ECONOMIC GROWTH IN LATIN AMERICA: STRUCTURAL BREAKS OR FUNDAMENTALS?*

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Abstract

Despite having accumulated physical and human capital at significant rates, Latin America's growth has been generally disappointing. Successful growth episodes have been accompanied by surges in TFP, sound and stable macroeconomic policies, and fewer distortions and government interventions. Structural breaks are often cited as sources of the disappointing and heterogeneous growth performance of countries in Latin America. We find that, once controlled for external shocks and a measure of distortions, the behavior of per capita GDP in a sample of Latin American countries is remarkably stable.

Resumen

El crecimiento en América Latina ha sido mediocre pese al crecimiento significativo en la acumulación de capital físico y humano. Los episodios de crecimiento exitoso han estado inexorablemente unidos a aumentos en la productividad total de factores, políticas estables, y menores distorsiones e intervenciones estatales. El desempeño heterogéneo y decepcionante de países latinoamericanos se ha motivado en ocasiones por la presencia de quiebres estructurales. Esta nota muestra que, cuando se controla por shocks externos y distorsiones, el comportamiento del PIB per cápita para una muestra de países es bastante estable.

Keywords: *Growth, Latin America, structural breaks.*

JEL Classification: O47, C32.

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1. Introduction

Latin American (LA) has had more than its fare share of political turmoil, populist outbursts, nationalization and privatization fads, market oriented reforms, and reform reversals. At present, the region is divided. Some countries are embracing markets and free trade and others are spurring increased government interventions in all areas of the economy.

These major swings have made the region a synonym of instability and have lead it to low growth and high volatility in the second half of the twentieth century. The heterogeneous and volatile nature of the evolution of the growth rates of the LA economies has been accompanied by a variety of reforms, external and internal real shocks faced, and different responses to them.

The theoretical and empirical tools to determine the factors behind the performance of each economy could be broadly categorized in domestic policies and domestic or external shocks (such as domestic supply shocks, terms of trade shocks, international crises, etc). Authors of case studies of growth in Latin America tend to emphasize specific characteristics of the country as if the shocks they face were different. This note presents stylized facts of the growth process and the major shocks experienced by seven Latin American economies over the last 40 years.[1] It also tests for the existence of structural breaks in their growth process and examines how different countries really are.

The rest of the paper is structured as follows: Section 2 presents some stylized facts and a summary of the main events that shaped the performance of seven Latin American economies. Section 3 performs growth accounting exercises using a homogeneous data set (Bosworth and Collins, 2003), and computes the relative contributions of labor, (physical and human) capital, and Total Factor Productivity (TFP) on growth and volatility. Section 4 evaluates the relative importance of common (aggregate) versus idiosyncratic (country specific) factors. Finally, Section 5 concludes.

2. Stylized and economic facts

Over the past four decades, on average, LA grew at a slower pace than the rest of the World and other regions considered in Table 1. With few exceptions (and for brief periods), the East Asian and OECD economies have tended to outperform them. When compared to other emerging economies, Latin America displays lower and more volatile growth rates.

The performances of different countries in the region have been heterogeneous. Only Brazil and Chile have had average growth rates that exceed 2%. In the case of Chile, this is due to its rapid growth in the past 20 years. For Brazil, this result is due to its performance in the sixties and early seventies. Growth rates in Argentina and Peru have been particularly disappointing, mainly because of their performance in the eighties.

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[1]   Argentina, Brazil, Chile, Colombia, Paraguay, Peru and Uruguay.

TABLE 1
AVERAGE GROWTH RATES OF GDP PER CAPITA (%)

	1961-1975	1976-1990	1991-2004	1961-2004
Argentina	2.00	–1.48	2.27	0.90
Brazil	5.18	1.44	0.43	2.44
Chile	0.23	2.39	4.25	2.25
Colombia	2.50	1.96	0.89	1.82
Paraguay	2.23	2.68	–0.62	1.53
Peru	3.47	–2.33	1.73	0.92
Uruguay	0.71	1.23	1.79	1.23
Latin America (19)	3.15	0.50	1.09	1.59
East Asia (9)	3.18	5.99	6.39	5.16
OECD (23)	3.36	2.35	1.78	2.51
World (99)	2.72	1.98	2.29	2.33
USA	2.63	2.45	2.08	2.39

Notes: Penn World Table 6.2, Chain series (2000 as base year). The number of countries considered is in parenthesis.

