

Give and Take: Voting Rights and Public Policy in Latin America in the 20th Century*

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Abstract

The allocation of voting rights can have a fundamental impact on policy choices. This paper quantifies the impact of political transitions between democracy and autocracy and the impact on gender and literacy restrictions on the right to vote on fiscal and social outcomes in 18 Latin American countries during the 20th century. We estimate a panel model and report the following findings: i) regime type matters for outcomes, with dictatorships taxing more than democracies; ii) women's suffrage increased enrollment in primary education, but did not affect fiscal outcomes; iii) literacy restrictions reduce the size of government, but, surprisingly, does not lead to lower enrollment in primary education; iv) dictatorships have larger armies and military expenditure than democracies.

Key words: Democracy, dictatorship, voting franchise, female suffrage, literacy restrictions.

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1 Introduction

Twentieth century Latin America provides an almost perfect laboratory for the study of political regime transitions and reforms. For example, since independence, Peru has

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changed or modified its constitution 13 times; Chile has modified its constitution 11 times, while Brazil and Colombia have made 8 and 12 changes, respectively. These changes not only reflect changes in the details of the rules governing the allocation of voting rights, but repeated vacillations between democracy and dictatorship. These factors make Latin America an ideal testing ground for a statistical assessment of the impact of voting rights, both when they are granted and when they are taken away, on policy outcomes.

A number of key questions arise in this context which require careful qualitative evaluations. Firstly, many Latin American countries have experienced episodes of democracy followed by dictatorship and a subsequent return to democracy (see Acemoglu and Robinson, 2001 for a theory of political transitions). One example is Argentina. Insofar as democracies and non-democracies impose different constraints on rulers, the two broad regime types should lead to different policy outcomes and we want to investigate this question using data from Latin American countries spanning the 20th century. Secondly, in the late 19th century most countries in Latin America were at least nominally democracies, but with a much more restricted voting franchise than, for example, the USA and Canada (Engerman and Sokoloff, 2001). Across the region this included wealth or income requirements as well as literacy qualifications. While most wealth or income requirements were abolished in the late 19th and early 20th century, literacy requirements remained in place in some countries until the 1980s (Engerman et al., 1998). In countries, such as Peru, Bolivia and Ecuador, which have large, pre-dominantly illiterate Native American populations, these restrictions may have served the purpose of keeping these marginal population groups away from political influence. An important question, in this context, is what impact these voting restrictions had on education policy and attainment, but also more broadly how literacy restrictions affected fiscal outcomes. Another voting restriction with potentially significant ramifications was women's suffrage, not granted well into the 20th century. The first country to grant women the right to vote was Ecuador in 1929 followed by Uruguay and Brazil in 1932. Nearly three decades later Paraguay followed suit in 1961. Restrictions on female participation in the political process in other contexts, e.g., the USA (Lott and Kenny, 1999) and Western Europe (Aidt et al., 2005 and Aidt and Jensen, 2005) have been found to affect fiscal outcomes. This paper examines if similar patterns can be found in Latin America.

We have constructed a (unbalanced) panel data set with information on fiscal outcomes, educational attainment, and political regime type from 18 Latin American countries¹ for the period 1920 to 2000.² This allows us to track political institutions over long periods of time and exploit time series variation in regime type across time within a country,

¹The countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

²For some countries data is available from 1900, however we run the regressions from the decade in which data for more than three countries becomes available.

as well as cross sectional variation in restrictions on voting rights. We estimate panel models and report the following findings: i) dictatorships raise more taxes out of GDP than democracies; ii) women’s suffrage had little impact fiscal outcomes, but a positive impact on the enrollment in primary education; iii) literacy restrictions decreased total spending and revenue, but, surprisingly did not have a statistically significant impact on enrollment in education; iv) dictatorships have larger armies and military expenditure than democracies. Some of these findings are consistent with economic theory, others are not and warrant more investigation.

The paper is organized as follows. In Section 2, we investigate the differences in terms of fiscal outcomes between autocratic and democratic regimes. In section 3, we investigate the impact of voting restrictions related to gender and literacy on fiscal and social outcomes. In Section 5, we provide some concluding remarks and discussion. All tables and diagrams are collected at the end of the paper.

2 Dictatorships versus Democracies

Dictatorship and democracy can be understood as two extremes in a continuum of regime types that combines elements of electoral accountability with elements of autocracy (Congleton, 2001). Positioning on this spectrum defines the regime type which subsequently maps to policy choices. The majority of Latin American countries have experienced multiple shifts in and out of democracy during the course of the 20th century. Figure 1 illustrates for each of the 18 Latin American countries in our data set the score on the Policy IV index of autocracy/democracy for the period 1900 to 2000. This index is coded from -10 (autocratic) to 10 (democratic).³ Regime volatility is striking. At one end of the scale, Argentina experienced no less than 8 major regime shifts between 1935 and 1990. At the other end of the scale, Costa Rica endured as the most stable democracy in the region with a score of 10 throughout the entire 20th century. Other countries fall somewhere in between these extremes.

[Figure 1 to appear here]

³This Polity IV index is constructed from two separate indexes of democracy and autocracy, where the democracy index measures general openness of political institutions on a scale from 0 to 10 and the autocracy index measures general closedness political institutions on a scale from -10 to 0. Both indexes are constructed from scores given to six authority characteristics. These are i) regulation of executive recruitment: institutionalized procedures regarding the transfer of executive power; ii) competitiveness of executive recruitment: extent to which executives are chosen through competitive elections; iii) Openness of executive recruitment: Opportunity for non-elites to attain executive office; iv) executive constraints: operational (de facto) independent of chief executive; v) regulation of participation: development of institutional structures for political expression; vi) competitiveness of participation: extent to which non-elites are able to access institutional structures for political expression (Marshall and Jaggers, 2000.). The Polity IV index is simply the difference between the democracy and autocracy index and ranges from -10 (high autocracy) to 10 (high democracy).

Given differences in the constraints facing the political leadership, we expect to see very different policy choices in democracies and autocracies. Voting models in the tradition of Meltzer and Richard (1981) and Boix (2001) suggest that spending on rich-to-poor redistribution is higher in a democracy than in an autocracy because of a more even distribution of voting rights in the former regime. Acemoglu and Robinson (2001) in their theory of the why the voting franchise was extended employ a very similar argument. On the other hand, Olson (1993) and others have argued that broad-based taxes (such as the income tax) will be levied at a lower rate in democracies than in autocracies because more taxpayers have a say in the decision in democracy than in autocracy. In addition, an important consideration that affects fiscal choices in autocracies is the need to make investments in securing and maintaining power. This leads to an increase in spending on defense and policing relative to a democracy where political pressures are more in the direction of redistributive spending (Mulligan et al., 2004). These partially conflicting effects determine the impact of political regime on fiscal outcomes, but it remains an empirical question as to which effect dominates. Surprisingly, recent work by Mulligan et al. (2004) suggests that autocracies and democracies differ very little with regard to government consumption, education spending, pensions, and nonpension social spending. Instead, the differences seem to arise with respect to policies that affect the degree of competition for public office. Mulligan et al. (2004) report the results of cross section regressions using (average) information for the years 1960-1990 in a sample of more than 100 countries. They use the democracy index constructed by the Polity IV project to measure regime type on a scale from 0 (nondemocratic) to 1 (democratic).⁴ There are, however, two main weaknesses with this approach. Firstly, the analysis is based on a cross section of countries. The impact of democracy on fiscal and other outcomes is, therefore, identified entirely from cross country variation in political regimes, making it hard to rule out omitted variable biases. Moreover, very strong homogeneity assumptions are needed to allow pooling of the data material. Secondly, and somewhat less critical, the regime type variable is used as a cardinal variable, which it is not.

