused across the region (Blyde 2004).

The most common pattern of economic reforms in Latin America has been, first, radical liberalization, and second, implementation of prudential norms that moderated the initial liberalization. The policy changes related to the financial system (namely, the removal of interest-rate controls, elimination of mandated credit to "priority" sectors, privatization of state banks, liberalization of the foreign investment regime, and more recently, improvements in the regulatory framework) have improved both the banking system and

the stock market. The traditional view of fiscal and monetary policies in developing countries (and particularly in LAC) is that they are pro-cyclical, contributing to deepen business cycles (e.g., Hausmann and Stein, 1996; Gavin and Perotti, 1997; Gavin and Hausmann, 1998; Talvi and Végh, 2000). It has been argued that governments relax their policies during booms and restrict them during busts, due to weak institutions, unfavorable political-economy equilibrium, and volatile access to international capital markets. The most common pattern of financial reforms in the LAC countries has been towards radical liberalization and implementation of prudential norms that moderated the initial process of liberalization. However, growth has not been higher in the post-reforms period not because of a failure of reforms to yield the growth payoff that they should have been expected to do on the basis of international experience, but because of the combination of an unfavorable external environment with the insufficient depth and breadth of reforms.

The performance of the LAC countries since the reforms initiated in the mid-eighties have shown mixed results. Their annual growth rate for the referred period was 3.9 percent though the performance was widely differed. During 1950-1980 the region has witnessed relatively higher growth rates that accounts for 5.0 percent per annum on an average. There has been a steep decline in the growth rates to the extent of 1.4 percent per annum among the LAC countries during the decade of 1980. The growth resumed in 1990's, that was lower than the growth rate of 3.4 percent per annum achieved during 1951-81 period.

//Table 1 about here//

Among the reforms leaders, Argentina, Bolivia, Chile and Uruguay emerge as star performers with an average growth rate of 4.4 percent per annum during 1991-2000 as against the average annual growth rate of 3.2 percent achieved during 1951-1980 period. These countries also stood above the average growth of the LAC region that accounted for 3.4 percent during 1991-2000. The other countries of the region including Brazil, Columbia, Ecuador, Jamaica, Mexico, Paraguay and Venezuela have shown a declining trend in the referred period. The growth rate for this group of countries has fallen from 5.7 percent in 1951-1980 to 2.0 percent per annum during 1991-2000, which was even below the average growth rate of the LAC region. Costa Rica has been growing at the pace of 6.5 percent per annum during the base period but had shown only 4.4 percent growth rate during the latter period. The decline the growth rate was caused largely due to the instable political conditions and lower contribution of factor to GDP.

Research Design

The objective of this paper is to measure the extent of growth in the countries of LAC region as an outcome of economic growth and to assess the competitiveness emerged thereof. The study is limited to 11 countries of Latin American region. The principal data sets have been used from the published resources of Economic Commission on Latin America and Caribbean (ECLAC), World Development Reports and World Economic Reports. The data has been subject to the TFP model discussed in the following sections. The GDP measures constructed by the Nehru and Dareshwar (1993) have been referred in the study to derive calculations for the TFP variables. The data has been analyzed

using the dummy variables referring to the period of structural reforms in the region. A similar procedure has been applied by Lefort and Solimano (1994) to measure the economic growth during the recessional period. Similarly, Griliches and Lichetenberg (1984) made an assumption in a study measuring the long-run effects of technology transfer indicators on TFP growth.

The researchers advocate of endogenous growth theory that claims physical capital growth alone cannot explain per capita output growth and that the neoclassical model fails to capture a number of crucial variables that explain economic growth. Their main contributions consist of including not only human capital (Romer, 1986, 1990, 1994; Barro, 1991; Lucas, 1988), but also international trade in goods (Feenstra, 1996; Eaton and Kortum, 1995, 1996; Rivera Batiz and Romer, 1991a, 1991b; Pissarides, 1997; Grossman and Helpman, 1991). By incorporating technological change, those models consider the diffusion of technology between countries, and the ability of developing countries to adopt and implement foreign technology.

