Can Latin America Prosper by Reducing the Size of Government?

Radhames Lizardo and André V. Mollick

This article examines the effect of government consumption on economic growth in 23 Latin American countries over the years 1974–2003. Employing the Armey Curve, we show that the typical Latin American government is spending beyond the optimal point. Using panel data and a fixed effects (FE) model, we find that increases in government consumption lead to unambiguous decreases in economic growth.

An Overview

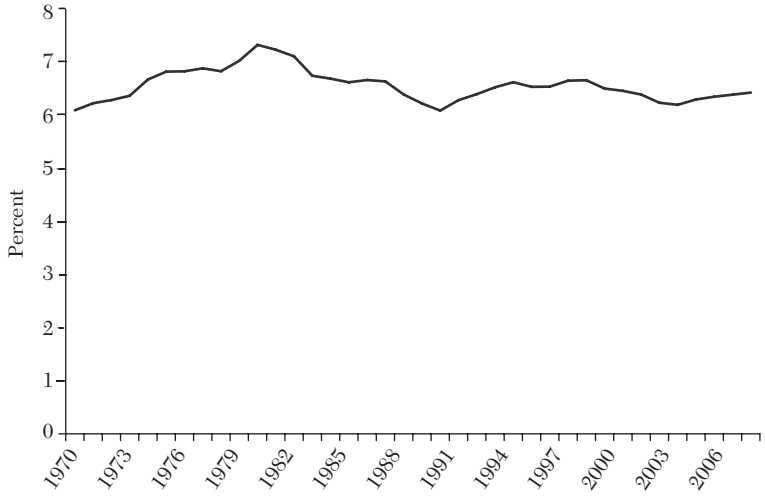
An important policy goal of governments is to improve the economic well-being of their citizens. However, as can be seen in Figure 1, Latin America's share in world output (GDP) dropped significantly during the 1980s. This decade has been called the "lost decade" for Latin America, with per capita real income actually shrinking from 1980 to 1989.

While the Latin America region has suffered from lack of economic growth, other regions of the world have experienced economic growth, especially during the last 20 years. Figure 2 depicts the growth of East Asia's share of world economic output and contrasts it to that of Latin America's. From 1970 to 2005, Latin America's

Cato Journal, Vol. 29, No. 2 (Spring/Summer 2009).

Radhames Lizardo just completed his doctorate in business administration at the University of Texas-Pan American, and André V. Mollick is Associate Professor of Economics at the University of Texas-Pan American.

FIGURE 1
Latin America's Share in World Output



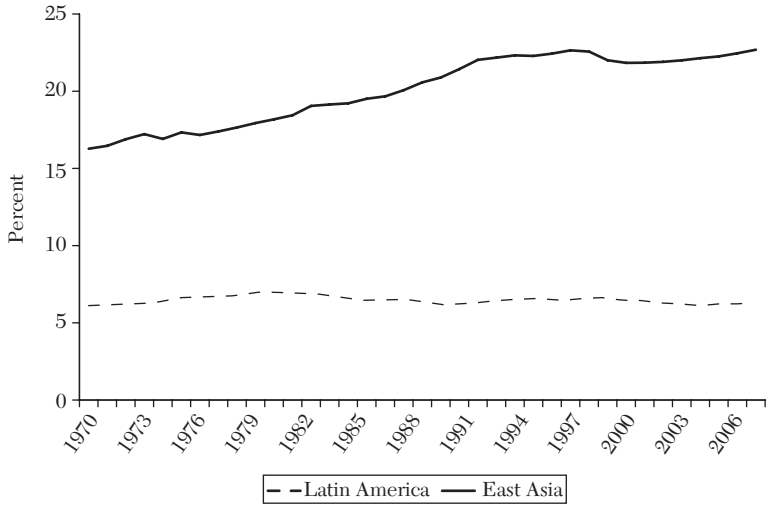
Source: GDP table in the ERS International Macroeconomic Data Set (www.ers.usda.gov).

share of world output grew from 6.09 percent to 6.35 percent (an increase of 4.3 percent) while East Asia's share, for the same period, went from 16.26 percent to 22.46 percent (an increase of 38.13 percent). The comparative exercise suggests that even after the implementation of more free-market economic policies during the late 1980s and 1990s, Latin America economic growth has been suboptimal. It could be argued that this is one of the reasons several countries of the region have recently veered toward less capitalist economic systems.[1]

One of the fastest-growing economies in the world, China, is eating away an important source of Latin American economic growth with an upward shift in the exports of manufactured goods, especially in textile and other tradable goods. China has already surpassed Latin America and the Caribbean in global exports. Figure 3 docu-

[1]See Gruben and Alm (2007) for a discussion of several indexes of economic freedom and business measures as well as comparison of recent developments.

