Why are there Serial Defaulters? Evidence from Constitutions

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Abstract

Presidential democracies were 4.9 times more likely to default on external debts between 1976 and 2000 than parliamentary democracies. This paper argues that the explanation to the pattern of *serial defaults* among a number of sovereign borrowers lies in their constitutions. *Ceteris paribus*, parliamentary democracies are less likely to default on their liabilities as the confidence requirement creates a credible link between economic policies and the political survival of the executive. This link tends to strengthen the repayment commitment when politicians are opportunistic. I show that this effect is large and statistically significant in the contemporary world even when comparison is restricted to countries that are *twins* in terms of colonial origin, geography and economic variables. Moreover, the result persists if OECD or Latin American democracies are excluded from the sample. Since the form of government of a country is typically chosen at the time of independence and highly persistent over time, constitutions can explain why debt policies in developing countries are related to individual histories.

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1 Introduction

What explains the fact that historically some countries have been more prone to default on their financial obligations than others? Why has Venezuela defaulted 9 times on its external debts and Mexico 8 times over the last 180 years while India, Malaysia and Thailand have never done so? (Reinhart and Rogoff (2004)). [1] This paper finds that the critical aspect to answer this question is found in a borrowing country's constitutional form of government. More specifically, democracies in which the executive needs the continuous consent of the legislature to remain in power, i.e. parliamentary democracies, are less likely to default on their external liabilities. The thrust of this argument is present in earlier work by North and Weingast (1989) on the evolution of political institutions in 17th century England. The rationale is based on the fact that the vote of confidence requirement found in parliamentary democracies creates a credible link between debt policy decisions and the survival of the executive. It is this credible link that leads to the possibility of compensating offers between opportunistic politicians within a parliamentary cabinet. Such compensation mechanisms will act to reduce the rescheduling probability of a parliamentary government vis-'a-vis a presidential government. The contribution of this study is to show that this effect is large and statistically significant in the contemporary world: the estimates suggest that if the legislature could pose a credible threat to

[1] See also Reinhart, Rogoff and Savastano (2003).

unseat sovereigns through a confidence motion the probability of default in a 25 year period in presidential democracies would be reduced from the current 79.3% to less than 33%. As shown in the paper, this holds even when we use matching techniques to restrict comparison to *twin* countries - i.e. countries with similar colonial origin, geographical and economic characteristics. Hence, the reason that history is of primary importance for debt policy [2] might come from the persistence of the constitutional form of government of the borrowing countries.

The paper proceeds as follows. Section 2 briefly explains the theoretical hypothesis. Section 3 analyses 72 contemporary democracies that have access to private credit markets, showing that North and Weingast's prediction that parliamentary democracies are less likely to default on external debt repayments is indeed borne out in the data. I show that this pattern was already present in the data before each of the two world wars. In the contemporaneous sample, it is shown that parliamentary democracies are found to be substantially less likely to default on their liabilities irrespective of whether Latin American or OECD countries are excluded from the sample or not. The paper recognizes that the main empirical limitation of comparative studies that rely on such fundamental pillars of a constitution as the form of government is that there are few instances of democratic changes in these to allow a more precise identification with standard techniques. [3] This

[2] See Lindert and Morton (1989) and Reinhart, Rogoff and Savastano (2003).

[3] Institutions in this paper are constraints on rulers in the sense of North (1981). The

is why section 4 resorts to quasi-experimental methods, aiming at insulating the form of government from other factors such as the colonial origin, location or income level of a country. Even though higher standard errors result from matching techniques, the difference between regimes remains large and statistically significant. Section 5 then proceeds to find that parliamentary democracies have reduced their external debts in more market friendly ways: only one among five parliamentary democracies that attained a reduction in the debt to GNP ratio in excess of 25% within a three-year-period resorted to a default - compared to more than 80% of presidential democracies in similar circumstances. Parliamentary democracies as Botswana, Malaysia, Papua New Guinea and Thailand attained such marked debt reductions without changing original terms of debt contracts. Finally, the paper concludes by discussing directions for further research.

2 Theoretical Rationale

The theoretical hypothesis of this paper claims that when politicians have conflicting interests in the decision of whether to continue servicing external debt or not, the institutional setting in which such a decision would ultimately be taken will condition the outcome. In particular, it will be cru-

fact that the form of government rarely changes and is typically inherited from the colonial past implies that this institution is largely unaffected by the contemporaneous vagaries of tastes. Arguably then, the form of government is one of the *deep parameters* that Glaeser et al. (2004) suggest should be used in institutional studies.

cial whether the political survival of the executive that takes such decision depends or not on other politicians. Parliamentary democracies are those regimes in which the executive (the prime-minister) can be unseated by the legislature through a *confidence motion*. In contrast, the Constitution of presidential countries does not include such possibility. [4] This distinction is likely to make a prime-minister give much greater consideration to the effects of an important policy change on his support basis in the legislature than a president would do. As a result, the probability of default in a presidential regime will typically be higher than that seen in parliamentary regimes when asset holders have the potential to sway the legislative chamber. To see this, assume that a debt default has consequences on the economy which will put downward pressure on asset values. [5] If the owners of assets who would be negatively affected in the case of discontinuance of debt service have higher stakes in debt policy than those who do not hold such assets, compensation mechanisms among political actors will tend to reduce the likelihood of a debt rescheduling.