In this section, we want to revisit this issue using time series data from 18 Latin American countries in a panel analysis. This has two advantages compared to the work by Mulligan et al. (2004). Firstly, despite inter-country differences, a sample Latin American countries is more homogenous than a world sample, making the required homogeneity assumption more acceptable. Secondly, taking a time series perspective allows us to control for fixed country and time effects, and thus identification of any impact of political regime on fiscal (and other) outcomes derives solely from within country variation in regime type. The data set covers the period from 1920 to the present, but is unbalanced.⁵ We estimate

⁴The democracy score constructed by Polity IV measures “general openness of political institutions” on an additive 11-point scale using the six authority characteristics listed in a previous footnote. Mulligan et al. (2004) re-scale the additive democracy index to lay between 0 and 1.

⁵See in the Appendix Table A1 for information about the time period covered for each country.

the following model:

$$y_{it} = \alpha_i + \eta_t + x_{it}^{pol}\beta + x_{it}^{control}\gamma + \varepsilon_{it} \quad (1)$$

where y_t is the outcome variable; x_{it}^{pol} is a vector of political variables that capture regime type; $x_{it}^{control}$ is a vector of control variables; ε_{it} is the error term; α_i is a country fixed effect; and η_t is a fixed time effect. We estimate the model with a fixed effects estimator allowing for panel-specific standard errors and correlations between panel units, as recommended by Beck and Katz (1995). We have tested the stationarity of the data using the Fisher Test for panel unit roots and can in each case reject the null hypothesis that the series are non-stationary for all panel units. However, since we do not model dynamics explicitly, we are worried about autocorrelation in the residuals and correct for autocorrelation of order one in all regressions.⁶

We are interested in estimating the impact of the regime type on five fiscal outcomes for which we have comparable data for the 18 countries. These are government spending out of GDP, total tax revenues out of GDP, income tax revenue as a percentage of total tax revenue, international debt as a percentage of total tax revenue, and investments in public infrastructure proxied by kilometers of roads per square kilometer. Spending and taxation refer to central government only. We measure regime type by a dummy variable – *democracy* – constructed from the Polity IV index of autocracy/democracy. We define a political regime with a negative score as autocratic and a regime with a positive score as democratic. Political transitions, where the Polity IV score is not defined, are dealt with in the way suggested by Marshall and Jaggers (2000). This implies that the regime dummy measures the impact of democracy vis-a-vis a counterfactual of "autocracy."

The time varying control variables included in the regressions are export plus import over GDP (*trade openness*), real GDP per capital (*GDP per capita*), the growth rate of GDP per capita (*growth*), population size in millions (*population*), population under 15 years of age (*population under 15*), population over 60 years of age (*population over 60*), the size of the economically active population (*economically active population*), the number of individuals working in manufacturing (*manufacture population*), the percentage of the population living in urban areas (*urban population*), the rate of inflation (*inflation*), and a dummy variable to control for economic crises (*economic crisis*).

Before we present the regression results, it is useful to look at some scatter plots of the data. In Figure 2a – d, we report the evaluation over time of the fiscal outcome variables, separated by regime type. For government expenditure out of GDP, no strong pattern emerges from Figure 2a, although we note that few dictatorships survive into the 1990s. The difference between the two types of regimes is more visible with respect to tax revenue out of GDP, and Figure 2b suggests that tax revenues might be larger in autocracies. The pattern for income tax revenue as percentage of total revenue is less clear, although Figure 2c does suggest that at least towards the end of the period, income tax revenues constitute

⁶We have also estimated a random effects model. In the few cases where it passes the Hausman test, the results are similar to the fixed effects model and we only report the results from the latter model.

a larger share of total revenues in democracies than in autocracies. Figure 2*d* suggests that international debt as a percentage of total tax revenues is slightly higher, on average, in democracies. The patterns detected in these diagrams are, of course, only suggestive and to get more robust insights, we need to turn to the regression results.

The regression results for the five fiscal outcomes are reported in Table 1.⁷ We find little difference between autocratic and democratic regimes with respect to income taxation, international debt and public infrastructure, but in contrast to Mulligan et al. (2004), we find that democracies raise less taxes relative to GDP than autocracies. This effect is significant at the 1 per cent level but only of limited economic importance: tax revenues out of GDP are about 1 percentage point lower in a democracy. This suggests that the need to finance internal security with taxes in an autocracy dominates the pressures for redistribution in a democracy. We do not have financial data on spending on internal security, but we do have data on the number of soldiers as a percentage of the total population aged between 16 and 59 years old (*defence*) since 1960. We also have data on military expenditure as a percentage of total government expenditure (*defence expenditure*) since 1973. In Table 2*a* and 2*b*, we report some regressions with *defence* and *defence expenditure* as the dependent variables, respectively. For comparison, we have reestimated the regressions for total government spending and revenue out of GDP for the appropriate time periods. We see that democracies have smaller armies than autocracies. On average, the percentage of soldiers is about half a percentage point lower in democracies. Consistent with this, democracy reduces the share of military expenditures in total government expenditure by about 2 percentage points. This suggests that the extra tax revenues in dictatorships is, largely, spend on internal security.

Given the fact that many of the countries in the sample move in and out of democracy, the distinction between new and established democracies may be of importance. For example, if redistributive preferences have been suppressed during a dictatorship, the transition to democracy may lead to a surge in redistributive spending which eventually levels out once democracy takes root. To capture this temporal issue, we split the dummy variable *democracy* into two separate dummy variables. *New democracy* is coded as 1 in the five years following a change in the Polity IV index from negative (autocracy) to positive (democracy) unless the Polity IV index becomes negative or zero again within this time window, in case of which the dummy takes the value of 1 until that point in time. *Established democracy* is coded 1 for the subsequent years that Polity IV index remains positive after the initial five years.⁸

⁷See Table A2 and A3 in the appendix for the results for the five fiscal outcomes without the inclusion of control variables and without controlling for autocorrelation.