FIGURE 2
Latin America and East Asia's
Share in World Output



Source: GDP table in the ERS International Macroeconomic Data Set (www.ers.usda.gov).

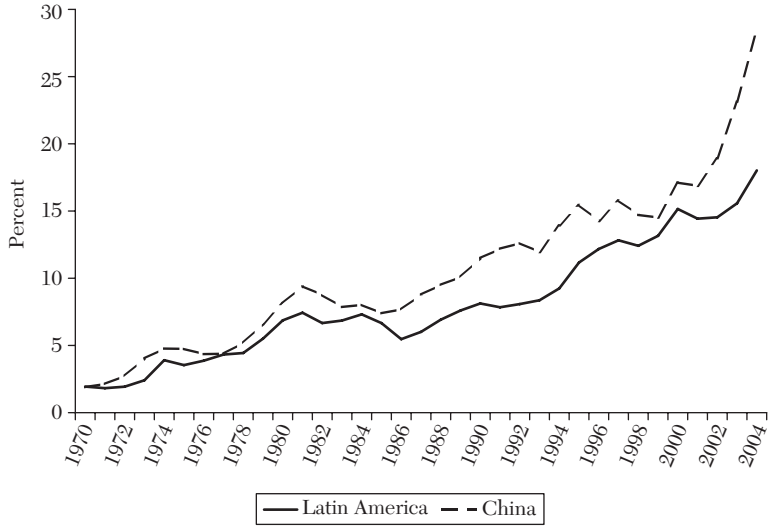
ments the growing importance of exports in China's GDP relative to Latin America's export/GDP share. In 1970, Latin America and China both had an export/GDP share of about 1.9 percent, but by 2004, China's share had risen to 28.48 percent while Latin America's share was 18.02 percent.[2] Such a trend is expected to continue unless effective economic reforms are put in place.

Along with sluggish economic growth, the Latin America region suffers from a severe inequality of income distribution both within and between countries. Figure 4 displays significant variation in annual real GDP per capita in the region ranging from $480 for Haiti to over $18,000 for the Bahamas in 2006.

Economists and other social scientists have tried to figure out the causes of disparities in living standards and the lack of economic

[2]See Jenkins, Peters, and Moreira (2008) for evidence on China's impact on trade (exports and imports) and foreign direct investment in Latin America.

FIGURE 3
Export Share of GDP

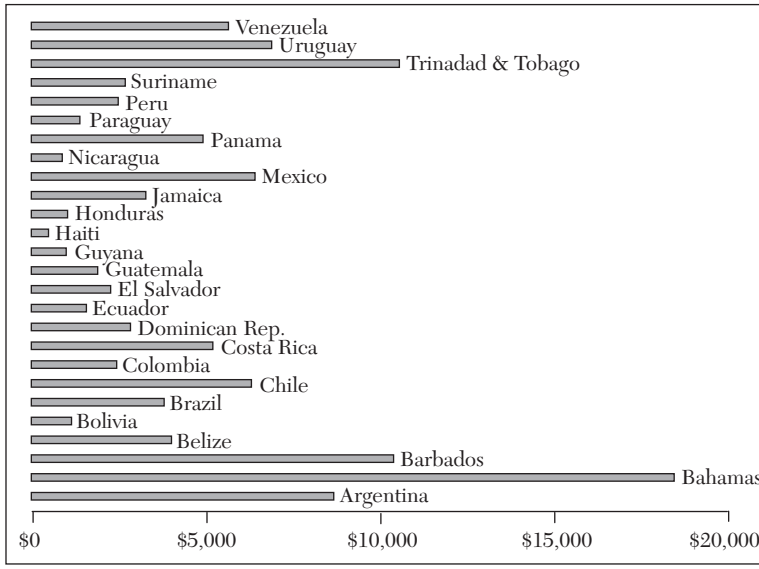


Source: International Monetary Fund IFS (www.imfstatistics.org/imf).

growth. Some experts have suggested that corruption, excessive debt, political instability, low investment in human capital, and emigration account for low levels of economic prosperity in Latin America.[3] Others have attributed the suboptimal economic growth to exchange-rate volatility (Hausmann, Panizza, and Rigobon 2006; Kaminsky and Reinhart 1998); bad monetary policy (Wallich 1985); insufficient foreign direct investment (FDI) (Goldberg and Kolstad 1995); inequality (Birdsall and Londoso 1997); lack of economic freedom (Islam 1996; Farr, Lord, and Wolfenbarger 1998; Fraga 2004; Miles, Feulner, and O'Grady 2005); and lack of democracy (Barro 1996, Leblang 1997).