Furthermore, while the OECD countries and the US have seen a smooth decline in their average growth rates and the East Asian economies have displayed an opposite trend, the LA economies have passed from periods of moderate growth to periods characterized by severe recessions and (occasional) booms. As a consequence, growth volatility is much larger in Latin America than in the rest of the World.

TABLE 2
COEFFICIENT OF VARIATION OF THE GROWTH RATES OF GDP PER CAPITA

	1961-1975	1976-1990	1991-2004	1961-2004
Argentina	2.02	–3.43	2.80	5.97
Brazil	0.62	3.35	4.50	1.67
Chile	24.59	2.62	0.71	2.39
Colombia	0.68	0.96	1.65	0.98
Paraguay	0.90	1.54	–2.77	2.07
Peru	0.68	–3.13	2.02	5.89
Uruguay	4.57	5.02	3.78	4.44
Latin America (19)	0.46	5.36	1.74	1.47
East Asia (9)	1.24	0.35	0.32	0.61
OECD (23)	0.57	0.62	0.62	0.65
World (99)	0.57	0.62	0.43	0.55
USA	0.99	1.03	0.79	0.94

Notes: Penn World Table 6.2, Chain series (2000 as base year). The number of countries is in parenthesis.

A defining characteristic of the so-called "emerging economies" is precisely that they are much more volatile than developed economies (see for instance Aguiar and Gopinath, 2004). Measured by the coefficient of variation (ratio between the standard deviation and the mean), LA is almost three times as volatile as the rest of the World and even within the group of emerging economies, it is atypically volatile (Table 2).[2]

Interestingly, this surge in volatility is mainly due to what the region experienced during the eighties and nineties and is very heterogeneous across countries. For instance, Chile has been consistently reducing its growth volatility, while the other countries have either increased it or reached a peak in the eighties. In fact, for the past two decades, Chile has had higher growth rates and lower volatility than the US, while most of the other countries of the region are now more volatile than ever.

In an effort to better understand the growth experience of Latin American countries, the Global Development Network (GDN) sponsored the elaboration of several country studies. They differ on their methodological approaches and treatment of series. The studies stress the importance of idiosyncratic shocks and specific policies (Table 3). Here we use a common methodological approach to evaluate the importance of common and country specific characteristics.

3. Growth accounting

This section presents a common methodology to decompose the contributions to economic growth of different factors. We use Bosworth and Collins's (2003) data set, which estimates the contributions of capital deepening, human capital accumulation and total factor productivity on the growth rate of GDP per worker.

Operationally, they start with a Cobb-Douglas production function:

$$Y = AK^{\alpha}(hL)^{1-\alpha},$$

where Y denotes output, K is capital, L denotes labor force, h is a human capital index based on education level, and A stands for the TFP index. The capital output elasticity (α) is assumed to be equal to 0.35 for all countries. The TFP level is an index estimated as:

$$A = \frac{Y / L}{(K / L)^{\alpha} h^{1-\alpha}} = \frac{y}{k^{\alpha} h^{1-\alpha}},$$

where y and k denote output and capital per worker.

This implies that:

(1) $$\hat{y} = \alpha\hat{k} + (1-\alpha)\hat{h} + \hat{A},$$

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[2]   Although not entirely accounted for, cross-country evidence tends to find a negative relationship between growth rate and volatility (Ramey and Ramey, 1995).

where $\hat{z}$ denotes the first difference of the log of variable z (that proxies its growth rate). Thus, the growth rate of GDP per worker can be decomposed into capital deepening (a $\left(\alpha\hat{k}\right)$, human capital accumulation $\left(\left(1-\alpha\right)\hat{h}\right)$, and TFP growth $\left(\hat{A}\right)$.