⁸This is different from Rodrik and Wacziarg (2004). They use a more narrow definition of what constitutes a new democracy. In particular, they use information from Polity IV data set about regime changes to define a new and code the dummy variable "new democracy" as one in the year and the subsequent five years after a major democratization, unless the process is interrupted by another major regime change, in case of which the variable is 1 until that point in time. Established democracy is coded

We notice from Tables 1, 2*a* and 2*b* that the distinction makes little difference for the results related to fiscal outcome, except that spending out of GDP in an established democracy may be slightly lower than in autocracies. More interestingly, however, we note from Table 2*a* that the reduction in the size of the army is particular large in established democracies, although new democracies also reduce the size of the army significantly. On the other hand, from Table 2*b* we note that the decrease of the share of military expenditures in total government expenditure is significant only for new democracies. One interpretation of this is that spending on hardware is cut immediately after a transition to democracy, while it takes a while to reduce the number of soldiers, possibly for employment reasons.

[Table 1 to appear here: full sample, but without female and education effects].

[Table 2*a* and 2*b* to appear here: shorter sample].

3 Gender and Education Restrictions on the Right to Vote

The previous section aimed at identifying differences between broad regime types. In this section, we are interested in a narrower question: within democratic regimes, does the allocation of voting rights have an impact on fiscal and social outcomes. We focus on the impact of gender and literacy restrictions. In Table 3, we report for each country, information about when literacy restrictions were abolished and when women gained suffrage rights.

[Table 3 to appear here: information about when each country introduced women's suffrage and lifted literacy restrictions]

We observe considerable variation across time and space in the restrictions imposed on voting rights. Virtually all Latin American countries adopted a literacy requirement for citizenship (which included the right to vote) in their first constitution or soon thereafter. These persisted in some, but not all, countries for long periods of time. The extreme cases are Brazil, Chile and Peru, where these restrictions played an important role until the 1970s and the 1980s. In a few other countries, e.g., Argentina and Colombia, literacy requirements were never applied systematically at the national level, but were in use in

1 for all years following the initial five years. We have chosen to use the alternative definition for two reasons. First, we are not interested in political transitions as such, but in the differences between different regime types. Second, with only 18 countries in the sample, the number of regime changes according to the Polity IV data set is limited and it makes more sense, in our context, to capture regime differences with a broader measure.

some federal states (Engerman and Sokoloff, 2001).⁹ Another commonplace restriction was gender. Women’s suffrage was granted within the time window from 1929 (Ecuador) to 1955 (Honduras, Nicaragua and Peru), and until then, voting rights were restricted to (literate and/or wealthy) males.

We expect these restrictions to have an impact on fiscal choices for a number of reasons. Firstly, men and women face different constraints and opportunities. This is particularly true for married females who have specialized in household production. In case of break down of marriage or widowhood, this group of females may find it difficult to enter or reenter the labor market. Lott and Kenny (1999) argue that such factors would induce female voters to support spending on publicly provided private goods, such as health and education, and on social insurance, as a precautionary measure. If so, the female franchise should be associated with higher spending on these items and with an increase in total spending and more progressive income taxation (Varian, 1980). Secondly, literacy restrictions were used systematically to exclude indigenous populations from voting. This effectively excluded a large fraction of mainly poor individuals from political influence. We would expect that this reduced the demand for redistributive public spending in general and discouraged elites from investing in public education in particular.

We begin our analysis by looking at the five fiscal outcomes (spending out of GDP, total tax revenues out of GDP, income tax revenue as a percentage of total tax revenue, international debt as a percentage of total tax revenue, and investments in public infrastructure) and then move on to education outcomes.

3.1 Fiscal Outcomes

To investigate if gender and literacy restrictions had any impact on fiscal outcomes, we construct a new set of dummy variables. The dummy variable *women’s suffrage* is coded as 1 in year t in country i if the Polity IV index is positive (the country is democratic at the time) *and* women were allowed to vote. We construct the variable *literacy effect* in two steps. First, we code a dummy variable as 1 in year t in country i if the Polity IV index is positive (the country is democratic at the time) *and* the right to vote is not restricted by literacy requirements. Second, we multiply this dummy variable with the share of the population who is illiterate. In this way, *literacy effect* captures the potential political influence of the group of illiterate voters.¹⁰ We note that *women’s suffrage* and *literacy effect* are designed to measure the impact of literacy and gender restrictions on

⁹Literacy requirements had by the turn of the 19th century replaced wealth or income requirements as a means to keep Native Americans and other poor people from voting in most countries in the sample. For this reason, we do not attempt to identify the impact of the restrictions on outcomes.

¹⁰One could argue that we for consistency should multiply women’s suffrage by the share of the adult females. We have tried this and it makes no difference to the results.

fiscal outcomes *conditional* on the regime being democratic.¹¹

We estimate a panel model similar to equation (1), except that the vector of political variables includes *democracy*, *new democracy*, *established democracy* along with the *literacy effect* and *women's suffrage*. The results are reported in Table 4.

[Table 4 to appear here: results with literacy effect and women's suffrage].

A number of interesting and somewhat surprising results should be highlighted. Firstly, conditional on being democratic, women's suffrage does not have a statistically significant impact on any of the fiscal outcome variables, although we might note that the point estimates suggest a *negative* marginal impact on the size of government.

This stands in sharp contrast to findings by Lott and Kenny (1999) who show that women's suffrage led to a significant increase in total spending across US states during period 1860-1940. Our finding is, however, more in line with results from Western Europe before World War II. Aidt et al. (2005) find that women's suffrage had little impact on total spending in a sample of 12 Western European countries, although it did contribute to the rise of social spending (Lindert, 1994) and increased the share of direct taxes (Aidt and Jensen, 2005).¹² Stutzer and Kienast (2004) exploring differences in the timing of the introduction of women's suffrage in the Cantons of Switzerland, however, find little association between women's suffrage and social spending at the Canton level and a negative impact on total spending. In contrast, Abrams and Settle (1999) find a large positive impact on social welfare spending in Switzerland after voting rights were granted to women in 1971.

Secondly, relaxation of literacy restrictions on the right to vote increases total government spending and revenues as a percentage of GDP. Evaluated at the mean of the sample, the size of this effect is between **XX** and **YY** percentage points. This is consistent with theory insofar as literacy restrictions excluded relatively poor voters who, when given the vote, would use their influence to support redistributive policies, leading to the increase in the size of government. We, however, also find that relaxation of literacy restrictions has a negative impact on the share of income tax revenue. This suggests that the surge in redistribution mainly takes place through the expenditure side of the budget.

¹¹This formulation assumes that voting rights granted in the past under a spell of democracy do not affect policy outcomes in subsequent dictatorships. This seems reasonable. We have checked if it makes a difference if the two dummy variables were coded 1 after the relevant restriction were lifted irrespective of subsequent regime changes and the results are very similar.