[3]See, for example, De Gregorio (1992), Hein (1992), Mauro (1995), Alesina et al. (1996), Hakim (1999), Habib and Zurawicki (2002), and Adams (2003).

FIGURE 4
2006 Annual Real Gross Domestic Product per Capita

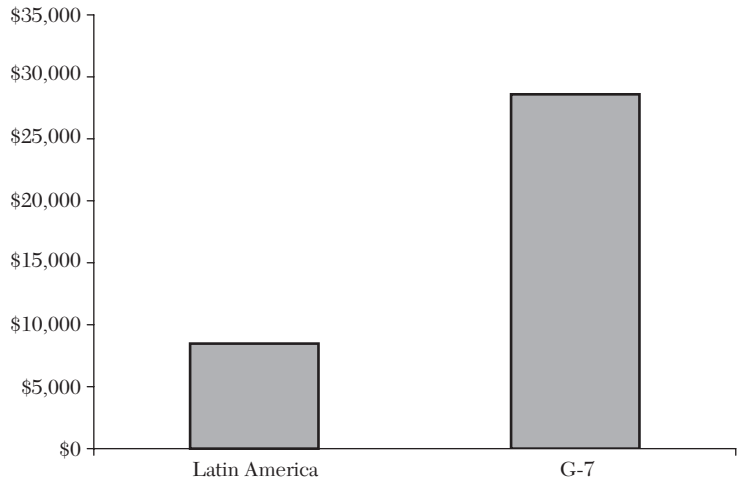


Source: GDP Table in the ERS International Macroeconomic Data Set (www.ers.usda.gov).

Figure 5 presents the average real GDP per capita (RGDP) of the G-7 (group of seven industrialized nations of the world) and of the 23 Latin American countries included in this article for 2003. The more than 3 to 1 gap in income between the two sets of countries is evident. Figure 6 presents average government consumption (GC) as a share of real GDP for both blocks of countries for 2003. Latin America has a much higher level of government consumption (more than 23 percent of GDP) than the most prosperous nations of the world (slightly more than 15 percent of GDP).

The Armey Curve analysis suggests that the optimal consumption by the average Latin America government is about 13.7 percent of the annual real GDP, substantially below the existing 23 percent. Panel data reinforce the message from the Armey Curve: an increase of 1 percent in GC as a share of real GDP leads to a reduction of economic growth from – 0.22 percent to – 0.28 percent under different model specifications.

FIGURE 5
Real Gross Domestic Product
per Capita, 2003



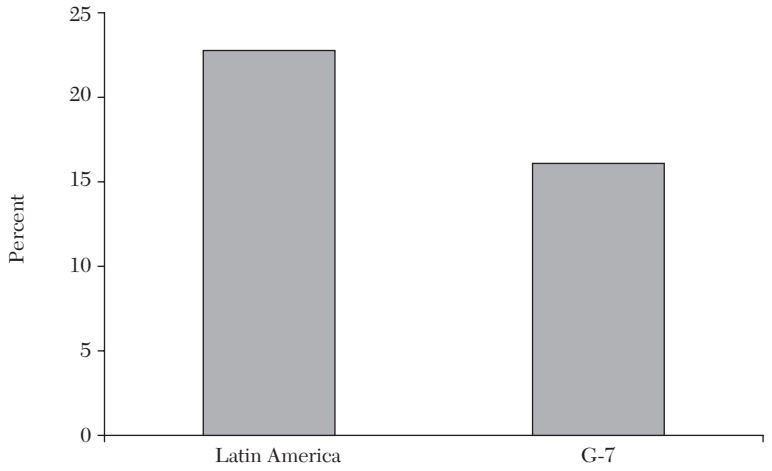
Note: Latin America: average of the 23 countries explained in the text. G-7: average of United States, Canada, United Kingdom, Japan, Germany, France, and Italy.

Our study corroborates the conclusion of other studies concerning the negative relation between economic growth and government consumption, and also the positive relationship between economic growth and investment put forward by Barro (1991). Our results are consistent with the notion that the typical Latin America government wastes too many resources in ineffective bureaucracy and harms the well-being of their citizens.

Hypothesis and Theoretical Issues

In this article, we conjecture that the atypical proportion of real GDP consumed by the typical government in Latin America is a significant impediment to economic growth. When the government controls a substantial part of the economy, space for private investment is limited, which has a negative spillover effect on productivity.