Take the example of a parliamentary government formed by a prime-

[4] Presidents can be *impeached*, but only if there are established criminal charges against them. The paper follows Persson and Tabellini (2003), that distinguish form of governments based on the confidence requirement.

[5] In fact, this seems to have been the case in heavily indebtded Argentina in 1999. Stock markets fell 8% in one day when one of the contenders for the presidential position announced that he was considering to halt external debt servicing. Later, in December 2001, the already depressed stock market fell a further 8% after the inauguration speech of the short-lived president Rodriguez Saa in which he stated: *Vamos a tomar el toro por las astas, vamos a hablar de la deuda externa. En primer lugar, anuncio que el Estado argentino suspenderá el pago de la deuda externa.*

minister and a junior coalition partner - the latter *proxying* for the prime-minister's support basis in the legislature. The junior partner may at anytime abandon the government, leading to a government dissolution followed by a new government formation. Assume for the moment that the prime-minister represents asset holders and therefore is strongly opposed to a debt rescheduling, whereas the pivotal junior coalition partner represents peasants. Since continuing to service external debt under current conditions implies negative international transfers, peasants would prefer to halt debt servicing (note that since peasants are assumed not to hold assets, it is natural that their optimizing horizons be shorter, as they will internalize the long term consequences of a default to a lesser extent). In such a situation, the prime-minister could buy the critical support of the peasant politician by giving him, for instance, a ministry in the portfolio. Since the benefits are directly linked to the survival of the government, such a transfer could eliminate the incentives of the junior coalition partner to unseat the debt servicing government. Interestingly, if the types of politicians are not perfectly observable before they have implemented policy themselves, all junior coalition partners would be able to extract side payments from the senior government member.

Now consider instead that the prime-minister is a peasant. The simple knowledge that with some probability a junior coalition member represents the interests of stakeholders - who would loose out heavily if a default were declared - will act as a deterrent to the implementation of such a policy,

as it might put the political survival of the government at risk. A default would reveal the type of the head of government and hence possibly lead his support basis to draw a new politician from the pool of candidates to form a government. In contrast, in a presidential democracy, any threat by Congress members to systematically oppose bill proposals of the executive in case its preferred debt policy is not implemented would not be subgame perfect: once the president has defaulted on debt contracts, legislators would find it optimal to take this decision as a bygone. [6] Obviously, the distinction between constitutional forms of government will only be relevant for countries in which there is an alternative to the incumbent government, i.e. where the threat of unseating the government is credible. This is why in the empirical section the comparison of Constitutions is limited to countries in which there are indications of political freedom.

Douglass North and Barry Weingast (1989) examine one of the rare cases in which such fundamental pillar of the Constitution as the form of government did change. They argue, that in 17th century England the empowerment of parliament during the Glorious Revolution resulted from a necessity of the Crown to raise funds to finance its wars. Reluctant creditors - who had already seen several unilateral changes in repayment terms - only came back to the market once the Parliament finally obtained the power to unseat

[6] Note that with opportunistic politicians, only the proportion of legislators that favours debt servicing is of relevance. Since asset holders have stronger incentives to enter into politics than peasants and pre-electoral announcements are "cheap talk", the proportions are unlikely to be the same in the cohort of politicians and the cohort of voters.

the sovereign that *stepped too far out of the line* (North and Weingast (1989, p.829). Kohlscheen (2004) formalizes this argument in an analytical model showing that, due to the credible link between policies and the political survival of the executive, debt defaults are less likely to happen in parliamentary democracies than in presidential ones under very general conditions.

3 Empirical Evidence

In order to test the conjecture that parliamentary democracies have a lower propensity to default on foreign debts, economic and political data were obtained for 72 democracies. The sample includes all countries that satisfied the following two criteria: a) obtained at least once a credit rating at one of the two major rating agencies; b) have an average index of political freedom and civil liberties that corresponds to a free or partially free democracy according to Freedom House. The first restriction is intended to exclude countries that have not signalled an interest in accessing private debt markets by requesting a sovereign debt rating and might be primarily involved in dealings with multilateral institutions. The complete list of countries, their default history and form of government classification can be found at the end of the paper.

To identify which countries have defaulted on their external debts between 1976 and 2000, two alternative indicators are used. The first indicator is from the rating agency Standard & Poor's and flags any change in the original terms of the contract. The second indicator, due to Detragiache and

Spilimbergo (2000), flags countries only when there have been substantial arrears in repayments (i.e. in excess of 5% of the debt stock). Also, in contrast to the first indicator, this index includes defaults on commercial debts. I shall refer to episodes identified by the first indicator as *technical defaults* or simply *defaults* and by *substantial defaults* when using the second indicator. [7] Finally, I use the form of government classification by Persson and Tabellini (2003). They classify a country as parliamentary if the Constitution of the country empowers the legislature to unseat the executive.

Table 1 summarizes the information found in the list of countries at the end of the paper. The difference is striking: whereas only 7 out of the 43 parliamentary democracies in the sample had a credit incident during the 25 years of the sample period, no less than 23 of the 29 presidential countries did so. Since most of the democracies throughout Latin America have presidential regimes, I also report the proportions when Latin America is dropped from the sample. The pattern persists: 5 defaulters among 38 parliamentary democracies against 7 in the group of 11 presidential democracies. Finally, the table shows that parliamentary countries also seem less likely to default when we restrict the sample to the developing world. In what follows, I report regression results when the technical default variable is used as the

[7] Detragiache and Spilimbergo's indicator tends to be more permissive towards borrowers. For instance, while the two authors suggest that Bolivia and Jamaica never had any debt crisis, Standard & Poor's considers that each of them defaulted at least twice. Looking at the more recent cases, only S&P considers that the rescheduling process of Pakistan in 1999 and Russia in 2000 was preceeded by a default. Detragiache and Spilimbergo however also include commercial defaults, and therefore consider that South Korea and Thailand both defaulted in 1998.

dependent variable. Table 1 shows that the difference between regimes in the unconditional probabilities of default is even larger for the substantial default indicator.