¹²It is possible that these differences are due to differences in the way women's suffrage is modelled. In particular, Lott and Kenny (1999) model the impact of women's suffrage through its impact on turnout, while the other studies include a women's suffrage dummy variable directly in the fiscal outcome regressions.

3.2 Education Outcomes

In this section, we investigate if restrictions on voting rights, as well as the regime type, affect education outcomes. As noted by, for example, Gilles and Verdier (1993) public education encourages accumulation of human capital and tends to produce a more even income distribution. The pressures for redistribution in a democracy may therefore materialize as more public spending on education, rather than as transfers and other more direct ways of redistributing income. However, the extent to which this is the case must depend on restrictions on the right to vote. Literacy restrictions may, for example, lead to worse education outcomes for the obvious reason that the restrictions were introduced in the first place to keep illiterate, poor voters away from political influence. Gender restrictions may also lead to worse education outcomes because women, as a precautionary measure, may have a preference for investments in education.

To investigate these possibilities, we estimate a panel model similar to equation (1) with the same vector of political variable as in the previous section but with the enrollment rate in primary, secondary and tertiary education as a percentage of the total population under the age of 15 years old. The results are reported in Table 5.¹³

[Table 5 to appear here]

The following results are of particular interest. Firstly, enrollment in primary education is significantly higher in democracies than in dictatorships giving some support to the hypothesis that education may serve as one of many tools of redistribution in a democracy. Democracy increases, on average, the enrollment rate in primary by about 0.8 percentage points. However, the effect of democracy per se disappears when we take gender restrictions into account: the entire difference is driven by women's suffrage. Secondly, literacy restrictions are not associated with worse education outcomes at any level. This is surprising as we would expect that the demand for public education expands once literacy related restrictions are removed, and that the supply of education (supported by the elite) expands once lack of investments no longer serves the purpose of keeping to-be future voters away from the polls. Empirically, however, this does not seem to be the case. Thirdly, democracy does not have any effect on enrollment into secondary education and only a marginally significant positive effect on enrollment in tertiary education.

To investigate the impact of extensions in the voting franchise within a democratic set up, we estimate the panel restricting the observations to democratic periods. This implies that the regime dummies are measuring the impact of gender restrictions and literacy restrictions vis-a-vis a counterfactual of "democracy". The results are reported in Table 6.

¹³It is not possible to obtain data on spending on public education for a sufficiently long time period to allow us to test the impact on spending directly. Enrollment rates are, however, likely to be highly correlated with public spending on education, though only with a lag.

[Table 6 to appear here]

Firstly, women's suffrage has a significant positive impact on enrollment in primary education relative to a democratic regime that excludes women. The increase is about 2 percentage points. Secondly, literacy restrictions leads to worse educational outcomes at any level of education. A democracy country that introduce literacy restrictions decreases enrolment in primary education by XX percentage points. Secondary and tertiary enrolment are reduced as well.

4 Other Results

The regressions reported above contain a number of control variables which in themselves are interesting determinants of fiscal and educational outcomes. Openness to trade is, for example, positively related to the size of government (as measured by total tax revenues as a percentage of GDP). This is consistent with the insurance argument advocated by Rodrik (1998). It is also of interest to note that equality (as measure by family farms as a percentage of total area of holdings) is negatively related to the share of income taxes and positively related to enrollment in primary, secondary and tertiary education.

5 Conclusion

Our analysis is a first attempt to quantify the impact of political reform and allocation of voting rights on fiscal and social outcomes in Latin America, and is preliminary in many regards. We comment on three areas that need more consideration below.

- The analysis maintains the assumption that political reforms are exogenous to the process that determines fiscal and social outcomes. Although, we do control for a range of observable determinants of fiscal and social outcomes, this may not be the case. In particular, any time varying unobserved factor and therefore excluded factor that is correlated with political regime or with decides about the allocation of voting rights would bias the results. Reverse causality may also be an issue, in particular with regard to education outcomes.
- Another important consideration that needs to be tackled is the fact that the regime transitions are endogenous (see Acemoglu and Robinson, 2001 for a theory of political transitions that demonstrates why). Econometrically, we seek to explore the possibility of using Markov Switching models to estimate jointly the transition probabilities and the regime-dependent link between exogenous structural variables and public policy. We plan to undertake this extension in future work.

- Lott and Kenny (1999) have argued that voting restriction are unlikely to have a direct impact on fiscal and social outcomes: they have an impact only insofar as they affect turnout in elections. We plan to undertake analysis along these lines in future work.

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6 Appendix

List of variables

- Democracy is a dummy variable that takes the value of 0 when the Polity IV index is equal or less than zero and takes a value of 1 when the Polity IV index is positive.
- New democracy is a dummy variable that takes the value of one when the Polity IV index becomes positive and for the subsequent five years unless the Polity IV index becomes negative or zero, in which case the dummy takes the value of 1 until the change of sign.
- Established democracy is a dummy variable that takes the value of one for the subsequent years that Polity IV index remains positive after the first five years of New Democracy. It is clear that the sum of New and Established Democracy is equal to the Democracy dummy.
- Political Crisis is a dummy variable that takes the value of one everytime a major political crisis takes place in the countries in the sample.
- Economic Crisis is a dummy variable that takes the value of one everytime a major political crisis takes place in the countries in the sample. As proxy of economic crisis, we use the dates when a currency change takes place, specifically the dummy is coded 1 two years before a currency change and one year after.
- Women's suffrage is a dummy variable that takes the value of one after the women were granted the right to vote in societies with democracy (Polity IV positive)
- Literacy effect is a dummy variable that takes the value of one after the literacy restrictions were lifted in societies with democracy (Polity IV positive) and is multiplied by the fraction of illiterate in the population.
- Government Expenditure is the Consolidated Central Government Expenditures divided by the GDP.
- Government Revenue is Central Government Revenue divided by GDP.
- Income Tax is the tax revenue from incomes, profits and capital gains as a percentage of the GDP.
- International Debt is the total external debt as a percentage of the GDP.
- Primary school enrolment is the total number of students in primary education divided by the total population.
- Illiteracy rate is the total number of illiterate adults divided by the total population.

