

# Young Democracies and Government Size: Evidence from Latin America

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## **Abstract**

We investigate the hypothesis that when democracies are young, or still fragile and unconsolidated, the size of government (in terms of consumption, debt and its share to GDP) tends to increase (presumably in an attempt of some sort of redistribution or to buy out the electorate, so that democracy becomes acceptable and "the only game in town"). Our sample includes nine Latin American countries between 1970 and 2007 and the results, based on principal component and panel data analyses (we use the POLS, Fixed Effects and SYS-GMM estimators), suggest that the young democracies of Latin America have been indeed associated with bigger governments. Furthermore, we test for the hypothesis that the outgoing dictatorships engaged in activities which would leave the young democracies with bigger debt to be repaid, therefore with justifiably bigger governments in their initial stages. This hypothesis is not confirmed by the analysis conducted here. Finally, there is evidence that as democracies (government and electorate), mature over time, the size of government decreases, or returns to a sort of steady state.

Keywords: Democracy, government, Latin America.

JEL Classification: H11, N16, O11, O54.

## I. Introduction and Motivation

Latin America, at least in its recent history, has been known for political transitions from (right-wing) dictatorships to more democratic regimes, macroeconomic instability (in terms of high rates of inflation), delayed stabilisation processes in the spirit of Alesina and Drazen (1991) (in some cases macroeconomic stabilisation took roughly nine years to be achieved), and no come back to less democratic regimes (democracy is maturing in the continent). The region has also been known for a certain, relatively above the average, degree of economic inequality<sup>1</sup>.

Against this background, we test the hypothesis that governments in young democracies tend to consume more, generate higher debt and consequently increase their shares to GDP (or overall size) at the initial stages of these transitions to more democratic regimes. This might be because these new regimes face many challenges; crumbling infrastructure, low wages of civil servants, or even the need to renovate the entire bureaucracy, to mention just a few. In addition, the reason for this increase in size might be the high economic inequality prevalent in some countries in the region and the need for some sort of redistribution (Meltzer and Richard (1991))<sup>2</sup>. Or it can also be that democracy in its infancy faces severe opposition, and therefore these new regimes try to buy out the electorate so that democracy becomes ideologically acceptable and literally "the only game in town" (Brender and Drazen (2007)).

Moreover, since those political transitions were announced well in advance, we investigate whether the last dictatorship in power engaged in activities (*e.g.* higher consumption) which would leave those new democratic regimes with considerable debt to be repaid. That would explain the need for higher borrowing, and therefore higher debt and bigger government when democracies are still young (Alesina and Tabellini (1990)). Finally, we check the hypothesis that democracies, even very young ones, mature over time, or that the electorate learn the nuts and bolts of the democratic game so that governments start being more responsible, and perhaps efficient, at least in terms of spending, debt generation and overall size.

To conduct the analysis we use data from nine Latin American countries which redemocratised at some point in the 1970s, 1980s and 1990s, and given data availability, we cover the period between 1970 and 2007. For the empirical analysis we make use of static and dynamic panel data models. More specifically, we use the Pooled Ordinary Least Squares, Fixed Effects and SYSTEM Generalised Method of Moments estimators.

In terms of results, firstly we find that governments indeed increased in size during the first two democratic terms and, in fact, to a certain extent during the whole democratic period. Secondly, we do not find any evidence that the outgoing dictatorships of the day engaged in, for instance, some sort of higher consumption activities leaving the new democratic coalitions with significant debt to be repaid. Hence, this particular reason for the need for higher and bigger government debt and size respectively in young democracies can be avoided in this case. Thirdly, we are able to provide evidence that democracies indeed mature over time, or that government size starts coming down as time after democratisation passes by.

The subject of electoral budget cycles has attracted attention for some time and the literature is clearly evolving over time in terms of explanations provided for the very existence of bigger governments. For instance, Rogoff and Sibert (1988), and Rogoff (1990) theoretically suggest that information is asymmetric, at least in the short run, and that governments doing a relatively good job will actually try to signal to the electorate, via higher spending or lower taxes, their achievements. Following that lead, Gonzalez (2002) studies the case of Mexico, a sort of mature democracy, at least in Latin American terms, and finds out that even under a one-party democracy, which is the Mexican case, the government increases spending during more democratic periods within an already democratic regime. This is to avoid opposition within the governing coalition or even to signal particular good deeds.

Woo (2003) formally introduces the role of inequality in the analysis, which some would argue to be an important factor in Latin America. He makes use of panel data and finds that inequality, and also finance, are related to bigger public deficits (via some sort of

redistribution and easier access to finance). Akhmedov and Zhuravskaya (2004) investigate the case of a young democracy, Russia, to find out that fiscal cycles diminish with time, or as they put it, with a freer and better media, a less-myopic electorate, and better checks and balances governments become less frivolous in their spending activities. All in all, with time there is a learning process of the nuts and bolts of democracy. Brender and Drazen (2005) extend on this and suggest that in a large cross-section of countries fiscal cycles are driven by young democracies, since voters tend to be fiscal conservatives in more mature societies (OECD countries).

Woo (2005 and 2008) extend on his previous analysis and suggests that polarisation within the coalition in power might generate a fight for the common resources pool, which leads to higher deficits and consequently output collapse. Shi and Svensson (2006) also make use of panel data and they suggest that in election years the deficit increases, particularly in developing countries in which corruption tends to be more prevalent. Brender and Drazen (2007) extend on the idea of young democracies being vulnerable and not entirely supported by the electorate, and indicate that higher spending during the first years of democratisation is a temporary solution to buy out the electorate so that democracy becomes "the only game in town".