[Table 1 about here]

Interestingly, as shown at the end of Table 1, the striking difference in default probabilities was already a characteristic of the two pre-war periods of 1880-1913 and 1919-1938. [8] Table 2 lists the 17 countries that were already independent and democratic during these periods. Even though here we are dealing with a very small sample, with 10 out of 11 parliamentary democracies maintaining a clean-sheet during these periods the hypothesis that the form of government does not affect the unconditional probability of default is rejected with a t-value of 2.93 (p=0.01). However, whereas a pattern of serial defaults is evident for some presidential countries in the table at the end of the paper, a clear-cut identification of what drives the difference between the groups during the pre-war period is complicated by two factors. First, the pre-war sample is almost prohibitively small if one considers that regime changes are very rare and most of the variation comes from the cross-sectional dimension [9] and, second, apart from Switzerland and the U.S., there was a perfect correlation between the form of government

[8] Here Lindert and Morton (1989) and Suter (1990) are used for the identification of defaults.

[9] Bordo and Meissner (2006) were able to find debt data for 15 out of 20 countries that were already democracies in the period 1880-1913. Unfortunately, debt statistics are available for only 3 of the 6 defaulting democracies of the period.

and the Latin American dummy variable before World War II. Developing presidential countries outside of Latin America that have become democracies only did so after WWII, whereas countries in Latin America that have a parliamentary Constitution only became independent after the war. For this reason I shall focus on the last quarter of the 20th century in the next section.

[Table 2 about here]

3.1 Cross-Sectional Logit Analysis

Table 4 shows the marginal effects at the mean of the covariates obtained with a logit regression when the usual economic determinants of debt defaults are added as explanatory variables. All variables are sample averages. Among the economic explanatory variables, the income level stands out as the most significant, but only when rich countries are included in the sample. Note that, perhaps a bit surprisingly, the long-term indebtness statistics do not have a significant effect on the likelihood of repayment. Neither does the fraction of tax revenues spent on interest payments. In fact, Reinhart, Rogoff and Savastano (2003) have already pointed out that more than half of debt defaults occurred in countries that would have satisfied the Maastricht criterion of a debt to GNP ratio below 60%. Higher average growth rates and higher stocks of international reserves relative to imports reduce the likelihood of default, although the effects are not always significant. The only variable that remains statistically significant throughout is the parliamen-

tary dummy variable. The full sample results suggest that a parliamentary Constitution reduces the likelihood of a country defaulting during a 25 year interval by 46 to 54 percentage points. In other words, 4/5 of the 63 percentage point difference between regimes in the unconditional probabilities remains after controlling for economic conditions. To assess the magnitude of this effect consider the following example: the average presidential democracy in the sample had a per capita income of about $1,950 during the last quarter of the 20th century. The estimates suggest that the risk of default of the representative presidential democracy if its Constitution required the executive to co-opt the support of the Congress to remain in power would be the same as for a presidential democracy with a per capita income level of $15,000 - which roughly corresponds to the average income level of Ireland during the period. [10] [11]

[Table 3 about here]

[Table 4 about here]

3.2 Time Variation

To infer whether the pattern above is robust and there is evidence of a causal relation between the form of government and debt reschedulings the sample

[10] Based on estimates of the first specification in Table 3.

[11] Summerhill (2005) argues that the fast development of credit markets in 19th century Brazil and the low risk premia on debt instruments at the time can be traced back to the empowerment of the enfranchised elite by the Emperor, through the Monarchic Constitution of 1824.

was split into successive five year periods. This leaves us with a total of 336 observations. All economic explanatory variables are lagged and represent averages over the previous five year interval. Economic variables do appear to carry some more predictive power over these shorter horizons: default is more likely for countries that struggle to grow, are more indebted and poorer. The latter two variables, however, are not always significant at the 5% confidence level when OECD members are dropped from the sample. Note that, as there is no variation in the form of government during the sampling period, fixed-effects cannot be included. Continental dummy variables for Latin America, Africa and Asia, and time dummies were also included to capture regional variations and changes in international credit conditions. The coefficients on the time dummies capture a significant reduction in defaults during the 1990s.

Table 6 reports the results of the pooled logit estimation using alternative specifications. Once more, countries in which the government requires the consent of the legislature are found to be significantly less likely to default on external debts. These effect amounts to a marginal reduction between 7 and 11.5 percentage points in the probability of default for the average country. Again, this is hardly negligible given that the average likelihood of default over a 5 year span is 21%.