The decomposition of output growth demonstrates that factor growth generally proves much more important than either the improved quality of factors or total factor productivity growth in explaining output growth. The quality of capital positively and significantly affects output growth in all groups. The quality of labor has a negative and notable effect in Latin America. The economic growth thus, associates with the declining quality deployment factors and vice versa. A growth accounting method for productivity and competitiveness has been determined using an integrated production function. The

justification to choose this approach is that during low growth period, which might have been contributed by economic recession and the firms, might have been forced to operate on the suboptimal manner with low levels of capacity utilization. The construct of the model is explained below:

The Cobb-Douglas function determines the relative influences of the factors of production. This model has been further interpreted in reference to the impact of factor dynamics resulted out of the structural reforms measures in LAC region, in terms of change in technology, investment, productivity and international trade. These factors, when considered with specific industrial sectors say, manufacturing industry determining the productivity in terms of Income will generate competition index that would reveal the industry competitiveness, upon pooling.

$$\mathrm{Y}_t = \hat{\mathrm{Z}}_t \left[\mathrm{K}_t^{\alpha} L_t^{(1-\alpha)} \right] \hat{Q}_t^{\infty} \left[I_t^{\beta} R_t^{1+\beta} \right]$$

where, Y is the generated income out of factor productivity (pooled), $\hat{Z}$ is an index of TFP, K and L are the indicators of capital and labor availability and Q^{∞} is the projected output as a function of innovation (I) and change in technology (R). Dividing both sides by the intensity of change in factor "Yield" (y), taking Logs and first differentiating the rates of change per LAC countries, resulting into TFP ($\tilde{Q}$) the equation may be constructed as:

$$\ln\left[\frac{y_t}{y_{t-1}}\right] = \ln\left[\frac{\hat{\mathrm{Z}}_t}{\hat{\mathrm{Z}}_{t-1}}\right] + \alpha \ln\left[\frac{K_t}{K_{t-1}}\right]$$

It is assumed that the rate of growth of TFP can be expressed as a constant (λ) with a random error (ε). In the process of estimating the change in TFP that is reflected in the

competitiveness in the manufacturing industry in LAC region, it is also assumed that (λ) suffers a break during the structural reforms and the process of economic integration. This leads to the following equation for estimation:

$$\ln\left[\frac{y_t}{y_{t-1}}\right] = \lambda + \alpha \ln\left[\frac{K_t}{K_{t-1}}\right] + D_{x(r1+r2)} + \varepsilon_t$$

Where D_{xr} is the dummy variable activated in the years of structural reforms and economic integration. This variable has been calculated for recession period of reforms D_{xr1} and during reforms when the productivity contribution went negative D_{xr2} In all equations, the demand function is assumed to have constant elasticities.

$$\ln x_t = \hat{p} \ln(rp)_t + \hat{y} \ln(m)_t + \varepsilon_t$$

Where x denotes the exports from LAC region during the reforms period, rp is relative prices, m is foreign real expenditure on manufactured good, $\hat{p}$ is price elasticity, $\hat{y}$ is income elasticity and ε is the error term in the referred period.

Results and Discussion

The decomposition results for the pre- and post-reforms period in the selected countries of the LAC region show that Brazil, Mexico and Uruguay had shown slower growth rate of GDP during the period of reforms.

//Table 2 about here//

The data presented in the Table 2 shows that these countries experienced average rate of output growth to the extent of 4 percent as compared to the 2.8 percent of the pre-reforms

period. The contribution of productivity as a fraction of GDP growth has a steep decline in Mexico while there had been slower rate of decline in Paraguay. Out of the countries selected for the study the contributions of productivity in Brazil and Mexico went down when corresponding economies were reformed. During the pre-reforms period 6 out of 10 countries have showed negative contributions of TFP to output growth, while such trend was found only in the Paraguay and Mexico during the stage of economic reforms.

//Table 3 about here//

The long-run effect of reforms would prevail if reforms were sustained, is given by the sum of the contemporaneous and the delayed impacts. If the latter is negative, some of the growth gains should be lost in the future. If positive, additional growth would occur effortlessly. The results including lagged reforms variables in the basic equation are reported in the coefficients that hold negative signs as compared to those of the corresponding contemporaneous variables. However, the lagged coefficients are quite small in absolute value, leaving substantial positive long-run effects for each of the reforms variables. None of the delayed effects is clearly statistically significant individually, but they are strongly significant jointly. This dynamic specification marginally improves upon the static one according to standard statistical measures, as well as with regards to the qualitative features of the results. As measured by the adjusted R-square, the fit of this dynamic specification is slightly better than that of its static counterpart. Moreover, in the dynamic specification, education is statistically significant. The evidence thus suggests the presence of a minor partial offset to the beneficial growth effect of stabilization during the post -reforms years.