Finally, Alesina, Tabellini and Campante (2008), also using panel data, suggest that fiscal pro-cyclicality in developing countries takes place because the electorate attempts to "starve the Leviathan", or to make sure to extract, during booms, from the government all resources possible, before the coalition in power wastes those resources in more frivolous activities.

In essence, the literature clearly suggests that governments, not only in developing countries as well suggested by Rogoff (1990), tend to increase in size either before elections (for all sorts of signalling reasons), or because, particularly in developing countries with young democracies, the new regime faces all sorts of challenges (inequality, corruption, ideological unacceptance), so the need to buy out the electorate. Furthermore, the literature suggests

that young democracies do not stay "forever young", they mature, and with maturity governments tend to become either more efficient in their spending, or more conservative and responsible in what they spend, or alternative speaking, particular policies, like fiscal responsibility laws, are introduced and they tend to constraint and discipline the *fiscus*.

Given the above, the value added of this paper to the literature is that we make use of a sample of Latin American countries (all sharing some developing countries characteristics, but with their own idiosyncrasies), which democratised at some point in the last forty years or so. This is interesting in itself because with that sample we can disaggregate and further our knowledge on how governments in young democracies behave over the short and long run, and not only during electoral years, in terms of consumption, debt and overall government size. Furthermore, we construct a variable for government size based on principal component analysis that captures what is common to different proxies for government size and that is believed to offer more explanatory power. Finally, we use of a range of panel data estimators to make sure that our results are robust. It is therefore believed that we are able to provide some robust evidence to specifically understand the recent history of Latin America, instead of treating the region either as an outlier to be removed from the sample, or as a dummy variable.

The remainder of this paper is as follows: the next sections describe the data set, the empirical methodology used, and then it presents and discusses the main results obtained. We then conclude and offer some future research avenues that can be pursued from here.

## **II. Empirical Analysis**

### ***A. A Look at the Data***

The data set covers the period between 1970 and 2007, and nine Latin American countries which transitioned from political dictatorship to full democracy at some point in the late 1970s (Ecuador), 1980s (Argentina, Bolivia, Brazil, Chile, Peru and Uruguay), and early 1990s (Guyana and Paraguay).

The variables used to measure the size of government are the share of government to GDP (from the Penn World Table), government consumption (from the International Financial Statistics provided by the IMF), and the share of public debt to GDP (from the recently released Historical Public Debt Database, also provided by the IMF). With that information we can make use of principal component analysis and extract from the standardised data matrix the unobserved common factors of these three, and rather popular in the literature, variables for government. We therefore end up with a proxy for government size (*GOV*) which contributes to reduce model uncertainty and that is believed to present more explanatory power. In this particular case, the first principal component—which roughly corresponds to the mean of the series—accounts for 52% of the variation in these three variables. This is important because in this case we are able to reduce the dimensionality of a set of prospective variables, and we end up with one variable, *GOV*, that contains most of the information coming from different candidates for government size.

We then construct different sets of dummy variables to account for the role of democratisation on government size. The first one (*NDEMOC*), accounts for the first two democratic terms (in which a positive and significant estimate indicates that the young democracies presented bigger governments); the second one (*DEMOC*) accounts for the whole democratic period (a positive estimate suggests that the size of government increases under more democratic regimes); the third one is for the last term of dictatorship (*LDICTAT*), in which a negative and significant estimate indicates that the last dictator did not engage in generating a bigger government (*e.g.* via higher consumption), which would leave the new democratic regime with significant levels of debt to be repaid in its initial stages; and finally a dummy which counts the number of years after democratisation (*MDEMOC*). In this case, a negative and significant estimate indicates that the size of government decreases with time, or alternatively that democracy, or the electorate, mature over time, or to put it another way, that governments become more responsible, or constrained, with a more mature electorate.

The control variables used are relatively standard in the literature and they are as

follows: a measure for trade openness relative to GDP (*OPEN*), which is provided by the Penn World Table, and it is expected that more open economies tend to display lower debt, or smaller governments. Moreover, we use the share of the liquid liabilities to GDP (*M2*), which comes from the World Development Indicators and are provided by the World Bank, and GDP and GDP growth (*GDP* and *GROWTH*), which also come from the Penn World Table. In those cases, it is expected that in economies with better developed financial sectors governments can acquire finance more easily and therefore increase in size via higher debt, and economies growing relatively fast can display, via the automatic stabilisers, lower debt (or smaller size overall). The inflation rates (*INFLAT*), come from the World Development Indicators, and it is expected that higher inflation, via higher nominal interest rates, leads to higher, or even ballooning, debt, or bigger governments in general.

In addition, constraints on the executive (*XCONST*) come from the Polity IV data set, the urbanisation (*URBAN*) series are from the World Development Indicators, and the Gini coefficients for income inequality (*INEQ*) from the UNU-WIDER data base. What is expected from these control variables is that more constrained executives tend to be more restrained in what they consume and consequently run lower debt, rapid urbanisation in developing countries leads to more spending in infrastructure, and higher inequality leads to some sort of redistribution (either via taxation or provision of particular public goods) which might lead to bigger government size overall.