[Table 5 about here]

[Table 6 about here]

4 Propensity Score Matching

The main objection to the results reported in the previous section is that the selection of Constitutions may not be random. Parliamentary and presidential democracies have different origins and may well differ in other aspects as well. For instance, parliamentary democracies typically have higher income levels and are older democracies than presidential democracies. This may raise doubts about whether causality has been established above. In fact, only two developed democracies are not parliamentary: Switzerland and the United States. These are hardly the typical cases of presidential regimes in our sample. In particular, the United States has enjoyed a unique monetary and geopolitical position during the sample period and has a system of checks and balances on the executive in place which is hardly the norm in other presidential countries. This asymmetry of cases constitutes an additional difficulty for an econometric test, as we are confronted with the task of identifying which effects are explained by forms of government, income levels or by whether the democracy is more mature. It is important to note however, that if the proposition that markets in parliamentary countries have a higher degree of immunization from debt crises is correct, one should certainly not expect to observe the same proportion of forms of government across different income groups - since the incidence of debt crises belongs to the determinants of well-being in a country (see Reinhart and Rogoff (2004)). A market that is afflicted by the *serial default* phenomenon will probably not

provide an economic environment in which long-term credit markets might thrive. So, while the skeptical will take this disproportion of parliamentary democracies among rich countries as a fundamental flaw of the dataset, those who are sympathetic to the proposition might interpret this disproportion as an additional confirmation of the theory. The findings of Rosenbaum and Rubin (1983) suggest that we should not stop at this point of the discussion.

The selection of Constitutions depends on a number of observable variables, allowing us to resort to quasi-experimental evidence (for an earlier example in this context see Persson and Tabellini (2002)). In the first stage we estimate the probability of a country to select a parliamentary form of government as a function of observable historical and geographical factors. Namely, we can observe whether the country has been colonized by the United Kingdom, the fraction of the population speaking one of the five major European languages as their first language (denoted by eurfrac), the time since independence (t_indep) and the geographical location (the latitude of the capital city or continental dummy variables). As economic explanatory variables long-term characteristics such as the degree of exposure to international trade (openness), the indebtness statistics and per capita income are used. Once the propensity of each country to adopt a parliamentary Constitution has been computed, we are able perform estimates using only the countries that are sufficiently similar (the "twins") in terms of propensity score. The cost of this method is that some observations which are too different to be

on the common support are dropped from the sample. Since observable differences between treatment and control groups are ironed out however, such cost might be worth paying.

Table 7 reports the results based on the nearest-neighbour, radius and kernel matching techniques for three different propensity score logit specifications. Bootstrapping was used to estimate the standard errors (with 10,000 replications). The results suggest that parliamentary countries are less likely to default on external debts, even when we restrict our comparison to democracies with similar characteristics. This effect amounts to between 46 and 58 percentage points in the probability of default over the sample period, which is in line with the finding of the previous section. In other words, the matching estimates suggest that by including a confidence requirement in their Constitution, the group of presidential countries would see the probability of default in a 25 year interval reduced from 79.3% to between 21% and 33%. [12] This is still higher than the 16.3% default rate observed for parliamentary democracies in the sample.

[Table 7 about here]

[12] Which compares with 25 to 33% in the cross-sectional logit analysis.

5 Debt Reversals

A further test of the theory comes from comparing how countries with different political institutions reacted to episodes in which debt repayment meant a great effort for the borrowing country. [13] For this test, I use Reinhart, Rogoff and Savastano's list of 22 episodes of sharp debt reductions between 1970 and 2000, defined as decreases in the external debt to GNP ratio of at least 25% over a 36 month interval. Six of these involved countries that were described as not free at the time (Freedom House). Table 8 lists the remaining 16 cases according to the form of government. The table is consistent with our earlier findings. Only two of the eleven presidential democracies did not reduce their indebtness by resorting to a default. Among the five cases that involved parliamentary democracies the opposite pattern can be observed. Only Jamaica did default. Botswana in 1976-79, Malaysia in 1986-89, Papua New Guinea in 1992-95 and finally Thailand in 1998-01 managed to massively reduce debt stocks without changing the forms of repayment dictated by original contracts. At the time of the debt reversals, these countries did not share many common characteristics apart from being parliamentary democracies. Despite the small size of the sample, the hypothesis that the

[13] Note that the theory suggests that political institutions will only be relevant for debt policy when there exists some divergence on whether the optimal policy is to service debt or to default (and eventually reschedule). It is highly plausible for instance that in the cases where international transfers are positive, there is an unanimity in favour of continuing debt servicing. If all political actors however have the same preferences regarding what the optimal policy might be, the outcome would be the same whatever the decision making institution.

proportion of defaulters is unaffected by the form of government is easily rejected at the 5% confidence level (t-statistic 2.75).

[Table 8 about here]

Among the seven parliamentary democracies that did reschedule their external liabilities during the 25 years that this study covers, the case of Turkey (the largest country in this group) is particularly revealing. During the 1970s the Turkish political environment was highly volatile with a succession of short-lived coalition governments. Eventually, an early popular election - that had been rescheduled from October to June 1977 - turned out to be inconclusive. Led by a temporary "care-taker" government, the country defaulted on its external debts in the following month. Arguably, given the circumstances and the absence of credible alternatives, the checks on this government were weaker as the risk of a no-confidence motion at the time was very low.

6 Concluding Remarks

This paper finds broad support for the prediction that parliamentary democracies are less likely to default on their external liabilities. The effect is quantitatively large and holds true irrespective of whether the sample includes OECD economies or not. It is important to stress that the theory does not predict that a presidential country will always default earlier than

a parliamentary democracy. What it does say is that over a long period of time or in a cross-section, as the one of this paper, one should observe less discontinuances in debt contracts in countries with a parliamentary Constitution. In principle, the theory should extend to the case of domestic debt reschedulings.