FIGURE 6
Government Consumption as a Share of
Real Gross Domestic Product, 2003



Note: Latin America: average of the 23 countries explained in the text. G-7: average of United States, Canada, United Kingdom, Japan, Germany, France, and Italy.

In addition, nonproductive public spending (government waste) is an impediment to economic growth. This hypothesis can be represented as follows:

(1) $GE_1 = PE_1 + UE_1$,

where GE_1 represents total government expenditure in period t; PE_1 is the amount of productive government expenditure, such as effective investment in human capital, infrastructure, and law and order; and UE_1 represents the amount of unproductive government expenditure, such as excess bureaucracy, giveaways, useless government programs, and outright misappropriations of public funds. The ideal situation is when $UE_1 = 0$; however, this is not realistic. We expect GE_1 to be higher than the optimal level, PE_1. Accordingly, when $UE_1 > 0$, we expect economic stagnation.

Our research design has the objectives of (1) detecting and measuring the negative effect, if any, that the size of the government

consumption has on the level of economic prosperity—that is, we assess whether or not the size of government expenditures contributes to the levels of income per capita, as measured by real GDP per capita—and (2) determining the optimal share of government consumption in the context of Latin America. The optimal share should be close to PE_1 in (1).

Economic theory suggests after some point there should be an inverse relation between the growth rate of real per capita GDP and the share of government consumption, as documented by Barro (1991). It has been shown, however, that a country with insufficient or no government (in which the share of government consumption in GDP is close to zero) suffers from graver economic conditions than those countries where the government consumes a larger share of GDP (see Vedder and Gallaway 1998). Therefore, we estimate the optimal share of Latin American government consumption and contrast that with the observed share.

Data and Descriptive Statistics

Due to data constraints, our analysis considers 23 of the countries that form the Latin American region. These countries are Mexico, Guatemala, Nicaragua, El Salvador, Honduras, Costa Rica, Panama, Venezuela, Brazil, Bolivia, Peru, Paraguay, Uruguay, Chile, Argentina, Bahamas, Barbados, Belize, Jamaica, Suriname, Santa Lucia, Trinidad & Tobago, and Saint Vincent, for the period 1974 to 2003. The excluded countries are, in most cases, small islands, except for Cuba. The observations of annual growth in real GDP per capita (GY), real GDP per capita (RGDPC), openness (OPEN), inflation (INF), and government consumption as a share of GDP (GC) come from the Penn World Table Version 6.2 (Heston, Summers, and Aten (2006). Fertility (FER) comes from the World Bank (Data and Statistics, http://web.worldbank.org).

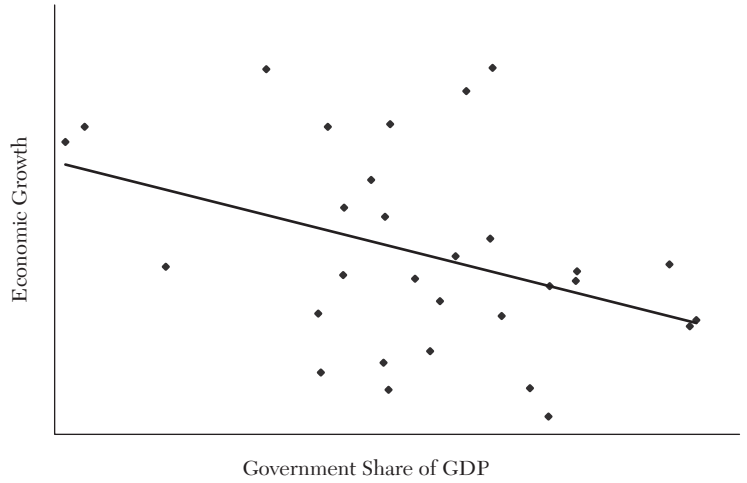
Basic descriptive statistics are presented in Table 1. Prosperity (GY), defined as the annual rate of growth of real GDP per capita, as well as the investment share of GDP (INV), inflation (INF), government consumption as a share of GDP (GC), and openness (OPEN) are presented in percentages. Real GDP per capita (RGDPC) is expressed in U.S. dollars. The countries with the highest/lowest-aver-

TABLE 1
DESCRIPTIVE STATISTICS OF KEY VARIABLES

Variable	Mean	Median	St. Dev.	Highest	Lowest
Prosperity (GY)	1.14	1.17	6.0	St.Vincent (3.62)	Nicaragua (–1.86)
Investment Share (INV)	14.37	13.87	5.8	Brazil (19.51)	Barbados (5.24)
Inflation (INF)	73.35	11.11	548.3	Bolivia (492.4)	Panama (2.5)
Openness (OPEN)	74.78	63.19	42.0	Panama (156.6)	Brazil (17.7)
Real GDP/Capita (RGDPC)	5,254	4,276	3,550.6	Bahamas (13,601)	Honduras (1,714)
Government Consumption (GC)	22.71	19.70	11.1	Nicaragua (33.85)	Barbados (11.7)