To briefly illustrate the behaviour of the government share to GDP (*gshare*) and government debt to GDP (*gdebt*), in Figure One we plot both normalised series against time. This initial eyeball evidence suggests that these country averages increased considerably during the late 1970s and early 1980s, which roughly coincides with the implementation of more democratic regimes in the region (alternatively, it can also coincide with the end of those political dictatorships). On the other hand, both series present a reasonably consistent reduction from the 1990s onwards, which might suggest that some time after democratisation the sizes of those governments decreased (or returned to a sort of steady state).

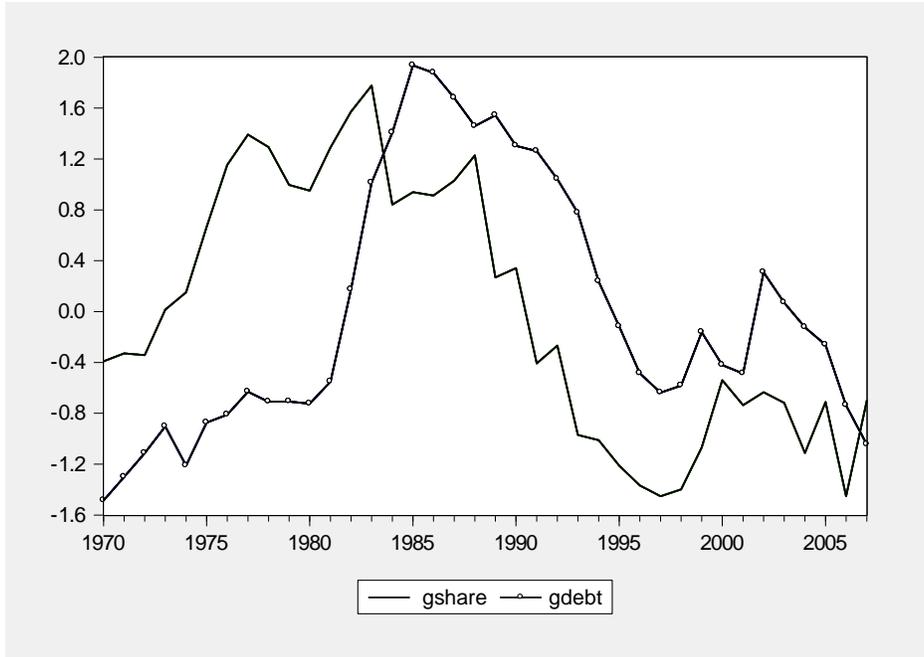


Figure 1: Government Share to GDP ( $gshare$ ) and Government Debt to GDP ( $gdebt$ ), Latin America, 1970-2007. Source: Penn World Table and IMF.

Moreover, we provide the correlation matrix in Table One, and the statistical correlation between our proxy for government ( $GOV$ ) and the dummy for the first two democratic terms ( $NDEMOC$ ) is positive and significant at the 5% level. The correlation between  $GOV$  and the dummy for the whole democratic period ( $DEMOC$ ) is positive, however not statistically significant, as well as the correlation between  $GOV$  and the dummy for the last term of those dictatorships ( $LDICTAT$ ). Finally, the correlation between  $GOV$  and the dummy which counts the number of years after democratisation ( $MDEMOC$ ) is negative and statistically significant at the 5% level.

Also of interest, the correlations amongst the government share to GDP ( $gshare$ ), government consumption ( $gcon$ ) and government debt ( $gdebt$ )—the variables used to construct the proxy  $GOV$ —with  $NDEMOC$  are all positive and mostly significant. On the other hand, the correlations amongst the government share to GDP, and government consumption and debt with  $MDEMOC$  are all negative and significant. Basically, these preliminary correlations (without implying any causation at this stage) suggest that the size of government

increases during the first years of democratisation and then decreases in the long term, or that democracy—governments and the electorate—mature over time. Alternatively it could be argued, given the size of the correlations, that *GOV* returns to a sort of long-run steady state.

Table 1: The Correlation Matrix: Latin America, 1970-2007.

	GOV	GSHARE	GCON	GDEBT	NDEMOC	DEMOC	LDICTAT	MDEMOC
GOV	1							
GSHARE	0.867*	1						
GCON	0.810*	0.500*	1					
GDEBT	0.385*	-0.001	0.048	1				
NDEMOC	0.322*	0.162*	0.275*	0.090	1			
DEMOC	0.011	-0.110*	0.104	-0.055	0.426*	1		
LDICTAT	0.009	0.172*	-0.061	0.095	-0.163*	-0.417*	1	
MDEMOC	-0.336*	-0.300*	-0.162*	-0.134*	-0.186*	0.725*	-0.315*	1

Sources: Penn World Table, IMF, and Polity IV files. \* represents significance at the 5% level.

In addition, we provide the OLS regression lines between government debt to GDP and the dummies for the first two democratic terms, the whole democratic period and the number of years after democratisation. What can be seen from this visual evidence is that there is a positive relationship between debt and young democracies, a positive, however weaker, relationship between debt and democracy, and finally a not entirely positive relationship (in fact, the relationship is weakly negative) between debt and the number of years after democratisation<sup>3</sup>.