Rather than resulting from the form of government per se, the failure of some countries to repay as originally contracted is related to the inexistence of a representative committee that decides on debt policy. The decision structure found in parliamentary democracies mimics, to some extent, the role such a committee would play. Future research might focus on institutional reforms that could strengthen commitments and better insulate credit markets from political developments that are the crux of any democratic process.

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DATA SOURCES

col_uk: indicator of whether a country was colonized by the UK. Wacziarg (1996) and Persson and Tabellini (2003).

col_uka: col_uk*(250 - t_indep)/250. Wacziarg (1996).

default indicator: Standard and Poor's.

eurfrac: fraction of population speaking English, French, German, Spanish or Portuguese as first language. For new democracies that were formed through secession, linguistic data of the country from which the secession occurred were imputed. Hall and Jones (1999).

latitude: latitude of the capital city of the country divided by 90. Hall and Jones (1999).

parliamentary dummy: indicator of whether the executive needs the confidence of the legislature to remain in power. Persson and Tabellini (2003). Lebanon, Morocco and Panama were classified as having a presidential form of government.

per capita income, GDP growth, interest payments/revenues, debt/GNP, international reserves/imports: WDI database. Central government debt data were complemented with data from the OECD yearbook (sample period averages).

openness: from the WDI database (WDI. NE.TRD.GNFS.ZS—Trade (% of GDP)).

substantial default indicator: Detragiache and Spilimbergo (2001).

t_indep: number of years since independence of the country.

Table 1

Debt Repayment in Democracies: 1976-2000

Worldwide (N=72)

	presidential A	parliamentary B	ratio A/B
No. of countries	29	43	
% with substantial default incident	65.5	7.0	**9.4**
% with default incident	79.3	16.3	**4.9**

Non-OECD (N=47)

	presidential	parliamentary	ratio
No. of countries	25	22	
% with substantial default incident	68.0	13.6	**5.0**
% with default incident	84.0	31.8	**2.6**

Non-LatAm (N=49)

	presidential	parliamentary	ratio
No. of countries	11	38	
% with substantial default incident	27.3	5.3	**5.2**
% with default incident	63.6	13.2	**4.8**

Non-LatAm & Non-OECD (N = 26)

	presidential	parliamentary	ratio
No. of countries	11	15	
% with substantial default incident	54.5	6.7	**8.2**
% with default incident	72.7	20.0	**3.6**

Debt Repayment in Democracies: 1880-1913 (N=20)

	presidential	parliamentary	ratio
No. of countries	9	11	
% with default incident	55.6	9.1	**6.1**

Debt Repayment in Democracies: 1919-1938 (N=20)

	presidential	parliamentary	ratio
No. of countries	7	13	
% with default incident	57.1	15.4	**3.7**

Table 2
Pre-WWII Debt History: 1880-1913 and 1919-1938

	Compliers	Defaulters
Presidential	Switzerland United States	Bolivia Chile Costa Rica Honduras
Parliamentary	Australia Belgium Canada France Japan New Zealand Norway South Africa Spain UK	Greece

Countries with Polity score > 0 were considered democratic.
Default history from Lindert and Morton (1989) and Suter (1990).

Table 3
Summary statistics - 25 year averages

	observations	average	std. dev.	min	max
Defaulters	72	0.417	0.496	0	1
Parliamentary	72	0.597	0.494	0	1
Latin America	72	0.319	0.470	0	1
Log (p.c. income)	72	3.684	0.559	2.48	4.62
GDP growth	72	3.361	1.873	-0.31	8.98
Trade openess (trade/GDP in %)	72	74.252	47.513	16.59	328.57
Debt/GDP	72	58.586	52.397	3.32	410.73
Latitude (normalized)	71	0.341	0.190	0.02	0.71
European lang. speaking pop. (%)	71	0.432	0.438	0	1
former British colony	72	0.333	0.475	0	1

Table 4

Dependent variable: Default indicator dummy

	WORLD			Non-OECD			Non-LatAm			Non-Latam&Non-OECD		
parliamentary	**-0.540**	**-0.463**	**-0.543**	**-0.563**	**-0.460**	**-0.540**	**-0.309**	**-0.273**	**-0.309**	**-0.724**	**-0.839**	**-0.730**
	2.73* **	**2.20** **	**2.68*** **	**2.84*** **	**2.06** **	**2.70*** **	**1.97** **	**1.87***	**1.96** **	**2.12** **	**1.83***	**2.11** **
Latin America	0.211	0.227	0.221	0.068	0.07	0.079						
	1.1	1.14	1.1	0.34	0.32	0.4						
log (p.c. income)	-0.608	-0.598	-0.617	-0.284	-0.097	-0.293	-0.34	-0.307	-0.340	-0.392	-0.114	-0.387
	3.45***	3.32***	3.38***	1.23	0.36	1.30	2.56**	2.27**	2.54**	1.28	0.36	1.25
GDP growth	-0.074	-0.062	-0.075	-0.09	-0.081	-0.088	-0.042	-0.035	-0.042	-0.116	-0.134	-0.115
	1.57	1.26	1.54	1.89*	1.51	1.84*	1.40	1.23	1.38	1.76*	1.72*	1.76*
Trade openess		-0.003			-0.006			-0.002			-0.010	
		0.98			1.69*			1.09			2.33**	
debt/GDP			0.002			0.001			0.000			0.000
			0.76			0.63			0.02			0.11
Countries	72	72	72	49	49	49	49	49	49	26	26	26
Pseudo R2	0.52	0.53	0.53	0.35	0.41	0.36	0.50	0.53	0.50	0.35	0.49	0.35
Log likelihood	-23.46	-22.97	-23.20	-21.15	-19.35	-20.97	-13.51	-12.94	-13.51	-11.65	-9.23	-11.65