- GDP per capita is the real GDP divided by the total population of the country.
- Inflation is percentage increase in the consumer price index divided by 100.
- Defense: Military participation rate. Number of soldiers per 1000 inhabitants.
- Defence expenditure: Total military expenditure as a percentage of total Central government expenditure.
- Income distribution: We proxy income distribution using a variable called Family Farms (as a percentage of total cultivated area or of total area of holdings).
- Population over 15: Percentage of total population aged 15 or less.
- Population over 60: Percentage of total population aged 60 or more.
- Economically active population: The number of employed and unemployed persons. Reported figures come from census data with interpolations between census years; expressed as a percentage of total population.
- Manufacture population: The number of employed and unemployed persons in the manufacturing industry; expressed as a percentage of total population.
- Trade openness: Exports plus imports divided by the GDP.
- Exports: Total value of merchandise exports valued FOB (free on board); expressed in million US dollars. The FOB valuation comprises the price of goods at the border of exporting country and includes the value of the commodity, all outlays on transport to the shipping point, and all requisite fees for loading. Reported trade figures are generally of ‘special’ rather than ‘general’ trade, i.e. they refer only to commodities that have been produced within the country.
- Imports: Total value of import goods valued CIF (cost, insurance, and freight); expressed in million US dollars. The CIF valuation comprises the price of goods at the border of the importing country, and includes the component elements of FOB valuation, as well as the cost of insurance and the cost of international transport. Reported trade figures are generally of ‘special’ rather than ‘general’ trade, i.e., they refer only to commodities that are intended for internal use.
- Roads: Generally the total network of permanent traffic; expressed in thousand kilometers, but for earlier periods may widen to include non-permanent roads, or narrow to roads suitable for motor vehicle transit only.

Data sources Consolidated central government expenditures, central government revenue, tax revenue from taxation of income, profit and capital gains, total population, real and nominal GDP, primary school enrolment, inflation and open railway lines, Illiteracy rate, roads, economically active population and manufacture population are from the data web side of Department of Latin American studies, Oxford University, UK. Population over 15 and Population over 60 are from Mitchell (1993). Military participation rate (Defense) and Total military expenditure as a percentage of total Central government expenditure are from the Statistical abstract of Latin America, various issues, University of California. Center of Latin American Studies. Family Farms is from Vanhanen, Tatu (University of Tampere. Department of Political Science and International Relations). The source for the extension of the female franchise and the literacy restrictions are CEPAL (1999), Nohlen (1993), and Engerman and Sokoloff (2001).

Construction of the data set For some control variables, there are gaps in the series. We have dealt with this by linear interpolation. The Polity IV index codes regimes transitions with -88, foreign interruption with -66 and periods of anarchy with -77. To work with time series we follow the suggestions given in the Polity IV user's manual (Marshall and Jaggers, 2000) and treat -66 as "system missing", -77 are converted to a polity score of 0 and cases of transition (-88) are pro-rated across the span of the transition.

Table 1: Results from Prais-Winsten common AR(1) Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Government expenditure	Government expenditure	Government revenue	Government revenue	Income tax (11-11-05)	Income tax	International debt	International debt	Roads	Roads
Democracy	-0.339 (0.474)		-0.953 (0.327) ***		0.884 (1.034)		15.647 (14.874)		2.747 (2.205)	
New democracy		0.164 (0.528)		-0.933 (0.354) ***		0.067 (1.117)		21.946 (16.898)		2.382 (2.394)
Established democracy		-1.016 (0.580) *		-0.967 (0.422) **		1.917 (1.211)		6.646 (16.313)		3.586 (2.820)
Trade Openness	0.233 (2.052)	0.012 (2.052)	10.086 (1.385) ***	10.060 (1.386) ***	0.025 (4.155)	0.206 (4.123)	-73.709 (50.554)	-71.513 (50.121)	-0.341 (8.738)	-0.193 (8.757)
GDP per capita	1.408 (0.712) **	1.362 (0.715) *	0.610 (0.521)	0.606 (0.523)	-0.654 (1.428)	-0.524 (1.418)	20.652 (21.734)	19.645 (21.348)	0.262 (4.127)	0.336 (4.135)
Growth	-2.698 (0.570) ***	-2.667 (0.567) ***	-0.326 (0.401)	-0.326 (0.402)	-0.927 (1.157)	-1.027 (1.160)	-45.132 (15.543) ***	-43.914 (15.344) ***	-2.407 (3.052)	-2.462 (3.066)
Income distribution	-13.812 (6.541) **	-14.340 (6.726) **	-5.577 (4.772)	-5.542 (4.807)	-45.629 (13.447) ***	-45.291 (13.270) ***	-72.140 (219.404)	-74.442 (213.358)	-59.230 (60.478)	-58.991 (60.175)
Population	5.616 (2.437) **	5.670 (2.474) **	0.799 (1.965)	0.805 (1.977)	50.416 (7.304) ***	50.309 (7.187) ***	16.978 (68.396)	20.606 (66.087)	116.770 (17.037) ***	116.914 (16.886) ***
Population under 15	12.422 (14.272)	13.256 (14.337)	14.264 (14.528)	14.017 (14.629)	84.044 (26.381) ***	79.985 (26.449) ***	-168.876 (343.686)	-131.761 (332.942)	147.004 (110.602)	145.037 (110.010)
Population over 60	40.585 (41.383)	36.286 (42.384)	77.438 (28.587) ***	77.186 (28.761) ***	-84.240 (52.571)	-81.407 (52.257)	-559.004 (1,342.221)	-596.697 (1,278.572)	-1,198.733 (344.619) ***	-1,196.886 (340.588) ***
Urban population	0.060 (0.056)	0.071 (0.058)	0.103 (0.045) **	0.102 (0.045) **	-0.523 (0.128) ***	-0.540 (0.128) ***	-0.259 (1.559)	-0.242 (1.453)	0.130 (0.470)	0.116 (0.467)
Economically active population	-21.491 (10.623) **	-20.575 (10.796) *	-5.085 (7.978)	-5.034 (8.022)	22.424 (21.626)	20.274 (21.588)	-825.722 (492.937) *	-765.012 (471.030)	39.625 (69.653)	38.692 (69.391)
Manufacture population	15.089 (12.058)	15.132 (12.402)	20.250 (11.442) *	20.175 (11.558) *	-7.147 (12.859)	-7.437 (12.728)	-81.675 (340.680)	-79.465 (322.683)	391.122 (100.078) ***	390.603 (98.791) ***
Inflation	-3.845 (3.010)	-4.103 (2.975)	-2.200 (1.266) *	-2.211 (1.265) *	-3.424 (1.843) *	-3.127 (1.819) *	-246.618 (123.564) **	-247.356 (122.306) **	-1.873 (4.994)	-1.702 (5.076)
Economic crisis	1.203 (0.662) *	1.188 (0.660) *	-0.317 (0.416)	-0.321 (0.416)	-1.084 (0.853)	-1.084 (0.847)	57.900 (22.204) ***	57.815 (22.200) ***	-1.336 (2.801)	-1.344 (2.812)
Observations	909	909	889	889	576	576	860	860	882	882
# of countries	18	18	18	18	17	17	18	18	18	18

Standard errors in parentheses

* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.