It may be seen from the Table 3 that the coefficients of the constants and the dummy variables D_{xr1} and D_{xr2} derived from the ordinary least squares for each country and the average of rate of growth for total factor productivity during the periods of reforms. The regression results show that in reference to, with and without the introduction of dummy variables there is upward growth in the total factor productivity for six countries. However, the economic reforms had a positive effect on the rate of growth of TFP that also reflected through the policy of trade liberalization in the Latin American countries.

Assuming low variation in the regional economic growth and taking the estimates at their face values, the income effect is immediate, the short term effect from relative prices is lagged, and the estimated short run price elasticity (-)0.3 is lower in absolute value than the long run elasticity (-)1.3. These results are common in the analysis of time-series data of foreign trade. The estimated long run coefficient of foreign imports is found to be 0.8 that implies a trend of increasing market share for Latin American countries on the basis of the pooled data at constant relative prices. Intra-regional trade is relatively small in general terms and it is negligible for the Costa Rica. Mexico has traditionally absorbed only a tiny fraction of Central America's exports. In sum, regional trade flows are not very big - on an average, no more than 18% of the region's exports have gone to the region itself and Mexico. On average 40% of all imports come from the US.

//Table 4 about here//

The Table 4 shows that the trend of exports in the selected countries is positive but with a slower rate of growth, relatively to the country debt and foreign direct investment (FDI).

It may be observed that except 3 countries, others have shown the positive trend in the FDI. Manufacturing in LAC region faces severe competitive stresses as it integrates into the global economy. Though it was the first region in the developing world - in the post-war era to liberalize on international trade and investment flows and had the most advanced industrial base, it failed to tap fully the opportunities offered. Reviewing the impact of the structural reforms in the LAC region it may be stated that manufacturing is no longer the driver of growth in Latin America; a significant concentration has taken place in the industrial sector with a small number of large conglomerates controlling industrial production; small and medium enterprises are experiencing particular difficulty in adjustment; capital-intensive resource-based sectors are growing; and extensive reorganization of work on the shop-floor is taking place. It was also noted that the decline of vertically integrated firms in the region opens up new possibilities for smaller firms as sub-contractors, provided that appropriate infrastructure and markets are operating. The overemphasis on political instability and ineffective governance issues have led policy makers to overlook key market failures that stand on the way to sustained productivity growth, increasing technological capability and greater competitiveness.

Summing-up

At the beginning of the 1980s, the private sector in Latin America faced a very uncomfortable economic environment. Inflation was high; there were sharp currency fluctuations which, in turn, led to acute price volatility; investment was low and import substitution prompted low production, state interventionism, large foreign debt and

severe balance of payment deficits. The whole region suffered under a strong macroeconomic state of imbalance, which required strong remedies. The subsequent stabilization and structural adjustment programs aimed to reduce fiscal deficits, open up economies, privatize state enterprises, reduce foreign debt, introduce flexible exchange rates and modernize the financial system.

During the reforms, much has been achieved-progress has been especially remarkable on trade and financial liberalization. Although these reforms proved largely successful in jump-starting economies they have not delivered long-term economic growth on a sustainable basis. Macro-economic reforms must be accompanied by institutional reforms, if they are to have a sustained impact on the economy. There is strong empirical evidence that better governance and higher quality institutions promote higher rates of economic growth. In this context, it is argued that structural and institutional differences between Latin America and South East Asia imply a difference in growth of 2 per cent per annum. It has been observed by the researchers (Cesar and Hebbel 2003) in reference to LAC countries that the monetary and fiscal policies could be counter-cyclical in emerging countries. Their cyclical stance depends on country fundamentals and policy credibility. Fiscal and monetary policies are counter-cyclical in emerging economies with low to moderate country-risk spreads. Controlling for external good or bad luck, country success in meeting inflation targets is strengthened by central bank independence and lower country-risk spreads. International exchange-rate regimes became less persistent than hard pegs and floats in LAC after the Asian crisis. The choice of exchange-rate regimes and their transitions do matter for inflation and growth. Inflation in LAC is lower

if the regime is less flexible, whereas growth in LAC is higher if the regime is more flexible. The contribution of very successful structural reforms - reflected in a massive growth jump in these countries.