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

alternative specifications with interest payments/revenues or reserves/imports available upon request

Table 5
Summary statistics - 5 year averages

	observations	average	std. dev.	min	max
Defaulters	336	0.211	0.409	0	1
Parliamentary	336	0.601	0.490	0	1
Log (p.c. income)	336	8.492	1.324	5.42	10.83
GDP growth	336	3.413	2.887	-8.99	15.99
Debt/GDP	336	0.583	0.711	0.02	8.31
Trade openess (trade/GDP in %)	336	0.7519	0.491	0.13	3.33
Interest payments/Revenue	304	13.370	10.727	0.35	86.58
Intl. reserves/Imports	328	0.483	0.386	0.01	3.26
Latin America	336	0.330	0.471	0	1
Asia	336	0.134	0.341	0	1
Africa	336	0.080	0.272	0	1

Table 6 - I.V. estimation (5 year averages)

Dependent variable: Default indicator dummy

	WORLD							Non-OECD						
parliamentary	**-0.115**	**-0.097**	**-0.164**	**-0.082**	**-0.080**	**-0.085**	**-0.070**	**-0.247**	**-0.266**	**-0.356**	**-0.288**	**-0.192**	**-0.271**	**-0.228**
	3.03* **	**3.19*** **	**4.88*** **	**3.11*** **	**2.61*** **	**3.00*** **	**2.74*** **	**3.05*** **	**3.31*** **	**5.15*** **	**3.35*** **	**2.39** **	**3.33*** **	**2.61*** **
log (p.c. income)	-0.067	-0.053	-0.052	-0.028	-0.051	-0.031	-0.017	-0.098	-0.092	-0.060	-0.054	-0.081	-0.063	-0.025
	2.73***	3.06***	3.81***	1.75*	3.22***	1.83*	1.37	2.25**	2.17**	1.64	1.27	2.06**	1.49	0.73
GDP growth	-0.018	-0.014	-0.019	-0.012	-0.012	-0.011	-0.010	-0.040	-0.036	-0.047	-0.042	-0.031	-0.035	-0.034
	3.64***	3.19***	3.75***	2.86***	3.00***	2.81***	2.83***	4.01***	3.50***	4.26***	3.60***	3.09***	3.36***	3.25***
Debt/GDP	0.050	0.037	0.047	0.023	0.040	0.043	0.025	0.094	0.083	0.092	0.063	0.094	0.114	0.074
	2.28**	2.34**	2.48**	2.21**	2.38**	2.59***	2.20**	2.05**	1.95*	1.84*	1.74*	1.98**	2.32**	1.99**
Interest paym./Revenues				0.000			0.000				-0.001			-0.001
				0.23			0.32				0.27			0.57
Trade openess					-0.043		-0.022					-0.177		-0.141
					1.14		0.62					1.82*		1.26
Intl. reserves/Imports						0.007	-0.005						0.015	-0.037
						0.3	0.27						0.23	0.54
Time dummies	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Observations	336	336	336	304	336	328	299	218	218	218	189	218	213	187
Countries	71	71	71	71	71	71	71	46	46	46	46	46	46	46
Defaults	0.211	0.211	0.211	0.194	0.211	0.207	0.194	0.312	0.312	0.312	0.296	0.312	0.305	0.294
Pseudo R2	0.391	0.468	0.515	0.585	0.518	0.538	0.602	0.276	0.385	0.423	0.503	0.433	0.445	0.527
Log likelihood	-105.53	-92.25	-84.05	-62.15	-83.49	-77.34	-58.58	-97.94	-83.22	-78.03	-57.07	-76.65	-72.73	-53.54

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7

Defaulting democracies and constitutions: matching estimates 1976-2000

	Nearest N.	Caliper	Kernel	Nearest N.	Caliper	Kernel	Nearest N.	Caliper	Kernel
parliamentary	-0.552	-0.555	-0.552	-0.500	-0.464	-0.586	-0.473	-0.516	-0.500
	2.62***	2.54**	2.62***	2.32**	2.04**	2.571***	1.94*	2.13**	2.07**
no. of observations	71	71	71	71	71	71	71	71	71
...on common support	66	64	66	65	61	62	66	59	62
logit specification:	A	A	A	B	B	B	C	C	C

logit A: eurfrac, t_indep, latitude, log (pc income)
logit B: col_uka, LatAm, debt/GDP, openess
logit C: col_uk, t_indep, latitude, openess
Absolute value of z statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8

Debt Reversals 1970-2000

	Defaulters	Compliers
Presidential	81.8% Morocco 85-88 Philippines 86-89 Costa Rica 87-90 Bolivia 88-91 Panama 89-92 Jordan 91-94 Albania 92-95 Bulgaria 92-95 Russia 99-02	18.1% South Korea 85-88 Egypt 87-90
Parliamentary	20% Jamaica 90-93	80% Botswana 76-79 Malaysia 86-89 Papua NG 92-95 Thailand 98-01

Cases listed in Reihart, Rogoff and Savastano (2003) involving non-free countries: Gabon 1978, Chile and Swaziland 1985, Paraguay 1987, Lebanon 1990 and Iran 1993.