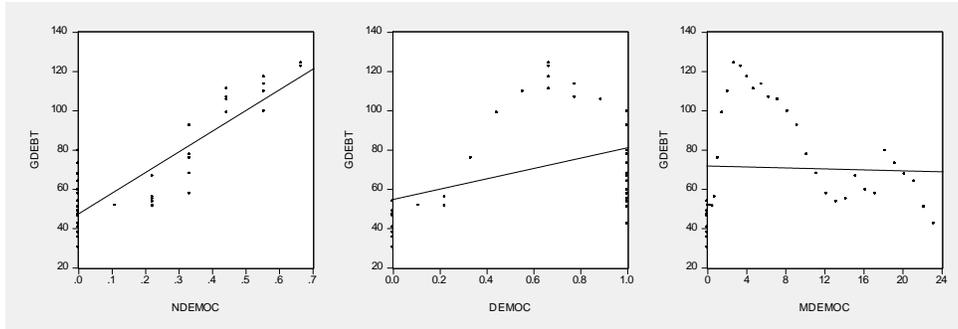


Figure 2: OLS Regression Lines, Government Debt to GDP ( $gdebt$ ) and Democracy, Latin America, 1970-2007. Sources: IMF and Polity IV.

In essence, the above preliminary evidence, with all its caveats, suggests that in one way or another the size of those governments, or consumption and consequently debt, increased during the first two democratic terms. Moreover, the evidence weakly suggests that democracy matures over time, or put it another way, that the size of overall government, or consumption and debt, have decreased as time after democratisation has gone by.

### ***B. Empirical Strategy***

In terms of empirical strategy, since we have a panel of nine Latin American countries ( $N = 9$ ) covering the period between 1970 and 2007 ( $T = 38$ ), we follow the previous literature and make use of static and dynamic panel data analysis.

Initially we make use of the baseline Pooled Ordinary Least Squares (POLS), and of the Fixed Effects (FE) estimators for our static specifications. The POLS assumes homogeneity of intercepts and slopes, and it gives equal weight to the within ( $y_{it} - \bar{y}_i$ ) and between ( $\bar{y}_i - \bar{y}$ ) variances in the data. The FE estimator (with robust standard errors for the correlation of residuals over time) assumes heterogeneity of intercepts, a reasonable assumption in such a diverse panel of countries, and it makes use only of the within ( $\bar{y}_i - \bar{y}$ ) variation in the data. Moreover, under the assumption of strict exogeneity of the regressors, the POLS and FE estimators provide unbiased estimates of the expected values of the coefficients in static models.

Secondly, in our dynamic specifications we first use the FE estimator—which via the within transformation above purges the correlation between the unobserved heterogeneity and the regressors—with robust standard errors. Essentially, the FE estimator under  $T \rightarrow \infty$ , not only minimises the Nickell bias present in short  $T$  dynamic panels, but also gives consistent estimates of the expected values.

Furthermore, although we attempt to use—given data availability—the most common control variables in the literature, one would argue that omitted variables, measurement error, and even some sort of (statistical or economic) endogeneity might be present. Thus, controlling for the number of instruments—and for what we instrument—to avoid overfitting (Bond (2002) and Roodman (2009)), we carefully make use of the Generalised Method of Moments (GMM) that also takes into account the fact that persistent series might lead to weak instruments (and to a non-negligible small sample bias). Basically we instrument for the lagged dependent variable with levels dated  $t - 2$  and earlier, a standard assumption, and for *INFLAT* (some would argue that higher debt is behind higher inflation), and *GROWTH* (the growth literature suggests that big governments are detrimental to GDP growth). We therefore make use of the GMM estimator, with robust standard errors and the small-sample correction provided by Windmeijer (2005) to avoid "too good to be true" standard errors, that combines the usual moment conditions for the first-difference GMM model  $(y_{it-2}, \dots, y_{i1})$ , with those extra conditions for the model in levels  $(\Delta y_{it-1})$ , SYSTEM (SYS), or the SYS-GMM estimator proposed by Arellano and Bover (1995), and Blundell and Bond (1998).

All in all, the above-mentioned static and dynamic estimators take into account not only the fact that those countries in the sample share particular characteristics (all of them went through political transitions), but also the fact that such a panel is, no doubt, heterogenous (some of the countries in the sample are more developed than others, more or less unequal than others, or have been under democratic regimes for longer than others). Moreover, some of these estimators take into consideration the possibility of omitted variables and

measurement error biases, and endogeneity issues, which is always an advantage for an estimator. The estimated differenced SYS-GMM dynamic equation is as follows,

$$\begin{aligned}\Delta GOV_{it} = & \alpha \Delta NDEMOC_{it} + \beta \Delta OPEN_{it} + \gamma \Delta M2_{it-1} + \delta \Delta GDP_{it-1} \\ & + \epsilon \Delta GROWTH_{it} + \varepsilon \Delta INFLAT_{it-1} + \zeta \Delta XCONST_{it} \\ & + \eta \Delta URBAN_{it} + \theta \Delta INEQ_{it} + \vartheta \Delta GOV_{it-1} + \Delta v_{it},\end{aligned}$$

where  $GOV$  is the proxy for government size which comprises the unobserved common factors amongst government share to GDP, government consumption and government debt,  $NDEMOC$  is the first set of dummies which accounts for the first two democratic terms,  $OPEN$  is a measure for trade openness,  $M2$  are the liquid liabilities over GDP,  $GDP$  is the real GDP and  $GROWTH$  are the GDP growth rates,  $INFLAT$  are the inflation rates,  $XCONST$  accounts for constraints on the executive,  $URBAN$  is the share of urban population, and  $INEQ$  are the Gini coefficients for income inequality.