Using time series of these variables, we can estimate the contribution of each factor. Table 4 presents the growth accounting exercises for selected LA economies and for three time periods (1961-1975, 1976-1990, and 1991-2000).[3] As a benchmark, the growth accounting exercise is also performed for the US economy.

The first finding is that human capital has been growing robustly in Latin America. Human capital accumulation has been a steady and stable source for growth in Latin America in the past four decades and in the case of Peru, the only source for growth. Countries that started up with relatively well-educated labor force (Argentina and Uruguay) owe approximately one third of their growth rates to this factor. The other countries display a growth rate of this variable that is approximately in line with what happened in the US. The past decade (1991-2000) evidences the importance that governments and international organizations have given to policies that encourage human capital accumulation and all countries increased their human capital at a faster rate than the US. This is not surprising as many of these countries started with low levels of school attendance, literacy rate, and average schooling.[4]

With the exception of Peru and Uruguay, capital per worker has also been increasing. As its trajectory has not been as smooth as that of human capital accumulation, the importance of capital deepening varies according to the country and period considered. In the past four decades, it has been the most important contributor to growth for Argentina, Brazil, and Paraguay.[5] In other countries and periods, capital per worker has actually declined. Taking the whole sample, the poorest performing countries (Peru and Uruguay) were also the ones that witnessed average negative growth rates for capital accumulation. Considering the whole sample and excluding Peru and Uruguay, the average contribution of capital deepening has been more important in LA than in the US. Thus, while on average the LA economies have not done better than the US in terms of their growth rates, they have tended to accumulate more physical capital.[6]

The main contributor to growth in the US economy has been Total Factor Productivity (57% of the growth rate of GDP per worker in the past four decades). This characteristic is not usually shared by the LA economies. TFP has changed dramatically between countries and periods. In the whole sample, Chile,

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[3]   Section 4 provides a formal treatment of the eventual presence and timing of structural breaks.

[4]   Human capital is measured using educational attainment and weights associated with relative earnings for different educational levels.

[5]   Capital deepening accounts for more than three-quarters of the overall growth of Argentina and Paraguay. These results are mainly driven by strong accumulations of capital in the sixties (Argentina and Brazil) and by the Itaipú project of the mid-seventies and early eighties (Paraguay).

[6]   As tends to happen with these statistics, capital accumulation does not consider idle capacity utilization.

TABLE 3

SUMMARIES OF THE COUNTRY STUDIES

Country	Sources of growth	Reforms / policies / shocks
Argentina	1950-1975: Balanced growth path. 1975-1990: TFP and output per worker fall at an annual average rate of 1.7% and 1.1%, respectively. 1991-1997: Positive TFP growth, driven mostly by labor reallocation.	1975-1990: Reallocation of labor into low productivity sectors due to the increase of capital cost implied by a rise in interest rates and the implementation of protectionist trade policies. 1990-2000: Lower real interest rates and relative price of investment goods.
Brazil	1930-1980: Rapid GDP and TFP growth and capital accumulation 1980-1993: Negative TFP growth. 1994-2000: TFP recovers its long-term growth rate.	1964-1980: Sound fiscal and monetary policies, high real exchange rate, credit market development. 1980-1993: Very high inflation and macro instability. Trade distortions were introduced. 1994-2000: Trade opening, low inflation.
Chile	1960s: Mild growth rates are mainly due to accumulation of human and physical capital. 1986-1998: High growth rates are due to TFP and capital accumulation.	Import substitution since the Great Depression. Intensified from 1970 until 1973. Mid 1970s until 2000: Trade liberalization, market oriented reforms, macroeconomic stability.
Colombia	1960-1973: Sustained GDP growth due to increases in TFP. 1973-1995: Growth was very strong due to factor accumulation. 1995-2000: Deep and only recession in the past 40 years.	1960-1990: protectionist trade policies (moderate if compared with other countries like Chile). 1990-1995: several reforms were in place: trade and financial openness, central bank independence, etc. 1995-2000: intensification of the guerrilla activities, violence and political instability
Paraguay	1960s moderate growth. 1970s very high growth of GDP driven by the accumulation of physical capital. TFP continuously declined after mid 70s.	The economic growth was very erratic during the entire period. 1970s: Investment in Itaipú, financed with large flows of foreign capital implied an investment boom and faster growth during that period.
Peru	1950-1966: Economic growth was very high, accompanied by TFP increase. 1970-1990: Stagnation of the economy. TFP falls at an average annual rate of 2%. 1990s: TFP grows 2.5% per year.	1963-1990: Mismanaged fiscal and monetary policies. Decreasing quality of investment (public investment becomes more important than private). 1990s: Inflation and fiscal deficit were reduced, privatization was enacted, and intervention and distortions were lowered.
Uruguay	1955-1973: Stagnation. 1974-1999: Period of economic growth. 1957-1999: Negative TFP growth, physical and human capital accumulation.	First period is characterized by government intervention, macro instability, and protectionist trade policies. 1974: Trade liberalization, fiscal reforms and macroeconomic stability started. 1990s: Uruguay joins Mercosur.