NOTES: Data are of annual frequency from 1974 to 2003. Countries included in the analysis are Mexico, Guatemala, Nicaragua, El Salvador, Honduras, Costa Rica, Panama, Venezuela, Brazil, Bolivia, Peru, Paraguay, Uruguay, Chile, Argentina, Bahamas, Barbados, Belize, Jamaica, Suriname, Santa Lucia, Trinidad & Tobago, and Saint Vincent.

FIGURE 7
The Negative Impact of Government Consumption on Economic Growth in Latin America, 1974–2003



Source: Authors' calculations based on dataset explained in the text.

aged observation are also indicated. Haiti, which is not included in the analysis for lack of data, is the poorest country in the region. Table 1 depicts significant dispersion in inflation and the level of real GDP per capita among these countries suggesting the presence of economic uncertainty and instability in the region. It is clear that lack of economic growth has been a pervasive problem for the whole zone.

Figure 7 depicts the relationship between the cross-sectional averages of economic prosperity (GY) and government consumption (GC). The scatter plot reflects a negative relationship between these two variables. As the government share increases in Latin America we tend to see lower average rates of economic growth.

Econometric Models

We can now move to a more rigorous discussion of the relation between economic growth and the size of government.

The Armey Curve

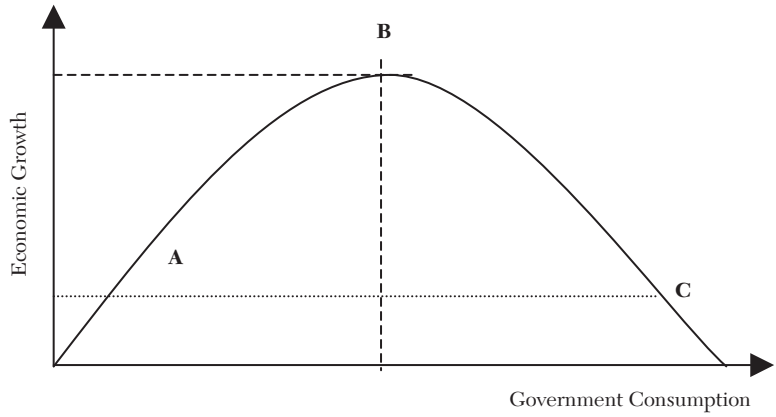
Our first approach in analyzing the relation between economic growth and government's share of real GDP in the context of Latin America and the Caribbean is through a cross-sectional study of the 23 countries using the Armey Curve methodology. As in Vedder and Gallaway (1998), we estimated the Armey Curve using the ordinary least squares (OLS). Hypothesized signs for the regression coefficients are provided below equation (2):

$$(2)\ GY_i=\beta_0+\beta_{+1}GC_i+\beta_{-2}GC_i^2+\varepsilon_i,$$

where *GY* represents economic growth, and *GC* represents government consumption as a percentage of annual real GDP. The positive expected sign on the linear term *GC* is designed to show the favorable effects of government spending on GDP, while the negative expected sign for the squared term is designed to reflect the unfavorable effects associated with increased government size beyond its optimal level on GDP. The downward-sloping portion of the Armey Curve is produced by the squared term, which increases in value faster than the linear term.

As can be seen in Figure 8, the unfavorable effect of continued growth in government size would eventually offset the favorable effect, ceteris paribus. The creator of the Armey Curve, former U.S. Representative Dick Armey, argues that the non-existence of government causes a state of anarchy and low levels of wealth creation. The absence of rule of law and protection of property rights and the lack of collective infrastructure lead to poor productivity and consequently low levels of wealth creation, as argued by Torstensson (1994). Similarly, when all input and output decisions are in the hands of the authorities, wealth creation is also very low or even negative. However, where there is a mix of private and government initiative regarding the allocation of resources, output will tend to grow. As a state of law and order is being installed, collective infrastructure such as roads, bridges, means of communication, education, and welfare all contribute to increased productivity. This evolution is projected as the part of the curve between Points A and B. Growth-enhancing features of government spending gradually diminish. Further inefficient expansion of government spending beyond the Armey-optimal Point B no longer leads to output expansion. At that point, the marginal productivity of public spending equals the marginal productivity

FIGURE 8
The Armey Curve



of private spending, and the marginal benefits from increased government spending become zero.