Table 2a Results from Prais-Winsten common AR(1) Regressions Period 1960-2000

(11-11-05)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Government expenditure	Government expenditure	Government revenue	Government revenue	Defence	Defence	Defence	Defence
Democracy	-0.300 (0.600)		-1.269 (0.404)***		-0.450 (0.165)***		-0.525 (0.160)***	
New democracy		0.358 (0.646)		-1.149 (0.422)***		-0.373 (0.178)**		-0.432 (0.173)**
Established democracy		-1.408 (0.774)*		-1.484 (0.559)***		-0.673 (0.225)***		-0.766 (0.211)***
Trade Openness	-2.135 (2.531)	-2.536 (2.534)	10.696 (1.699)***	10.637 (1.701)***	0.453 (0.974)	0.448 (0.975)	-0.063 (0.865)	-0.085 (0.868)
GDP per capita	1.915 (0.988)*	1.794 (0.990)*	0.215 (0.661)	0.192 (0.666)	0.006 (0.325)	-0.011 (0.324)	-0.108 (0.293)	-0.128 (0.292)
Growth	-2.924 (0.794)***	-2.846 (0.786)***	0.127 (0.524)	0.145 (0.524)	-0.238 (0.268)	-0.219 (0.266)	-0.002 (0.248)	0.018 (0.246)
Income distribution	-26.837 (10.225)***	-26.569 (10.360)**	-5.391 (6.000)	-5.327 (6.028)	-11.827 (2.996)***	-11.836 (2.975)***	-7.296 (2.713)***	-7.306 (2.667)***
Population	10.916 (4.007)***	11.106 (4.062)***	5.544 (3.049)*	5.562 (3.060)*	2.026 (2.205)	2.094 (2.214)	2.392 (1.834)	2.476 (1.837)
Population under 15	59.250 (28.886)**	58.286 (28.891)**	49.510 (17.924)***	49.395 (17.874)***	10.887 (13.039)	11.297 (12.905)	11.563 (10.753)	12.126 (10.609)
Population over 60	178.017 (92.689)*	162.138 (93.675)*	197.321 (51.047)***	193.963 (50.761)***	29.622 (28.556)	27.320 (27.638)	27.331 (25.447)	24.732 (24.458)
Urban population	0.040 (0.080)	0.057 (0.081)	0.022 (0.053)	0.025 (0.053)	0.018 (0.024)	0.021 (0.024)	-0.005 (0.020)	-0.002 (0.020)
Economically active population	-25.113 (16.164)	-26.045 (16.286)	-1.039 (10.618)	-1.132 (10.625)	-3.529 (4.827)	-3.587 (4.791)	1.593 (4.453)	1.577 (4.439)
Manufacture population	14.576 (15.057)	15.392 (15.468)	32.106 (13.808)**	32.266 (13.919)**	-10.612 (4.869)**	-9.951 (5.032)**	-7.071 (3.744)*	-6.322 (3.850)
Inflation	-3.691 (3.080)	-4.037 (3.041)	-1.939 (1.354)	-1.998 (1.357)	-0.106 (0.901)	-0.156 (0.907)	0.215 (0.833)	0.164 (0.839)
Economic crisis	1.359 (0.815)*	1.333 (0.813)	-0.455 (0.511)	-0.461 (0.512)	0.084 (0.180)	0.083 (0.179)	0.104 (0.175)	0.104 (0.174)
War							4.719 (1.005)***	4.718 (1.007)***
Observations	640	640	630	630	550	550	550	550
# of countries	18	18	18	18	18	18	18	18

Standard errors in parentheses

* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.

Table 2b Results from Prais-Winsten common AR(1) Regressions Period 1973-1997

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Government expenditure	Government expenditure	Government revenue	Government revenue	Defence expenditure	Defence expenditure	Defence expenditure	Defence expenditure
Democracy	-0.555 (0.810)		-1.492 (0.534) ***		-2.075 (0.833) **		-2.104 (0.829) **	
New democracy		-0.146 (0.860)		-1.405 (0.546) **		-2.205 (0.858) **		-2.212 (0.855) ***
Established democracy		-1.824 (1.025) *		-1.804 (0.731) **		-1.171 (1.110)		-1.444 (1.109)
Trade Openness	-5.198 (2.891) *	-5.413 (2.886) *	9.498 (1.875) ***	9.432 (1.872) ***	-5.618 (3.120) *	-5.559 (3.117) *	-5.439 (2.911) *	-5.370 (2.910) *
GDP per capita	2.153 (1.151) *	2.097 (1.147) *	0.103 (0.745)	0.090 (0.741)	-2.021 (1.145) *	-2.014 (1.147) *	-2.197 (1.074) **	-2.198 (1.075) **
Growth	-4.058 (1.039) ***	-3.984 (1.037) ***	-0.442 (0.663)	-0.424 (0.666)	2.958 (1.001) ***	2.902 (1.003) ***	3.676 (0.980) ***	3.638 (0.984) ***
Income distribution	-28.378 (9.667) ***	-27.735 (9.575) ***	-3.227 (6.501)	-3.174 (6.450)	-14.924 (10.419)	-15.704 (10.389)	-3.578 (8.780)	-4.243 (8.688)
Population	19.419 (6.505) ***	19.939 (6.524) ***	11.455 (4.137) ***	11.718 (4.096) ***	13.049 (9.102)	12.551 (9.196)	13.255 (8.373)	12.950 (8.477)
Population under 15	83.644 (44.096) *	87.421 (43.221) **	69.599 (23.291) ***	71.421 (22.713) ***	-12.491 (56.446)	-15.635 (56.851)	-9.568 (48.418)	-11.915 (48.858)
Population over 60	244.366 (139.433) *	232.257 (137.429) *	208.693 (78.674) ***	206.800 (76.731) ***	135.349 (126.663)	134.870 (126.648)	101.853 (114.050)	102.764 (113.587)
Urban population	-0.041 (0.101)	-0.023 (0.100)	-0.055 (0.063)	-0.052 (0.062)	0.034 (0.119)	0.023 (0.119)	0.002 (0.111)	-0.006 (0.110)
Economically active population	-22.467 (21.977)	-21.868 (21.892)	6.751 (12.894)	7.154 (12.789)	10.441 (23.742)	8.539 (23.578)	22.926 (21.088)	21.474 (21.049)
Manufacture population	36.698 (24.643)	40.812 (24.406) *	60.509 (20.849) ***	62.090 (20.483) ***	-48.684 (21.273) **	-49.924 (20.786) **	-43.358 (19.262) **	-44.285 (19.008) **
Inflation	-4.062 (3.522)	-4.294 (3.500)	-2.103 (1.578)	-2.147 (1.601)	3.465 (3.190)	3.599 (3.196)	4.475 (3.220)	4.568 (3.222)
Economic crisis	2.082 (0.995) **	2.068 (0.996) **	-0.242 (0.610)	-0.223 (0.613)	0.167 (0.988)	0.163 (0.989)	0.297 (1.001)	0.296 (1.004)
War							9.957 (3.158) ***	9.926 (3.153) ***
Observations	461	461	461	461	403	403	403	403
# of countries	18	18	18	18	18	18	18	18
Standard errors in parentheses								
* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.								