Sources: Authors' construction based on Hopenhayn and Neumeyer (2005), Castelar Pinheiro et al (2005), Chumacero and Fuentes (2005), Arbelez et al (2001), Fernandez and Monge (2005), Carranza et al (2005), de Brun (2005)

Colombia, and Uruguay display a dominant role of TFP on growth, while in Argentina and Peru, measured TFP actually declined. However, almost every period in which an economy witnessed a significant increase in its growth rate, TFP has increased (Argentina and Uruguay in the nineties; Brazil, Colombia, Peru, and Paraguay in the sixties; and Chile since the mid-seventies). More importantly, all the periods of decline in GDP per worker have been mainly driven by more than proportional declines of TFP (Argentina, Brazil, and Peru during the 1976-1990 period; and Colombia, and Paraguay in the nineties).[7] As several studies have pointed out, measured TFP is strongly correlated (and in cases econometrically determined) by real shocks, relative prices, and policy variables.[8]

Using equation (1) we can derive an expression for the variance of the growth rate of GDP per capita:

$$(2) \quad V\left(\hat{y}\right) = \alpha^2 V\left(\hat{k}\right) + \left(1-\alpha\right)^2 V\left(\hat{h}\right) + V\left(\hat{A}\right) + 2\alpha\left(1-\alpha\right)Cov\left(\hat{k},\hat{h}\right)$$
$$+ 2\alpha Cov\left(\hat{k},\hat{A}\right) + 2\left(1-\alpha\right)Cov\left(\hat{h},\hat{A}\right),$$

where $V(z)$ denotes the variance of z and $Cov(a, b)$ denote the covariance between a and b. Table 5 presents the decomposition of the volatility of the growth rate and reports the contribution of the first three terms of (2). As the covariance terms are not reported, the three components do not add up to the total variance.

The discrepancies found while decomposing the average growth rates of GDP per worker disappear when analyzing the decomposition of their second moments. Human capital accumulation has been very stable and did not contribute much to the volatility of the growth rate. On the other hand, regardless of its contribution to the average growth rate, TFP is a dominant factor behind the volatility of the growth of GDP. All countries (including the US) share this characteristic. With the exception of Paraguay, where the volatility of TFP accounts for close to 77% of total volatility, in the other cases, the ratio between TFP and GDP volatility is of at least 90% regardless of the sample period considered.

Summarizing, as a whole, Latin America has had a disappointing growth performance for the past four decades. Despite of their heterogeneous results, all the economies have had some common features: Human capital has been growing steadily and smoothly,[9] physical capital accumulation has also been increasing (although not as smoothly as human capital). The main differences across countries and periods have to do with the evolution of TFP. Countries and episodes of high growth are inevitably linked with growth in TFP. Finally, TFP volatility accounts for almost all the growth volatility.