Panel Data Analysis

Equation (2) is based on cross-sectional aggregated data. When cross-sectional data are aggregated, statistical results may be negatively affected due to the loss of variance. In addition, economic growth is affected by more than just government spending. In order to minimize the effect of aggregating cross-sectional data and the "omitted variables problem," we expand our analysis by combining cross-sectional and time series data. The relation between economic growth and government consumption is assessed using equation (3). To take into account the characteristics of each country, we let the intercept vary for each country, but we still assume that the slope coefficients are constant across countries (see Gujarati 2003). We use the fixed effects (FE) model in our panel data analysis in the following format (expected signs are provided below the equation):

$$(3)\ GY_{it}=\alpha_i+\beta_{-1}GC_{it}+\beta_{+2}INV_{it}+\beta_{+3}OPEN_{it}+\beta_{-4}INF_{it}+\beta_{-5}FER_{it}+\beta_{-6}ESIZE_{it}+\varepsilon_i.$$

Equation (3) is a reduced form model of Barro (1991). The coefficient for the squared term of GC could also appear at the right hand side, but the effect is never statistically significant. The model under-

lying (3) incorporates independent variables found in the traditional growth literature. Important variables such as human capital are not included due to lack of data for many of the countries of Latin America. However, we believe that the included control variables such as investment (INV), inflation (INF), openness (OPEN), fertility rate (FER), and economy size (ESIZE) effectively serve as control variables and provide an adequate model. Economy size is here measured by the country's GDP relative to the GDP of the United States.

We expect β_1 to be negative and significant. A negative sign would be an indication that the government is spending beyond the optimal level. Traditional economic theory posits that investment encourages economic growth. As a result, we expect β_2 to be positive. Economic theory also suggests that openness allows trade to flourish, which should positively impact economic growth. Inflation has been shown to negatively impact economic growth (Barro 1991, De Gregorio 1992); β_4 is thus expected to be negative. Barro (1991) also shows that fertility and initial level of wealth are negatively associated with economic growth. Therefore, we expect β_5 and β_6 to be negative.

Empirical Results

We now move to our empirical results.

The Armey Curve

Table 2 shows the estimation of equation (2). Government Consumption (GC) and the square of GC have the expected signs and are statistically significant ($p<0.01$). The result seems to confirm the hypothesis that economic growth moves negatively with government consumption that goes beyond the optimal point. It also lends support to the argument that certain levels of government participation are healthy for economic growth. The optimal point (Point B in Figure 8) is computed by taking the first derivative of the OLS estimation presented in Table 2, setting it equal to zero and solving for the critical point as follows:

$$(4)\ \frac{\partial GY}{\partial GC} = 41.49 - 3.02GC = 0.$$

By solving equation (4), we can determine that the function is maximized at GC ≈ 13.7. Since the average government consumption

TABLE 2
Estimation of Stimulation of Equation (2)
Dependent Variable: Economic Growth (GY)

	(1)	(2)
β_0	–282.801**	24.392***
	(110.295)	(8.734)
β_1	41.487**	–1.623**
	(15.435)	(0.615)
β_2	–1.505***	
	(0.538)	
Adj. R^2	0.281	0.175
N	30	30
DW	1.662	1.660
F-STAT	6.653	7.142

Notes: The method of estimation is Ordinary Least Squares (OLS). *** denotes statistical significance at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. White-cross section standard errors are reported in parenthesis.

in Latin America (see Table 1) is 22.71 percent of real GDP, we can infer that the average Latin America government is spending beyond the optimal point. The increase of GC beyond optimal levels results in lower economic growth. In the average cross-section framework of Table 2, if one eliminates the squared term of GC one has a negative and direct effect between GC and GY of –1.623, as shown in column (2). This result suggests that an increase in GC leads to a more than proportional negative effect on GY. Panel data analysis will shed further light on this relation—even though the systematic effect of GC on GY is smaller compared to that presented in Table 2, the relation is clearly negative.

Panel Data Analysis

Table 2 tends to support the argument that government consumption is an important predictor of economic growth in the context of Latin America. One possible reason is that a significant amount of government consumption is in giveaways and outright misappropriations. However, aggregating data might weaken statistical power and the model should include other variables that are well-established predictors of economic growth.