Table 3

Country	Female Franchise	Literacy Restriction
Argentina	1947	1912/never at national level
Bolivia	1952	1952
Brazil	1932	1985
Chile	1949	1970
Colombia	1954	1936/never at national level
Ecuador	1929	1978
Paraguay	1961	1870
Peru	1955	1979
Uruguay	1932	1918
Venezuela	1946	1947
Costa Rica	1949	1949/1913
Dominican Republic	1942	1865
El Salvador	1950	1883/1945
Guatemala	1946	1946
Honduras	1955	1894
Mexico	1953	1857
Nicaragua	1955	1893
Panama	1945	1904

Sources: For Female Franchise: Economic Commission for Latin America and the Caribbean, UN: Participation and Leadership in Latin America and the Caribbean: Gender Indicators, December, 1999. For Literacy Franchise: Nohlen Dieter, Enciclopedia Electoral Latino Americana y del Caribe, 1993.

Table 4: Results from Prais-Winsten common AR(1) Regressions

(11-11-05)

	(1) Government expenditure	(2) Government expenditure	(3) Government revenue	(4) Government revenue	(5) Income tax	(6) Income tax	(7) International debt	(8) International debt	(9) Roads	(10) Roads
Democracy	-1.811 (1.151)		-1.743 (0.811)**		3.706 (2.130)*		49.365 (27.173)*		10.646 (5.507)*	
New democracy		-0.913 (1.212)		-1.758 (0.843)**		2.303 (2.373)		63.802 (29.720)**		10.125 (5.780)*
Established democracy		-2.050 (1.171)*		-1.758 (0.825)**		3.641 (2.129)*		45.274 (27.323)*		11.002 (5.565)**
Women's suffrage	-0.091 (1.065)	-0.406 (1.092)	-0.216 (0.730)	-0.218 (0.746)	-0.427 (1.865)	0.058 (1.902)	-34.536 (24.260)	-41.736 (24.934)*	-6.207 (4.590)	-5.998 (4.635)
Literacy effect	6.892 (2.107)***	6.317 (2.064)***	4.510 (1.619)***	4.558 (1.592)***	-15.822 (7.483)**	-13.354 (7.806)*	-15.816 (45.654)	-20.415 (44.247)	-10.241 (12.182)	-9.958 (12.196)
Trade Openness	0.893 (2.028)	0.598 (2.030)	10.400 (1.384)***	10.434 (1.383)***	-1.320 (4.127)	-0.748 (4.135)	-77.172 (50.005)	-76.901 (49.682)	-0.959 (8.747)	-0.852 (8.752)
GDP per capita	1.449 (0.703)**	1.405 (0.706)**	0.664 (0.518)	0.667 (0.518)	-0.789 (1.390)	-0.669 (1.401)	20.967 (21.840)	19.992 (21.547)	0.298 (4.130)	0.329 (4.126)
Growth	-2.644 (0.571)***	-2.626 (0.568)***	-0.322 (0.401)	-0.319 (0.402)	-1.021 (1.141)	-1.053 (1.144)	-45.824 (15.549)***	-44.765 (15.382)***	-2.493 (3.060)	-2.573 (3.060)
Income distribution	-14.173 (6.314)**	-14.773 (6.515)**	-5.975 (4.732)	-6.040 (4.698)	-45.831 (13.313)***	-44.884 (13.366)***	-86.726 (224.507)	-96.757 (222.800)	-60.289 (59.758)	-67.169 (59.437)
Population	5.791 (2.370)**	5.838 (2.410)**	0.928 (1.937)	0.927 (1.924)	50.183 (6.976)***	50.013 (6.984)***	17.338 (69.176)	19.812 (67.520)	117.050 (16.680)***	117.060 (16.645)***
Population under 15	12.245 (14.167)	12.924 (14.223)	13.638 (14.382)	13.991 (14.275)	95.815 (26.175)***	90.290 (26.522)***	-186.927 (347.106)	-154.962 (337.672)	147.943 (109.250)	148.615 (108.825)
Population over 60	54.306 (39.823)	49.936 (40.676)	87.151 (28.524)***	87.423 (28.159)***	-110.514 (52.950)**	-105.878 (53.400)**	-485.603 (1,368.890)	-531.419 (1,324.435)	-1,218.217 (336.323)***	-1,210.503 (332.894)***
Urban population	0.059 (0.054)	0.071 (0.055)	0.103 (0.044)**	0.103 (0.044)**	-0.513 (0.124)***	-0.532 (0.128)***	-0.050 (1.571)	0.091 (1.477)	0.162 (0.464)	0.176 (0.463)
Economically active population	-23.315 (10.520)**	-22.749 (10.665)**	-6.777 (7.941)	-6.826 (7.884)	34.991 (21.658)	31.324 (22.071)	-883.848 (498.765)*	-847.917 (485.489)*	36.163 (69.844)	37.024 (69.614)
Manufacture population	12.827 (11.685)	12.831 (12.035)	18.448 (11.203)*	18.536 (11.071)*	-0.275 (12.817)	-1.166 (12.918)	-99.277 (351.175)	-98.047 (339.499)	391.631 (96.852)***	390.233 (96.617)***
Inflation	-3.790 (3.031)	-4.043 (2.995)	-2.219 (1.278)*	-2.214 (1.288)*	-3.254 (1.683)*	-3.065 (1.694)*	-247.100 (123.559)**	-249.165 (122.288)**	-1.884 (5.034)	-1.788 (5.110)
Economic crisis	1.163 (0.665)*	1.152 (0.663)*	-0.340 (0.418)	-0.335 (0.418)	-0.954 (0.847)	-0.963 (0.844)	58.044 (22.238)***	58.028 (22.227)***	-1.298 (2.814)	-1.689 (2.808)
Observations	909	909	889	889	576	576	860	860	882	885
# of countries	18	18	18	18	17	17	18	18	18	18

Standard errors in parentheses

* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.