### ***C. Results and Discussion***

In Table Two we report the static and dynamic estimates of the dummy covering the first two democratic terms. More specifically, in columns (1) and (2) the static POLS and FE estimates of  $NDEMOC$  on  $GOV$  are positive and statistically significant. These estimates suggest that during the first two democratic terms  $GOV$  indeed increased in size. Most of the control variables present the expected signs against  $GOV$ ;  $M2$  is positive, which indicates that deeper financial sectors ease the burden of finance on governments,  $GDP$  and  $GROWTH$  present the expected negative estimates (richer societies tend to be more efficient in what they spend and how they collect, and economies growing faster present lower debt, via the automatic stabilisers, which in turn has an impact on government size), and  $INFLAT$ , via higher nominal interest rates, presents positive estimates, although not significant.

About the structural controls, *XCONST* presents negative estimates (more constrained executives have less room to engage in bigger government activities), and finally *INEQ* is the control presenting non-expected negative estimates (one would expect that high inequality, prevalent in some Latin American countries, leads to higher spending and transfers, or redistribution of some kind, which impacts government size).

Moving to our preferred dynamic specifications, in columns (3) and (4) we present the FE and SYS-GMM estimates of *NDEMOC* against *GOV*. Both estimators deliver the same, and statistically significant, story of bigger governments during the first two democratic terms. The controls are also consistent with the static estimates (financial depth facilitates bigger governments), fast growing economies are able to reduce debt, more constrained executives tend to spend less, and higher inequality is not really leading to bigger government, as one would expect in Latin America. Finally, the Arellano and Bond *m2* test for second-order serial correlation suggest that we can not reject the null hypothesis and the Sargan test does not indicate that the instrument set is invalid (in this case the instruments are not correlated with the residuals in the first-differenced equation).

Table Two: POLS, FE and SYS-GMM Estimates

GOV	Static and Dynamic Models			
	POLS	FE	FE	SYS-GMM
NDEMOC	.472 (3.31)	.230 (1.78)	.141 (4.12)	.074 (2.06)
OPEN	.000 (.28)	.007 (4.49)	.000 (0.30)	-.001 (-2.35)
M2	.473 (2.87)	.201 (0.95)	.302 (3.19)	.311 (3.81)
GDP	-.000 (-1.28)	-.000 (-23.81)	-.000 (-2.92)	-.000 (-1.17)
GROWTH	-.032 (-2.76)	-.030 (-7.71)	-.030 (-8.19)	-.027 (-4.88)
INFLAT	.125 (1.49)	.061 (0.91)	.024 (0.62)	.020 (0.44)
XCONST	-.113 (-3.96)	-.030 (-0.68)	-.027 (-2.36)	-.038 (-2.78)
URBAN	.000 (0.03)	.025 (0.98)	.005 (1.12)	-.004 (-1.43)
INEQ	-.006 (-0.73)	-.032 (-1.75)	-.006 (-2.80)	-.004 (-1.19)
GOV <sub>-1</sub>			.775 (14.80)	.954 (25.98)
F test	5.99			
m2 (p)				0.15
Sargan (p)				1.00

T-ratios in parentheses. Number of observations:  $NT = 342$ . *GOV* is the proxy for government size, *NDEMOC* is the dummy for the first two democratic terms, *OPEN* is a measure for trade openness, *M2* are the liquid liabilities over GDP, *GDP* is the real GDP and *GROWTH* are the GDP growth rates, *INFLAT* are the inflation rates, *XCONST* the constraints on the executive, *URBAN* is the share of urban population, and *INEQ* are the Gini coefficients for income inequality. POLS is the Pooled Ordinary Least Squares, FE is the Fixed Effects and SYS-GMM is the System Generalised Method of Moments.

In Table Three we report the estimates of the dummy covering the whole democratic period, *DEMOC*, against *GOV*. In columns (1) and (2) the static estimates of *DEMOC* are not entirely clear cut (the POLS presents negative, although not significant, and the FE presents positive, and just marginally significant, estimates). The control variables present consistent estimates with the ones reported above (more financially developed economies

can engage in higher consumption and consequently debt, although those estimates are not entirely significant, fast growing economies have the ability to reduce debt, and higher inequality is not behind bigger governments in Latin America).

On the other hand, in columns (3) and (4) the preferred dynamic FE and SYS-GMM estimates clearly suggest that governments indeed increased in size during the whole democratic period. The controls follow similar patterns as before, with financial depth being positively related to *GOV*, fast growing economies displaying smaller governments, constraints on the executive restraining *GOV*, and inequality once again not displaying any effect on larger governments. The Arellano and Bond, and Sargan tests do not suggest that the instrument set is in anyway invalid.

Table Three: POLS, FE and SYS-GMM Estimates

GOV	Static and Dynamic Models			
	POLS	FE	FE	SYS-GMM
DEMOC	-.343 (-1.37)	.471 (1.63)	.243 (3.94)	.227 (2.50)
OPEN	.002 (0.88)	.007 (6.26)	.000 (0.59)	-.001 (-1.20)
M2	.495 (2.86)	.267 (1.35)	.340 (3.54)	.329 (4.61)
GDP	-.000 (-1.04)	-.000 (-16.99)	-.000 (-3.97)	.000 (1.73)
GROWTH	-.024 (-2.02)	-.031 (-6.46)	-.031 (-8.72)	-.026 (-5.33)
INFLAT	.219 (2.68)	.068 (1.09)	.029 (0.76)	.023 (0.54)
XCONST	-.037 (-0.72)	-.050 (-1.56)	-.034 (-3.91)	-.052 (-3.41)
URBAN	-.001 (-0.17)	-.009 (-0.28)	-.014 (-2.11)	-.004 (-1.67)
INEQ	-.007 (-0.83)	-.033 (-1.86)	-.007 (-2.38)	-.002 (-0.72)
GOV <sub>-1</sub>			.772 (17.48)	.949 (28.42)
F test	4.60			
m2 (p)				0.12
Sargan (p)				1.00