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[7]   Cole et al (2006) conclude that the main culprit of the poor performance of Latin American economies is TFP. They consider that barriers to competition are prime candidates to explain this.

[8]   Manuelli (2005) considers several models that could help to explain these results.

[9]   As evidenced by international tests, the quality of human capital and education are still far away from the international frontier.

TABLE 4
GROWTH ACCOUNTING FOR SELECTED COUNTRIES AND PERIODS

Country	GDP per worker	1961-2000		TFP
		Capital deepening	Human capital	
Argentina	0.88	0.73	0.32	-0.17
Brazil	1.67	0.78	0.34	0.55
Chile	2.02	0.75	0.32	0.95
Colombia	1.04	0.31	0.29	0.44
Paraguay	1.44	1.09	0.27	0.08
Peru	0.16	-0.01	0.45	-0.27
Uruguay	0.83	-0.07	0.27	0.63
USA	1.62	0.36	0.34	0.92
		1961-1975		
Argentina	2.14	1.58	0.32	0.24
Brazil	4.03	1.30	0.14	2.58
Chile	0.36	0.87	0.28	-0.79
Colombia	2.56	0.35	0.29	1.93
Paraguay	2.38	0.81	0.22	1.34
Peru	2.52	0.04	0.42	2.06
Uruguay	0.85	-0.46	0.28	1.03
USA	1.44	0.05	0.37	1.02
		1976-1990		
Argentina	-1.40	0.34	0.35	-2.09
Brazil	-0.05	0.72	0.52	-1.30
Chile	2.22	-0.10	0.40	1.92
Colombia	0.26	0.22	0.25	-0.22
Paraguay	2.18	1.88	0.42	-0.12
Peru	-2.80	-0.17	0.47	-3.10
Uruguay	0.15	0.06	0.29	-0.20
USA	1.67	0.42	0.46	0.79
		1991-2000		
Argentina	2.41	0.04	0.28	2.09
Brazil	0.70	0.07	0.38	0.25
Chile	4.20	1.86	0.26	2.08
Colombia	-0.08	0.40	0.34	-0.82
Paraguay	-1.09	0.30	0.13	-1.52
Peru	1.08	0.15	0.46	0.47
Uruguay	1.84	0.33	0.23	1.28
USA	1.82	0.74	0.10	0.98

4. COMMON AND IDIOSYNCRATIC FACTORS

As mentioned earlier country studies often emphasize idiosyncratic features (such as domestic policies) as the main sources of abrupt changes on growth (Table 3). They also suggest that internal policies or external shocks changed the structure of the economies and modified the patterns of growth at specific dates.

The sum of these two factors (domestic policies and external shocks) may generate structural breaks in the pattern of growth. However, the presence of such breaks needs to be tested. While a country study may consider that a structural change occurred due to internal factors (policies), the specific period identified often coincides among countries (for example with the debt crisis).

This section develops a methodology to determine structural breaks on the dynamics of GDP for each country. We consider a model that includes responses of GDP to external and internal factors. By doing so, we are able to test for structural breaks. If they are present, we date them and evaluate if they are clustered on specific dates.

We use a formal framework for evaluating structural changes using recent tests for structural breaks with unknown dates (Bai and Perron 1998, 2002; Hansen, 2001). Formally, assume that there are $j=1,...,J$ distinct regimes in the sample. Let $y_{i,j,t}$ denote (the log of) GDP per capita for country i in regime j at period t. We consider the model:

$$(3) \qquad y_{i,j,t} = \alpha_{i,j} + x'_{i,j,t}\beta_{i,j} + \gamma_{i,j}t + \sum_{l=1}^{L_{i,j}} \delta_{i,j,l} y_{i,j,t-l} + u_{i,j,t},$$

where $L_{i,j}$ is the number of lags necessary to characterize $u_{i,j,t}$ as a white noise process, t is a deterministic trend, and $x_{i,j,t}$ is a vector of explanatory variables. The explanatory variables considered are (the log of) terms of trade (as a proxy for external shocks) and the share of government expenditures on GDP (as a proxy for internal policy distortions).[10]

This structure is quite general as it allows for differences among countries and regimes. It also allows for differences between short and long run effects of different variables, different short and long run growth rates, and different volatilities depending on the regime and country. Note that the presence of a structural break does not imply that the law of motion of the *x* variables changed, but that the way in which *x* interacts with *y* has changed.