Greater trade openness in Latin America would help to improve institutions. The opening up of markets can play an important role in weakening vested interests and reducing economic rents associated with long standing economic and institutional arrangements. Trade can thus spur improvement in domestic institutions that otherwise would not have been possible. In addition, international agreements can be an important external anchor and catalyst for institutional change by breaking through domestic impediments to reforms. Chile and Mexico provide important role models for the region. Institutional strengthening in both countries has allowed them to establish a successful inflation targeting framework, lower public debt, open the trading regime, and build a strong regulatory and oversight framework for the banking system. Both countries also provide important lessons of targeted social spending. Chile's example, in particular, of institutional changes that limit the room for inconsistent fiscal behavior by the regional governance, provides an especially valuable lesson to other countries that have frequently witnessed high fiscal volatility.

Although Latin America has been intensively debating appropriate institutional designs for more than two decades, little progress has been made. One of the key challenges, therefore, will be to provide explanations as to why institutional reforms have succeeded in some policy areas but not in others. Today, most of the Latin American countries are well-respected democracies, with a multi-party political system, the division of powers, a

working parliament and regular elections. But at the same time, there is a strong crisis of confidence, not only towards governments, but in the whole political class and representation in general. The increasing lack of confidence in the political elite in Latin America has fostered new forms of opposition in several countries, leading to a significant number of Latin American presidents[2] not being capable of completing their terms of office during the 1990s. Although political shifts are a constant feature of democracy and generally indicate the strengths of democratic institutions, a more stable political system in the region would have helped to pursue reforms processes in a more effective way. Specifically, a strong macroeconomic stabilization will, after some short-run recessive effects, provide a framework that has less distortion for economic indicators than the pre-reforms period. The failure of market reforms in Latin America to produce sustained growth and equitable prosperity is demonstrated most clearly by Argentina's most recent economic and political meltdown. But economic difficulties, poverty and searing inequality has continued to plague the Mexican case as well. Latin American policy makers themselves have begun to contribute to the growing discussion of policies necessary to confront the lingering economic and social challenges. Included among the recommended policy prescriptions are increased social spending, supported by tax reforms, assistance to small and medium enterprise, and an end to corruption. Such policy reforms require governments that are autonomous from particular business interests with established institutional channels capable of securing generalized business cooperation and support (Teichman 2002).

It is well established that inflation, for example, is costly and that its elimination is beneficial for the long-run growth. The same is true of structural reforms. Multiple exchange rates, multiple interest rates, protection of domestic products with licenses, quotas, tariffs in the excess of what would have been necessary for infant industries, and a welter of regulations and bureaucratic obstacles to normal business in general have detrimental effects on economic growth. Mainstream economic theory suggests that economic welfare would be maximized when distortions are minimized. Accordingly, a removal of distortions of both macroeconomic and microeconomic nature would have beneficial effects on economic activity and the rate of growth (Igor 2000). Therefore, there might exist a mutual reinforcement of those benefits as the reforms process goes on. In other words, there might be a synergistic relationship between the effects of structural reforms and macroeconomic stabilization.

Table 1: Growth of GDP in the Latin American Countries

(In percent)

Countries/Period	1951-60	1961-70	1971-80	1981-1990	1991-2000	2003
Argentina	2.9	4.4	2.8	-0.6	4.6	8.6
Brazil	6.8	6.1	8.7	1.7	2.6	-0.4
Chile	4.0	4.3	2.7	3.2	6.0	3.3
Colombia	4.7	5.2	5.4	3.7	2.6	3.7
Costa Rica	7.3	6.8	5.5	2.3	4.4	6.4
Ecuador	5.0	4.8	9.0	1.8	1.8	2.5
Mexico	6.1	7.0	6.7	1.9	3.3	1.2
Paraguay	2.8	4.7	8.7	3.1	2.8	2.5
Peru	5.5	5.1	3.9	-0.8	4.7	4.1
Uruguay	2.2	1.6	3.1	0.2	3.2	2.3
Venezuela	7.6	6.0	1.9	-0,5	2.1	-9.3

Source: Economic Commission for Latin America and Caribbean (ECLAC)

Table 2: Growth Decomposition in Periods of Reforms and No-Reforms of the Economy, 1950-2003

(In percent)

Country	GPD growth		Productivity		Contribution of Productivity in GDP	
Status	Pre-Reforms	Reforms	Pre-Reforms	Reforms	Pre-Reforms	Reforms
Argentina	1.6	4.7	-0.5	4.1	-31.25	87.23
Brazil	5.2	2.5	0.9	0.2	17.31	8.00
Chile	2.3	5.2	-0.3	2.3	-13.04	44.23
Colombia	4.7	4.7	0.9	1.8	19.15	38.30
Costa Rica	4.3	5.9	-0.1	0.8	-2.33	13.56
Ecuador	1.8	5.5	-0.9	1.6	-50.00	29.09
Mexico	5.7	1.4	1.1	-1.9	19.30	-135.71
Paraguay	4.9	3.5	-0.4	-0.2	-8.16	-5.71
Peru	1.6	5.3	-1.2	2.9	-75.00	54.72
Uruguay	1.6	3.1	0.7	2.1	43.75	67.74
Venezuela	2.3	5.2	-1.2	1.9	-52.17	36.54

Source: Based on the data computation done by the author.