As a result, we added time series to the cross-sectional data and estimated equation (3) six times, adding one variable per estimation to check the consistency of β_1, the focus of this article. The results are presented in Table 3. White-robust heteroscedasticity consistent standard errors are given in parenthesis. As expected, β_1 is negative and significant at the 1 percent level throughout. The coefficient for the squared term of GC was never statistically significant at the 10 percent level or less and was thus omitted in the estimation. In the panel data context, the square of GC has no impact on economic growth—GY responds only to GC (negatively). As control variables are added, β_1 remains stable. The result is clear: an increase of 1 percent in GC leads to a reduction of economic growth from – 0.22 percent to –0.28 percent depending on the specification. Investment also helps explain the variance in economic growth among the 23 countries. As can be seen, there is a positive relationship between the two, in line with economic theory and the evidence in Barro (1991). The coefficient β_2 is very stable, with both magnitude and direction consistent throughout model specifications. The implication is that besides keeping an adequate size of government, policymakers should strive to increase investment in order to encourage economic growth.

Interestingly, the coefficient on openness (β_3) is negative and statistically significant only in one out of four specifications. This is contrary to what one would expect. While the negative coefficient is found only for column (6) and only at the 10 percent level of significance, another implication is that more comprehensive measures of openness to control for financial flows should be more appropriate than a perspective based on traded goods only as performed in Table 3. The coefficient on inflation (β_4) has the correct sign (negative) and is statistically significant throughout, but only at the 10 percent level. Fertility, a driver of population growth, is found to vary in statistical

TABLE 3
Estimation of Stimulation of Equation (3)
Dependent Variable: Economic Growth (GY)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
β_1	– 0.249***	– 0.219***	– 0.242***	– 0.240***	– 0.230***	– 0.276***	– 0.247***
	(0.070)	(0.073)	(0.067)	(0.067)	(0.065)	(0.068)	(0.076)
β_2		0.149*	0.178**	0.172*	0.213**	0.276***	0.210***
		(0.084)	(0.090)	(0.090)	(0.090)	(0.093)	(0.088)
β_3			– 0.032	– 0.032	– 0.036	– 0.048*	
			(0.028)	(0.028)	(0.027)	(0.027)	
β_4				– 0.0006*	– 0.0006*	– 0.0006*	
				(0.0004)	(0.0003)	(0.0004)	
β_5					– 1.070***	– 0.581	
					(0.394)	(0.412)	
β_6						– 0.162***	– 0.143***
						(0.055)	(0.053)
Adj. R^2	0.044	0.052	0.058	0.060	0.067	0.084	0.068
DW	1.706	1.734	1.730	1.739	1.752	1.764	1.750
F-STAT	2.315	2.588	2.708	2.678	2.837	3.240	2.996

N	23.00	23.00	23.00	23.00	23.00	23.00	23.00
T	30.00	30.00	30.00	30.00	30.00	30.00	30.00
N.T	690.00	690.00	690.00	689.00	689.00	689.00	690.00

NOTES: The method of estimation is Feasible Generalized Least Squares (FGLS) with fixed effects. A constant term was included but is not reported. The squared term on government consumption was always not statistically significant throughout specifications. *** denotes statistical significance at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. White-cross section standard errors are reported in parentheses.

significance in this data set. However, the size of the economy, measured by GDP relative to that of the United States, is statistically significant and has the expected sign. If the country's GDP is high compared to the United States, country growth tends to be smaller, which is consistent with the convergence hypothesis (see Barro 1991).

The last column reproduces the estimation of equation (3) for the series that have been consistently statistically significant in the estimations. Column (7) confirms the negative effect of government consumption ($\beta_1 = -0.247$), the positive effect of the investment ratio ($\beta_2 = 0.210$), and the negative effect of country size relative to the United States ($\beta_6 = -0.143$). As before, the parsimonious model in column (7) does not suffer from serial correlation problems (DW = 1.75).

The results of this analysis have important implications for policymakers. First, the evidence supports the notion that promoting efficiency in governmental activities is good for the region. Second, limited government can have a stronger impact on economic growth when accompanied by increases in private investment.

Conclusion

As Latin American policymakers ponder how to keep the region competitive and their economies growing, one area that should be carefully considered is the size of their respective governments. This article tests the hypothesis that government expenditures in excess of the optimal point, as shown by the Armey Curve, tend to reduce economic growth. When resources are wasted in sustaining an ineffective bureaucratic governmental system, opportunities to grow the economy are forfeited. When government overspends, it is because the government has overtaxed its citizens, which dries up the pool of private investment. However, if government is limited, private investment appears to be a positive and significant predictor of economic growth.

Our findings corroborate the conclusion of other studies concerning the negative relation between economic growth and government consumption, and also the positive relationship between economic growth and investment (e.g., Barro 1991).