Forms of Government and Default History

	parliamentary constitution ?	default pre-WWII	default 1976-2000	substantial def. 1976-2000		parliamentary constitution ?	default pre-WWII	default 1976-2000	substantial def. 1976-2000		parliamentary constitution ?	default pre-WWII	default 1976-2000	substantial def. 1976-2000
Argentina	No	Yes	Yes	Yes	**Germany**	Yes	Yes	No	No	**Norway**	Yes	No	No	No
Australia	Yes	No	No	No	**Ghana**	No	--	Yes	No	**Pakistan**	No	--	Yes	No
Austria	Yes	Yes	No	No	**Greece**	Yes	Yes	No	No	**Panama**	No	Yes	Yes	Yes
Bahamas	Yes	--	No	No	**Guatemala**	No	Yes	Yes	Yes	**Papua NG**	Yes	--	No	No
Barbados	Yes	--	No	No	**Honduras**	No	Yes	Yes	Yes	**Paraguay**	No	Yes	Yes	Yes
Belgium	Yes	No	No	No	**Hungary**	Yes	Yes	No	No	**Peru**	No	Yes	Yes	Yes
Belize	Yes	--	No	No	**Iceland**	Yes	--	No	No	**Philippines**	No	--	Yes	Yes
Bolivia	No	Yes	Yes	No	**India**	Yes	--	No	No	**Poland**	Yes	--	Yes	No
Botswana	Yes	--	No	No	**Ireland**	Yes	--	No	No	**Portugal**	Yes	Yes	No	No
Brasil	No	Yes	Yes	Yes	**Israel**	Yes	--	No	No	**Russia**	No	Yes	Yes	No
Bulgaria	Yes	Yes	Yes	No	**Italy**	Yes	No	No	No	**Senegal**	No	--	Yes	Yes
Canada	Yes	No	No	No	**Jamaica**	Yes	--	Yes	No	**Singapore**	Yes	--	No	No
Chile	No	Yes	Yes	Yes	**Japan**	Yes	No	No	No	**South Africa**	Yes	No	Yes	No
Colombia	No	Yes	No	Yes	**Jordan**	No	--	Yes	Yes	**South Korea**	No	--	No	Yes
Costa Rica	No	Yes	Yes	Yes	**Lebanon**	No	--	No	No	**Spain**	Yes	No	No	No
Cyprus	No	--	No	No	**Luxembourg**	Yes	No	No	No	**Sweden**	Yes	No	No	No
Czech Rep.	Yes	--	No	No	**Malaysia**	Yes	--	No	No	**Switzerland**	No	No	No	No
Denmark	Yes	No	No	No	**Malta**	Yes	--	No	No	**Thailand**	Yes	No	No	Yes
Dominican	No	Yes	Yes	Yes	**Mauritius**	Yes	--	No	No	**Trinidad&T.**	Yes	--	Yes	Yes
Ecuador	No	Yes	Yes	Yes	**Mexico**	No	Yes	Yes	Yes	**Turkey**	Yes	No	Yes	No
El Salvador	No	Yes	No	Yes	**Morocco**	No	--	Yes	Yes	**U.K.**	Yes	No	No	No
Fiji	Yes	--	No	No	**Netherlands**	Yes	No	No	No	**USA**	No	No	No	No
Finland	Yes	--	No	No	**New Zealand**	Yes	No	No	No	**Uruguay**	No	Yes	Yes	No
France	Yes	No	No	No	**Nicaragua**	No	Yes	Yes	Yes	**Venezuela**	No	Yes	Yes	Yes

Pre-WWII data are from Lindert and Morton (1989) and Suter (1990).