To determine the number of regimes (J), we proceed as follows: For each country i, we use Bai and Perron's (1998) methodology to evaluate the null hypothesis of no structural breaks against the alternative of one break or two breaks. If the null hypothesis is rejected, we use a battery of tests to evaluate the number of breaks and their dates.

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[10]   We also considered other variables routinely used on cross-country studies, but these two summarize the main factors contended to affect the economic performance of the countries.

TABLE 5
VARIANCE OF GROWTH ACROSS PERIODS

Country	GDP per worker	1961-2000		TFP
		Capital deepening	Human capital	
Argentina	0.2841	0.0076	0.0002	0.2812
Brazil	0.1716	0.0074	0.0006	0.1538
Chile	0.2672	0.0098	0.0002	0.2455
Colombia	0.0574	0.0014	0.0003	0.0552
Paraguay	0.1265	0.0132	0.0003	0.0973
Peru	0.2929	0.0023	0.0007	0.2853
Uruguay	0.1858	0.0057	0.0002	0.1895
USA	0.0419	0.0014	0.0012	0.0411
		1961-1975		
Argentina	0.1861	0.0018	0.0002	0.1902
Brazil	0.1343	0.0057	0.0002	0.1137
Chile	0.3107	0.0050	0.0002	0.2581
Colombia	0.0261	0.0005	0.0009	0.0261
Paraguay	0.0406	0.0032	0.0001	0.0345
Peru	0.0560	0.0019	0.0006	0.0558
Uruguay	0.0718	0.0008	0.0003	0.0679
USA	0.0526	0.0007	0.0001	0.0504
		1976-1990		
Argentina	0.3308	0.0055	0.0004	0.3100
Brazil	0.2158	0.0083	0.0007	0.2029
Chile	0.2976	0.0036	0.0002	0.2965
Colombia	0.0419	0.0006	0.0001	0.0434
Paraguay	0.2276	0.0207	0.0003	0.1833
Peru	0.4916	0.0022	0.0011	0.4890
Uruguay	0.3459	0.0113	0.0002	0.3558
USA	0.0511	0.0006	0.0027	0.0542
		1991-2000		
Argentina	0.2883	0.0018	0.000002	0.3188
Brazil	0.0463	0.0004	0.000001	0.0471
Chile	0.1121	0.0033	0.000001	0.1206
Colombia	0.0803	0.0043	0.000002	0.0694
Paraguay	0.0356	0.0015	0.000009	0.0273
Peru	0.1690	0.0030	0.000376	0.1589
Uruguay	0.1363	0.0011	0.000001	0.1433
USA	0.0192	0.0009	0.000001	0.0151

Table 6 presents the results of performing the tests of no breaks against the alternatives of one or two breaks (and consequently two or three regimes).[11] The last column presents the number of breaks more consistent with the data, where a zero (0) implies that there is no statistical evidence of a structural break.[12] For example, take Colombia. If we allow for one break, the test dates it to the year 1990. If we consider two possible breaks, the test dates them in 1977 and 1990.

TABLE 6
DATES OF POTENTIAL STRUCTURAL BREAK(S)

	One Break	Two Breaks	Breaks
Argentina	1980	1974, 1982	0
Brazil	1980	1976, 1984	0
Chile	1978	1972, 1981	0
Colombia	1990	1977, 1990	0
Paraguay	1981	1974, 1982	1
Peru	1987	1979, 1987	0
Uruguay	1981	1981, 1989	0

When one break is allowed, its date takes place by the end of the 1970s or the early 1990s in all the countries but Colombia and Peru, where it would have occurred in the late 1980s or 1990. When two breaks are allowed, they are clustered on the early 1970s (oil crisis), late 1970s or early 1980s (debt crisis), and the late 1980s or 1990.