T-ratios in parentheses. Number of observations:  $NT = 342$ . *GOV* is the proxy for government size, *DEMOC* is the dummy for the whole democratic regime, *OPEN* is a measure for trade openness, *M2* are the liquid liabilities over GDP, *GDP* is the real GDP and *GROWTH* are the GDP growth rates, *INFLAT* are the inflation rates, *XCONST* the constraints on the executive, *URBAN* is the share of urban population, and *INEQ* are the Gini coefficients for income inequality. POLS is the Pooled Ordinary Least Squares, FE is the Fixed Effects and SYS-GMM is the System Generalised Method of Moments.

In Table Four we run a simple exercise for the fact that perhaps the outgoing dictatorships engaged in activities that would leave the young democracies of Latin America with significant debt to be repaid, therefore the need for higher debt, and consequently bigger government, in the initial stages of democracy. In columns (1) and (2) the static estimates of *LDICTAT* against *GOV* do not present any clear cut picture. The control variables

present similar patterns as before, financial depth facilitates bigger governments, fast growing economies are able to reduce the debt, more constrained executives are not able to spend freely, and inequality, once more going against the conventional wisdom, presents negative estimates on *GOV*.

On the other hand, our preferred FE and SYS-GMM dynamic specifications clearly suggest that at least the last dictator in power did not engage in higher consumption nor debt, therefore not leaving the young democracies of the day with huge bills to be repaid, so this particular explanation for bigger governments, or debt, during the first years of democracy can be avoided. About the controls, the liquid liabilities keep their importance in financing higher debt, as well as economic growth in reducing government size, and inequality still does not play any role in terms of bigger governments. Once again, the specification tests do not detect any sign of second-order serial correlation or overidentification.

Table Four: POLS, FE and SYS-GMM Estimates

GOV	Static and Dynamic Models			
	POLS	FE	FE	SYS-GMM
LDICTAT	.111 (0.57)	-.182 (-1.40)	-.142 (-4.49)	-.117 (-3.22)
OPEN	.002 (0.90)	.008 (8.17)	.001 (0.95)	-.001 (-1.35)
M2	.520 (3.00)	.253 (1.21)	.335 (3.39)	.333 (4.77)
GDP	-.000 (-1.05)	-.000 (-16.61)	-.000 (-4.06)	.000 (1.63)
GROWTH	-.024 (-2.04)	-.030 (-5.20)	-.029 (-7.94)	-.026 (-5.50)
INFLAT	.227 (2.76)	.076 (1.18)	.031 (0.73)	.029 (0.65)
XCONST	-.087 (-2.65)	.001 (0.02)	-.013 (-0.86)	-.037 (-2.41)
URBAN	-.001 (-0.18)	.001 (0.04)	-.010 (-2.28)	-.005 (-1.46)
INEQ	-.008 (-0.92)	-.034 (-1.81)	-.007 (-2.53)	-.004 (-0.93)
GOV <sub>-1</sub>			.778 (18.47)	.947 (28.48)
F test	4.36			
m2 (p)				0.16
Sargan (p)				1.00

T-ratios in parentheses. Number of observations:  $NT = 342$ . *GOV* is the proxy for government size, *LDICTAT* is the dummy for the last dictatorship, *OPEN* is a measure for trade openness, *M2* are the liquid liabilities over GDP, *GDP* is the real GDP and *GROWTH* are the GDP growth rates, *INFLAT* are the inflation rates, *XCONST* the constraints on the executive, *URBAN* is the share of urban population, and *INEQ* are the Gini coefficients for income inequality. POLS is the Pooled Ordinary Least Squares, FE is the Fixed Effects and SYS-GMM is the System Generalised Method of Moments.

Finally, in Table Five we report the estimates of our dummy that counts the number of years after democratisation (*MDEMOC*), and the static POLS and FE estimates are not particularly clear cut. The control variables presenting some significant estimates are financial depth (positive), growth (negative) and inequality (negative), which confirms the previous estimates reported above.

In contrast, our preferred dynamic FE and SYS-GMM estimates significantly suggest that democracy matures over time, or that as time goes by, the size of governments actually decreases in Latin America. Loosely speaking, we could say that *GOV* is in fact returning to its long-run steady state. On the controls, finance is again an important source of debt, higher growth works via the automatic stabilisers in reducing debt, and inequality (against all odds) presents negative and significant effects on *GOV*. About the validity of the instrument set, the Arellano and Bond, and Sargan tests again do not detect any evidence of invalidity or proliferation of instruments.