Table 3: Total Factor Productivity Growth: Average in 1950-2003 and Change During Periods of Reforms, OLS Regressions (Percent)

Recession Dummy	None		D_{xr1}		D_{xr2}	
Country/ Period	1950-2003	δ_x	1950-2003	δ_x	1950-2003	δ_x
Argentina	-1.9	6.7	2.5	3.9	2.8	4.0
	(0.161)	(0.008)	(0.001)	(.005)	(0.001)	(0.005)
Brazil	-1.3	1.9	0.4	1.4	2.0	0.7
	(0.245)	(0.392)	(0.651)	(0.350)	(0.010)	(0.614)
Chile	-1.3	2.9	2.9	1.8	3.4	0.6
	(0.229)	(0.047)	(0.059)	(0.079)	(0.483)	(0.927)
Colombia	0.7	0.4	0.8	0.4	2.3	-0.5
	(0.465)	(0.503)	(0.485)	(0.593)	(0.000)	(0.271)
Costa Rica	-1.7	1.3	0.3	1.6	0.8	0.9
	(0.201)	(0.469)	(0.786)	(0.174)	(0.316)	(0.217)
Ecuador	-1.2	3.1	1.3	0.7	1.5	2.9
	(.570)	(0.159)	(0.469)	(0.740)	(0.449)	(0.227)
México	-3.7	1.1	-0.7	1.4	1.2	4.2
	(0.004)	(0.372)	(0.415)	(0.556)	(0.569)	(0.899)
Paraguay	-1.3	0.4	0.2	-0.7	1.5	1.1
	(0.099)	(0.784)	(0.990)	(0.536)	(0.020)	(0.248)
Peru	-1.9	2.9	0.8	2.6	2.5	0.8
	(0.132)	(0.16)	(0.327)	(0.152)	(0.224)	(0.947)
Uruguay	1.4	1.4	2.8	0.4	3.3	-0.2
	(0.223)	(0.537)	(0.000)	(0.785)	(0.000)	(0.822)
Venezuela	-1.2	3.3	0.4	2.8	3.6	1.0
	(0.18)	(0.072)	(0.458)	(0.395)	(0.022)	(0.440)

δ_x = change during the reforms period

Source: Based on the data computation done by the author.
p values are presented in parentheses, D_{xr1} is activated when the GDP growth is negative while D_{xr2} is activated when the growth rate of TFP is negative.

Table 4: Industry Competitiveness in the Latin American Countries (1970-2000)

	Regression Analysis[a]					
Country	Openness	FDI	Portfolio	Debt	Terms of Trade	Exports
Argentina	0.72988**	0.61124**	0.54371**	0.84319**	0.30104**	0.44134
Brazil	0.30145	0.79216**	0.61112	0.82243	0.12769	0.37621**
Chile	0.53661	0.20073	0.59721	0.88301	0.44166**	0.39823
Colombia	0.19972**	0.14217	0.39012	0.69931**	0.37164	0.47159
Costa Rica	0.55374	0.49214	0.39822**	0.47644	0.79331**	0.61842**
Ecuador	0.11498	-0.11767	0.17632	0.53319	0.03467	0.15620
México	0.19833	0.57622**	0.89831	0.73012**	0.59217**	0.48542
Paraguay	0.77971	0.39872	0.52761	0.61320	0.27643	0.29811
Peru	0.49321**	-0.0352	0.21984**	0.71097	0.48711**	0.30102
Uruguay	0.59136	-0.0349	-0.0127	0.29371	0.30891**	0.20956
Venezuela	0.0234	0.35612	0.52019	0.76653**	0.46522	0.71131**

a : Dependent variable GDP
** Statistical significance at 5 percent level
Source: Based on the data computation done by the author

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End Notes

[1] "Trade intensity" is defined as the quotient of (real) exports plus (real) imports, over (real) GDP

[2] World Economic Forum : Latin America Agenda, Latin America Business Summit, Rio de Janeiro, Brazil, 20-22 November 2002