However, as the model in (3) controls for variables such as terms of trade and distortions, the statistical evidence points out that the only country that presents strong support for the presence of a break is Paraguay (with the date estimated being between 1980 and 1982). Thus, although growth for each country may have differed greatly in the sample, with the exception of Paraguay, the structure that determines it has remained stable.

As equation (3) states, the models estimated to construct Table 5 consider that the response of GDP per capita to the *x* variables differ across countries. The evidence points out towards very different responses to terms of trade shocks or distortions in each country. Thus, one should be careful in interpreting the results of panel data models in which homogeneity restrictions among parameters are oftentimes imposed and not tested (Blyde and Fernández-Arias, 2005; De Gregorio and Lee, 2005; Velasco, 2005).

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[11] The 95% confidence intervals for the dates of breaks generally correspond to ±1 year and are not reported.

[12] There are several tests available for evaluating the presence of breaks. Here we use Bai and Perron's (2002) suggestion and take the number of breaks chosen by the modified Schwarz criterion. This criterion behaves well under the null even in the presence of serial correlation. However, it might underestimate the number of breaks when some serial correlation is present.

Table 7 reports the long run elasticities of per capita GDP with respect to terms of trade and the share of government expenditures on GDP estimated in a panel structure without imposing homogeneity restriction across countries in the trend and autoregressive coefficients.[13] Argentina and Brazil display similar and relative important responses to terms of trade and domestic policy shocks. Chile and Peru present intermediate responses, and Colombia and Peru are the least responsive to these shocks. As (3) entails that GDP per capita is trend stationary, only permanent shocks on terms of trade and the size of the government should have permanent effects on GDP, while transitory shocks should have transitory (but persistent) effects on the level and growth rate.

TABLE 7
LONG RUN ELASTICITIES OF GDP PER CAPITA

	Terms of trade	Distortions
Argentina	0.399 (0.19)	−0.030 (0.019)
Brazil	0.398 (0.17)	−0.033 (0.012)
Chile	0.275 (0.07)	−0.023 (0.009)
Colombia	0.231 (0.16)	−0.019 (0.014)
Peru	0.309 (0.13)	−0.026 (0.014)
Uruguay	0.170 (0.06)	−0.014 (0.006)

Standard deviations in parenthesis.

This exercise serves two purposes. First, it shows that, with the exception of Paraguay and once controlled for variables that proxy external shocks and internal distortions, the evolution of GDP per capita has been relatively stable. Second, the heterogeneous performance of each country on different periods has been mainly due to changes in forcing variables (terms of trade shocks and distortions) and not on how the economies respond to them.[14]

5. Concluding remarks

The World has renewed its interest in Latin America. Several countries are now considering or implementing policy reversal with respect to the Washington Consensus. The growth performances of LA countries have been as unstable

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[13] Paraguay is excluded as it is the only country for which there is strong evidence of a structural break.

[14] Calderón and Fuentes (2006) may provide an alternative explanation for these results. They consider nonlinear effects on growth due to complementarities on economic policies and the quality of institutions.

and volatile as their respective policies. Although external shocks (good or bad luck) play an important role, internal policies are also crucial. The heterogeneous and volatile results that they have experienced over the past decades are mostly due to radical changes in policies.

Despite having accumulated physical and human capital at significant rates, Latin America's growth has been generally disappointing. What is clear is that successful growth episodes have been accompanied by surges in TFP. In turn, measured TFP is positively related with sound and stable macroeconomic policies, and fewer distortions and government interventions.

Structural breaks are often cited as sources of the disappointing and heterogeneous growth performance of countries in Latin America. We find that, once controlled for external shocks and a measure of distortions, the behavior of per capita GDP in a sample of Latin American countries is remarkably stable.

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