Data Appendix - 1976-2000

	log (p.c income)	GDP growth	openess	Debt/ GDP	European speaking	col _uk	col _uka	latit.	t_ indep
Argentina	3.85	2.02	16.59	43.55	0.836	0.00	0.00	0.41	183
Australia	4.26	3.32	35.00	17.77	0.950	1.00	0.61	0.36	98
Austria	4.41	2.53	74.88	59.40	0.980	0.00	0.00	0.54	250
Bahamas	4.10	4.39	129.62	10.50	0.865	1.00	0.90	0.27	26
Barbados	3.83	1.99	115.80	32.29	1.000	1.00	0.87	0.15	33
Belgium	4.38	2.26	131.66	95.03	0.345	0.00	0.00	0.56	169
Belize	3.36	5.10	119.61	42.84	0.940	1.00	0.93	0.20	18
Bolivia	2.96	2.06	51.64	102.28	0.372	0.00	0.00	0.17	174
Botswana	3.39	8.98	108.47	19.85	0.000	1.00	0.87	0.24	33
Brazil	3.62	3.03	17.49	33.03	0.998	0.00	0.00	0.22	177
Bulgaria	3.19	0.23	85.99	60.98	0.000	0.00	0.00	0.47	91
Canada	4.26	2.93	58.27	52.68	0.857	1.00	0.47	0.49	132
Chile	3.52	5.71	54.08	68.27	0.931	0.00	0.00	0.37	189
Colombia	3.31	3.56	31.61	33.86	0.980	0.00	0.00	0.05	189
Costa Rica	3.49	4.25	74.93	60.76	0.906	0.00	0.00	0.11	178
Cyprus	3.95	6.64	105.15	88.35	0.000	1.00	0.84	0.39	39
Czech Rep.	3.70	-0.10	109.05	34.53	0.013	0.00	0.00	0.55	6
Denmark	4.49	2.00	66.20	71.88	0.005	0.00	0.00	0.62	250
Dominican R.	3.16	4.26	58.96	44.34	0.871	0.00	0.00	0.21	155
Ecuador	3.18	2.92	53.00	79.66	0.714	0.00	0.00	0.02	177
El Salvador	3.19	1.77	56.41	37.16	0.923	1.00	0.29	0.15	178
Fiji	3.37	2.82	104.61	24.28	0.008	1.00	0.88	0.20	29
Finland	4.37	2.60	58.14	48.48	0.000	0.00	0.00	0.67	82
France	4.38	2.31	43.46	42.05	1.004	0.00	0.00	0.54	250
Germany	4.43	2.18	52.25	31.18	0.949	0.00	0.00	0.54	250
Ghana	2.56	2.80	40.64	61.32	0.000	1.00	0.83	0.07	42
Greece	4.03	1.97	45.46	105.11	0.000	0.00	0.00	0.42	170
Guatemala	3.16	3.14	40.78	25.05	0.588	0.00	0.00	0.16	178
Honduras	2.85	3.68	72.68	85.03	0.845	0.00	0.00	0.16	178
Hungary	3.65	1.40	78.58	56.72	0.005	0.00	0.00	0.53	250
Iceland	4.39	3.35	69.72	40.94	0.000	0.00	0.00	0.71	55
India	2.48	5.20	18.25	21.20	0.000	1.00	0.79	0.28	52
Ireland	4.16	5.05	117.63	80.72	0.742	1.00	0.69	0.61	78
Israel	4.13	4.24	90.57	222.66	0.000	1.00	0.80	0.36	51
Italy	4.22	2.38	43.89	79.85	0.006	0.00	0.00	0.50	250
Jamaica	3.32	0.53	96.76	109.91	0.940	1.00	0.85	0.20	37
Japan	4.55	3.12	21.23	44.67	0.000	0.00	0.00	0.40	250
Jordan	3.22	6.23	120.63	101.88	0.000	1.00	0.83	0.35	43

	log (p.c income)	GDP growth	openess	Debt/ GDP	European speaking	col _uk	col _uka	latit.	t_ indep
Lebanon	3.40	5.48	79.77	33.48		0.00	0.00	0.37	46
Luxembourg	4.53	4.51	211.39	3.32	0.000	0.00	0.00	0.55	160
Malaysia	3.49	6.94	136.24	46.41	0.000	1.00	0.83	0.04	42
Malta	3.80	5.87	177.75	41.28	0.000	1.00	0.86	0.40	35
Mauritius	3.44	5.61	116.44	42.57	0.567	1.00	0.88	0.22	31
Mexico	3.51	3.46	36.18	45.04	0.880	0.00	0.00	0.19	189
Morocco	3.09	3.77	54.87	77.92	0.000	0.00	0.00	0.37	43
Netherlands	4.38	2.56	105.28	59.32	0.000	0.00	0.00	0.58	250
New Zeland	4.19	1.74	57.79	51.19	0.900	1.00	0.63	0.41	92
Nicaragua	2.77	-0.31	69.51	410.73	0.655	0.00	0.00	0.14	178
Norway	4.45	3.27	74.20	24.82	0.000	0.00	0.00	0.67	94
Pakistan	2.61	5.39	34.53	44.99	0.000	1.00	0.79	0.35	52
Panama	3.45	3.18	75.80	94.62	0.805	0.00	0.00	0.10	96
Papua NG	2.95	2.93	93.29	63.07	0.015	1.00	0.90	0.07	24
Paraguay	3.25	4.33	57.43	32.46	0.036	0.00	0.00	0.28	188
Peru	3.37	1.85	33.54	70.07	0.564	0.00	0.00	0.13	178
Philippines	3.04	3.05	63.21	64.12	0.000	0.00	0.00	0.15	53
Poland	3.46	3.70	50.93	48.84	0.040	0.00	0.00	0.56	81
Portugal	3.95	3.44	63.16	55.40	1.000	0.00	0.00	0.43	250
Russia	3.48	-0.14	54.66	26.51	0.007	0.00	0.00	0.62	250
Senegal	2.75	2.80	69.25	73.13	0.000	0.00	0.00	0.16	39
Singapore	4.21	7.71	328.57	76.92	0.089	1.00	0.86	0.02	34
South Africa	3.62	1.68	49.59	17.82	0.090	1.00	0.64	0.32	89
South Korea	3.85	7.30	66.02	32.16	0.000	0.00	0.00	0.42	51
Spain	4.11	2.58	39.03	47.18	0.728	0.00	0.00	0.42	250
Sweden	4.40	1.79	64.61	52.43	0.000	0.00	0.00	0.66	250
Switzerland	4.62	1.45	70.02	21.51	0.840	0.00	0.00	0.53	250
Thailand	3.26	6.69	66.74	42.15	0.000	0.00	0.00	0.15	250
Trinidad&Tob	3.64	2.93	81.97	33.95	0.965	1.00	0.85	0.12	37
Turkey	3.39	3.93	31.85	35.60	0.000	0.00	0.00	0.46	250
Uk	4.23	2.33	53.47	40.88	0.974	0.00	0.00	0.57	250
Uruguay	3.71	2.36	40.45	40.80	1.000	0.00	0.00	0.39	171
USA	4.39	3.31	20.10	46.91	0.972	0.00	0.00	0.38	250
Venezuela	3.57	1.66	48.81	50.59	0.969	0.00	0.00	0.11	188