Table Five: POLS, FE and SYS-GMM Estimates

GOV	Static and Dynamic Models			
	POLS	FE	FE	SYS-GMM
MDEMOC	-.035 (-4.20)	.018 (1.10)	-.009 (-2.07)	-.009 (-1.98)
OPEN	.000 (0.20)	.008 (6.60)	.000 (0.61)	.000 (0.58)
M2	.468 (2.92)	.229 (1.15)	.325 (2.87)	.325 (2.75)
GDP	-.000 (-1.48)	-.000 (-10.41)	-.000 (-2.49)	-.000 (-2.39)
GROWTH	-.030 (-2.70)	-.030 (-5.58)	-.030 (-6.76)	-.030 (-6.47)
INFLAT	.109 (1.35)	.084 (1.27)	.027 (0.58)	.027 (0.56)
XCONST	-.016 (-0.49)	.014 (0.24)	-.006 (-0.46)	-.006 (-0.44)
URBAN	.000 (0.07)	-.019 (-0.52)	.006 (0.86)	.006 (0.82)
INEQ	-.004 (-0.48)	-.035 (-1.84)	-.005 (-2.08)	-.005 (-1.99)
GOV <sub>-1</sub>			.806 (27.77)	.806 (26.59)
F test	7.02			
m2 (p)				0.43
Sargan (p)				1.00

T-ratios in parentheses. Number of observations:  $NT = 342$ . *GOV* is the proxy for government size, *MDEMOC* is the dummy which counts the years after democratisation, *OPEN* is a measure for trade openness, *M2* are the liquid liabilities over GDP, *GDP* is the real GDP and *GROWTH* are the GDP growth rates, *INFLAT* are the inflation rates, *XCONST* the constraints on the executive, *URBAN* is the share of urban population, and *INEQ* are the Gini coefficients for income inequality. POLS is the Pooled Ordinary Least Squares, FE is the Fixed Effects and SYS-GMM is the System Generalised Method of Moments.

All in all, we present evidence which suggests that young democracies do indeed pursue higher consumption, debt and consequently higher government share to GDP. This might be because of the many challenges that young democracies face from the outset (demand for some sort of redistribution, fierce opposition to democracy by particular groups in its early

stages and consequently the need to buy out the electorate so that democracy becomes "the only game in town")<sup>4 5</sup>.

On the other hand, we present evidence that suggests that those young democracies of Latin America cannot put the blame on the outgoing dictator of the day for the higher debt incurred in the early stages of democracies to repay the bills elusively left by the last dictatorship. Finally, there is also evidence indicating that democracy, and the electorate, mature over time (better media, better dissemination and acquisition of information, or more experience in dealing with the democratic process), so that those governments engage less in big government activities. Alternatively, we could argue that after this process of maturing, governments return to a sort of long-run steady state.

In terms of the control variables used, access to finance  $M2$  plays an important role in providing governments with financial resources which are probably used to reissue and generate new government consumption and debt, and the automatic stabilisers are at work via faster economic growth. In addition, one important cyclical control variable that is rarely significant in the analysis is inflation. This is probably because some of those countries engaged in interest rate controls (financial repression), which would artificially reduce the impact of higher nominal interest rates on debt, while others had completely indexed economies during their episodes of hyperinflation. It is plausible that overall both effects are cancelling each other out.

Finally, an old determinant of redistribution, or bigger governments, inequality, does not play, as suggested by Woo (2003, 2005 and 2008), its expected role in the region (it must be said though that inequality data are fragmented, with some countries, *e.g.* Guyana, not presenting very consistent series). This is perhaps because, although Latin America is known for being relatively unequal, in fact not all those countries are actually that unequal (Argentina, Chile and Uruguay, to mention a few, do not present high Gini coefficients of their own, and Brazil has presented decreasing inequality recently). Alternatively, some would argue that new democratic coalitions coming into power, even when from the left, will

try to disguise themselves and avoid engaging in leftist redistribution (Acemoglu, Egorov and Sonin (2011)), which might be a mitigating factor of the effect of inequality on government.

### III. Concluding Observations

In this paper we have investigated the hypotheses that governments tend to increase in size during periods of democratisation, and also that democracies, and the electorate, mature over time. The evidence, based on a sample of Latin American countries that have recently democratised in the last forty years or so, and on panel data analysis, is suggestive of the fact that young democracies indeed engage in larger consumption, debt and consequently end up with a larger share to GDP, or bigger governments overall. Furthermore, the evidence points to the fact that young democracies become more responsible, and perhaps more conservative, in terms of consumption, debt, share to GDP and overall government size as time passes by, or that there is a learning process within democracies and a return to a sort of long-run steady state.

The importance of this study is that we have been able to specifically study the Latin American case, with all its idiosyncrasies, without having to incur in generalisations which are not always warranted (in particular about inequality), nor to treat the region either as a dummy or as an outlier to be removed from the sample. With that we have furthered our understanding of the recent history of the region in terms of government size and dynamics during political transitions, which might be of use to understand the new wave of democratisation affecting the world as we speak.

Future research can be extended to further disaggregations and comparisons. For instance, on one hand the Brazilian case is of interest and quite illustrative in the sense that it has democratised in the 1980s and then suffered severe bursts of macroeconomic instability for ten years or so (the so-called ‘lost decade’) which tend to lead to higher debt. On the other hand, South Africa which is a young democracy being governed by a very broad political coalition has so far not displayed any sign of ballooning debt nor macroeconomic

instability.

Perhaps the lesson from above is that ideally young democracies inherit, or implement right away, an institutional framework which includes particular economic institutions such as central bank independence and fiscal responsibility laws, institutions that help to constraint the executive and which were absent in Brazil in 1985, but already present in South Africa in 1995, so that 'lost decades' can be minimised. All in all, it seems that democracy matures with time as well as the democratisation processes themselves.

## REFERENCES

Abbas, S. Ali; Belhocine, Nazim; ElGanainy, Asmaa and Horton, Mark. "A Historical Public Debt Database," IMF Working Paper. 2010.