What is the optimal size of the governments of Latin American countries? Since this is a question that must be answered for each

country, we leave this for future study. However, we estimated that the optimal consumption by the average Latin America government should be around 13.7 percent of the annual real GDP; yet the actual average spending is about 22.71 percent of the annual real GDP. The findings from panel data analysis reinforce the message from the Armey Curve: an increase of 1 percent in government consumption as a share of real GDP leads to a reduction of economic growth varying from –0.22 percent to –0.28 percent across specifications.

References

Adams, R. (2003) "International Migration, Remittances, and the Brain Drain: A Study of 24 Labor-Exporting Countries." World Bank Policy Research Working Paper No. 3069.

Alesina, A.; Ozler, S.; Roubini, N.; and Swagel, P. (1996) "Political Instability and Economic Growth." *Journal of Economic Growth* 1(2): 189–211.

Barro, R. J. (1991) "Economic Growth in a Cross-Section of Countries." *Quarterly Journal of Economics* 106 (2): 407–43.

_____ (1996) "Democracy and Growth." *Journal of Economic Growth* 1(1):1–27.

Birdsall, N., and Londoso, L. (1997) "Asset Inequality Matters: An Assessment of the World Bank's Approach to Poverty Reduction." *American Economic Review* 87 (2): 32–37.

De Gregorio, J. (1992) "Economic Growth in Latin America." *Journal of Development Economics* 39 (1): 59–84.

Farr, W. K.; Lord, R. A.; and Wolfenbarger, J. L. (1998) "Economic Freedom, Political Freedom, and Economic Well-being: A Causality Analysis." *Cato Journal* 18 (2): 247–62.

Fraga, A. (2004) "Latin America since the 1990s: Rising from the Sickbed?" *Journal of Economic Perspectives* 18 (2): 89–106.

Goldberg, L., and Kolstad, C. (1995) "Foreign Direct Investment, Exchange Rate Volatility and Demand Uncertainity." *International Economic Review* 36 (4): 821–54.

Gruben, W., and Alm, R. (2007) "Is Latin America Saying Adiós to Market-Friendly Reforms?" Federal Reserve Bank of Dallas *Economic Letter* 2 (7).

Gujarati, D. N. (2003) *Basic Econometrics*. 4th ed. New York: McGraw-Hill.

Habib, M., and Zurawicki L. (2002) "Corruption and Foreign Direct Investment." *Journal of International Business Studies* 33 (2): 291–307.

Hakim, P. (1999) "Is Latin America Doomed to Failure?" *Foreign Policy* 117: 104–19.

Hausmann, R.; Panizza U.; and Rigobon, R. (2006) "The Long-run Volatility Puzzle of the Real Exchange Rate." *Journal of International Money and Finance* 25 (1): 93–124.

Hein, S. (1992) "Trade Strategy and the Dependence Hypothesis: A Comparison of Policy, Foreign Investment and Economic Growth in Latin America and East Asia." *Economic Development and Cultural Change* 40 (3): 495–521.

Heston, A.; Summers, R.; and Aten, B. (2006) *Penn World Table*, Version 6.2. Center for International Comparisons of Production, Income, and Prices, University of Pennsylvania (September).

Islam, S. (1996) "Economic Freedom per Capita Income and Economic Growth." *Applied Economic Letters* 3 (9): 595–97.

Jenkins, R.; Peters, E. D.; and Moreira, M. M. (2008) "The Impact of China on Latin America and the Caribbean." *World Development* 36 (2): 235–53.

Kaminsky, G., and Reinhart, C. (1998) "Financial Crisis in Asia and Latin America: Then and Now." *American Economic Review* 88 (2): 444–48.

Leblang, D. A. (1997) "Political Democracy and Economic Growth: Pooled Cross-Sectional and Time-Series Evidence." *British Journal of Political Science* 27 (3): 453–566.

Mauro, P. (1995) "Corruption and Growth." *Quarterly Journal of Economics* 110 (3): 681–712.

Miles, M. A.; Feulner, E. J.; and O'Grady, M. A. (2005) "Index of Economic Freedom." Washington: Heritage Foundation and Dow Jones & Company.

Torstensson, J. (1994) "Property Rights and Economic Growth: An Empirical Study." *Kyklos* 47 (2): 231–47.

Vedder, R., and Gallaway, L. (1998) "Government Size and Economic Growth." Joint Economic Committee. Available at www.house.gov/jec/.

Wallich, H. (1985) "Central America: Monetary Policy and Economic Growth." *Journal of Interamerican Studies and World Affairs* 27 (4): 111–15.