Acemoglu, Daron, Georgy Egorov, and Konstantin Sonin. 2011. A Political Theory of Populism. Unpublished manuscript.

Akhmedov, Akhmed and Zhuravskaya, Ekaterina. "Opportunistic Political Cycles: Test in a Young Democracy Setting." *The Quarterly Journal of Economics*, 2004, 119(4), pp. 1301-38.

Alesina, Alberto; Campante, Filipe R. and Tabellini, Guido. "Why Is Fiscal Policy Often Procyclical?" *Journal of the European Economic Association*, 2008, 6(5), pp. 1006-36.

Alesina, Alberto and Drazen, Allan. "Why Are Stabilizations Delayed?" *American Economic Review*, 1991, 81, pp. 1170-88.

Alesina, Alberto and Tabellini, Guido. "A Positive Theory of Budget Deficits and Government Debt." *Review of Economic Studies*, 1990, 57, pp. 403-14.

Arellano, M. and Bover, O. "Another Look at the Instrument Variables Estimation of Error Components Models." *Journal of Econometrics*, 1995, 68, pp. 29-51.

Barro, R. "On the Determination of Public Debt." *Journal of Political Economy*, 1979, 87, pp. 240-71.

Bittencourt, Manoel. "Is Copacabana Still the 'Little Princess of the Sea?'" CES-Ifo Forum, 2011, 12(1), pp. 11-16

Blundell, R. and Bond, S. "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models." *Journal of Econometrics*, 1998, 87, pp. 115-43.

Bond, Stephen. "Dynamic Panel Data Models: A Guide to Micro Data Methods and Practice," Cemmap Working Paper. 2002.

Brender, Adi and Drazen, Allan. "Political Budget Cycles in New Versus Established Democracies." *Journal of Monetary Economics*, 2005, 52, pp. 1271-95.

\_\_\_\_\_. "Why Is Economic Policy Different in New Democracies? Affecting Attitudes About Democracy," NBER Working Paper Series. 2007.

Drazen, Allan. *Political Economy in Macroeconomics*. Princeton University Press, 2000.

Gonzalez, Maria de los Angeles. "Do Changes in Democracy Affect the Political Budget Cycle? Evidence from Mexico." *Review of Development Economics*, 2002, 6(2), pp. 204-24.

Meltzer, A. and Richard, S. "A Rational Theory of the Size of the Government." *Journal of Political Economy*, 1981, 89, pp. 914-27.

Pickering, Andrew and James Rockey. "Ideology and the Growth of Government." *Review of Economics and Statistics*, 2011.

Rogoff, Kenneth. "Equilibrium Political Budget Cycles." *The American Economic Review*, 1990, 80(1), pp. 21-36.

Rogoff, Kenneth and Sibert, Anne. "Elections and Macroeconomic Policy Cycles." *The Review of Economic Studies*, 1988, 55(1), pp. 1-16.

Roodman, David. "How to Do Xtabond2: An Introduction to Difference and System Gmm in Stata." *Stata Journal*, 2009, 9(1), pp. 86-136.

\_\_\_\_\_. "A Note on the Theme of Too Many Instruments." *Oxford Bulletin of Economics and Statistics*, 2009, 71(1), pp. 135-58.

Shi, Min and Svensson, Jakob. "Political Budget Cycles in Developed and Developing Countries." *Journal of Public Economics*, 2006, 90(8-9), pp. 1367-89.

Smith, Ron and Fuertes, Ana-Maria. "Panel Time-Series," *Centre for Microdata Methods and Practice, Institute for Fiscal Studies*. London, 2008.

Windmeijer, F. "A Finite Sample Correction for the Variance of Linear Efficient Two-Step Gmm Estimator." *Journal of Econometrics*, 2005, 126, pp. 25-51.

Woo, Jaejoon. "Economic, Political, and Institutional Determinants of Public Deficits." *Journal of Public Economics*, 2003, 87, pp. 387-426.

\_\_\_\_\_. "Social Polarization, Fiscal Instability and Growth." *European Economic Review*, 2005, 49, pp. 1451-77.

\_\_\_\_\_. "Why Do More Polarized Countries Run More Pro-Cyclical Fiscal Policy?" *Review of Economics and Statistics*, 2008, 91(4), pp. 850-70.

## Notes

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<sup>1</sup>Although there are signs that inequality is actually decreasing in some places, see Bittencourt (2011) for a recent analysis of the Brazilian case.

<sup>2</sup>Furthermore, some would argue that since those dictatorships presented a right-wing flavour, the first democratic coalitions coming into power would be of a more left-wing nature (and would consequently engage in higher consumption and debt, not to mention redistribution, (Pickering and Rockey (2011)). However, this is an unwarranted generalisation, *e.g.* Alfonsín and Sarney (the first Argentinean and Brazilian civilian Presidents) were not representatives of any left-wing coalition (Alfonsín's coalition was not related to the Peronist party, and Sarney's coalition excluded the main leftist parties). Nevertheless, both coalitions engaged in redistributive policies.

<sup>3</sup>The same sort of pattern arises when we graph the OLS regression lines between other variables for government and the respective dummies. Available on request.

<sup>4</sup>We also have evidence which suggests that governments increase in size during the first democratic term, however the evidence is weaker. This is probably because young democracies are still living under a budget which was decided by the last dictatorship in power. Available on request.

<sup>5</sup>For robustness sake, we also run specifications using the DIF-GMM estimator and the results are similar to the ones reported above. Available on request.