Table 5: Results from Prais-Winsten common AR(1) Regressions
(11-11-05)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Primary enrolment	Primary enrolment	Primary enrolment	Primary enrolment	Secondary enrolment	Secondary enrolment	Secondary enrolment	Secondary enrolment	Tertiary enrolment	Tertiary enrolment	Tertiary enrolment	Tertiary enrolment
democracy	0.789 (0.367)**		0.061 (0.704)		0.040 (0.144)		-0.109 (0.472)		0.085 (0.051)*		0.021 (0.131)	
New democracy		0.666 (0.390)*		-0.267 (0.716)		-0.001 (0.151)		-0.196 (0.482)		0.086 (0.055)		0.020 (0.134)
Established democracy		1.006 (0.489)**		0.167 (0.748)		0.128 (0.185)		-0.062 (0.477)		0.084 (0.062)		0.021 (0.134)
Women's suffrage			1.316 (0.587)**	1.466 (0.611)**			-0.059 (0.420)	-0.014 (0.422)		0.049 (0.118)		0.050 (0.118)
Literacy effect			-1.903 (1.745)	-1.737 (1.710)			0.910 (0.704)	0.933 (0.704)		0.099 (0.221)		0.100 (0.222)
Trade Openness	-0.785 (1.222)	-0.784 (1.227)	-0.782 (1.226)	-0.775 (1.232)	1.313 (0.510)**	1.315 (0.511)**	1.359 (0.510)**	1.365 (0.511)**	0.396 (0.214)*	0.396 (0.215)*	0.405 (0.217)*	0.407 (0.217)*
GDP per capita	1.112 (0.558)**	1.128 (0.560)**	1.051 (0.562)*	1.076 (0.564)*	1.087 (0.286)**	1.091 (0.287)**	1.097 (0.287)**	1.102 (0.287)**	0.383 (0.089)**	0.384 (0.089)**	0.388 (0.089)**	0.390 (0.089)**
Growth	-0.058 (0.394)	-0.077 (0.396)	-0.018 (0.395)	-0.043 (0.397)	-0.505 (0.193)**	-0.511 (0.193)**	-0.506 (0.193)**	-0.511 (0.193)**	-0.192 (0.053)**	-0.193 (0.053)**	-0.194 (0.053)**	-0.195 (0.053)**
Income distribution	10.338 (5.115)**	10.486 (5.107)**	11.165 (5.196)**	11.358 (5.171)**	9.229 (3.823)**	9.321 (3.815)**	9.128 (3.835)**	9.232 (3.826)**	2.129 (1.054)**	2.136 (1.052)**	2.168 (1.055)**	2.186 (1.051)**
Population	12.662 (2.268)**	12.635 (2.275)**	12.675 (2.314)**	12.617 (2.314)**	3.777 (1.393)**	3.775 (1.395)**	3.814 (1.388)**	3.806 (1.390)**	-0.068 (0.482)	-0.077 (0.481)	-0.099 (0.482)	-0.114 (0.480)
Population under 15	11.477 (26.091)	11.223 (25.964)	11.106 (26.388)	11.055 (26.152)	-20.395 (3.844)**	-20.535 (3.846)**	-20.588 (3.835)**	-20.726 (3.836)**	-10.722 (1.334)**	-10.718 (1.339)**	-10.716 (1.334)**	-10.713 (1.340)**
Population over 60	-132.447 (39.003)**	-131.215 (38.878)**	-139.638 (39.785)**	-138.356 (39.385)**	121.436 (26.824)**	121.879 (26.815)**	123.598 (26.927)**	123.939 (26.907)**	73.152 (7.692)**	73.043 (7.666)**	72.892 (7.629)**	72.690 (7.576)**
Urban population	0.089 (0.064)	0.087 (0.064)	0.078 (0.065)	0.075 (0.065)	0.081 (0.032)**	0.079 (0.032)**	0.080 (0.032)**	0.079 (0.032)**	0.049 (0.010)**	0.049 (0.010)**	0.049 (0.010)**	0.049 (0.010)**
Economically active population	-7.005 (8.825)	-7.302 (8.794)	-4.884 (8.908)	-5.100 (8.908)	-2.925 (3.709)	-3.016 (3.711)	-3.124 (3.718)	-3.199 (3.720)	1.445 (1.104)	1.454 (1.100)	1.447 (1.105)	1.462 (1.101)
Manufacture	72.025 (24.770)**	71.985 (24.602)**	73.453 (25.177)**	73.504 (24.843)**	-24.295 (4.007)**	-24.372 (4.024)**	-24.687 (4.060)**	-24.748 (4.071)**	-9.370 (1.112)**	-9.379 (1.113)**	-9.390 (1.114)**	-9.410 (1.111)**
Inflation	-0.623 (0.942)	-0.566 (0.948)	-0.602 (0.935)	-0.532 (0.942)	-0.012 (0.257)	0.011 (0.257)	-0.017 (0.256)	0.006 (0.255)	0.069 (0.086)	0.069 (0.086)	0.070 (0.087)	0.070 (0.086)
Economic crisis	0.028 (0.546)	0.028 (0.544)	0.044 (0.543)	0.041 (0.542)	0.061 (0.152)	0.061 (0.152)	0.057 (0.152)	0.056 (0.152)	-0.034 (0.042)	-0.034 (0.042)	-0.034 (0.042)	-0.034 (0.042)
Observations	901	901	901	901	886	886	886	886	623	623	623	623
# of countries	18	18	18	18	18	18	18	18	18	18	18	18

Standard errors in parentheses
* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.

Table 6: Results from Prais-Winsten common AR(1) Regressions

(11-11-05)

	(1)	(2)	(3)
	Primary enrolment	Secondary enrolment	Tertiary enrolment
Women's suffrage	1.886 (1.029) *	-0.187 (0.527)	-0.170 (0.140)
Literacy effect	14.315 (4.317) ***	10.953 (2.635) ***	5.319 (0.681) ***
Trade Openness	-1.080 (1.663)	2.875 (0.943) ***	0.198 (0.279)
GDP per capita	0.015 (0.720)	2.264 (0.414) ***	0.518 (0.118) ***
Growth	0.663 (0.515)	-0.918 (0.292) ***	-0.280 (0.098) ***
Income distribution	0.324 (5.396)	7.861 (4.725) *	-0.062 (1.200)
Population	13.749 (2.549) ***	2.801 (1.519) *	1.812 (0.629) ***
Population under 15	-8.824 (17.116)	-15.824 (5.166) ***	-8.908 (1.401) ***
Population over 60	-153.563 (33.762) ***	113.590 (23.210) ***	70.537 (7.481) ***
Urban population	0.151 (0.052) ***	0.098 (0.030) ***	0.038 (0.011) ***
Economically active population	-17.720 (10.226) *	-10.868 (5.918) *	5.740 (1.650) ***
Manufacture population	57.786 (13.037) ***	-34.872 (4.643) ***	-16.535 (1.049) ***
Inflation	-1.539 (1.054)	-0.061 (0.250)	0.294 (0.168) *
Economic crisis	-0.106 (0.456)	0.076 (0.187)	-0.060 (0.072)
Observations	433	420	319
# of countries	18	18	18

Standard errors in parentheses
* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.

Appendix Tables and Graphs

Table A1: Time periods for variables used in the regression analysis

Regressions Periods

	Government Expenditure	Government Revenue	Income Tax From	External Debt From	Primary School Enrolment	Illiteracy rate
Argentina	1920-2000	1920-2000	1920	1929	1920-1998	1920-2000
Bolivia	1960-2000	1960-2000	1985	1960	1960-1990	1960-2000
Brazil	1920-2000	1900-2000	1923	1914	1900-1997	1920-2000
Chile	1940-2000	1940-2000	1940	1940	1940-1996	1940-2000
Colombia	1936-2000	1936-2000	1936	1936	1936-1996	1936-2000
Ecuador	1939-2000	1939-2000	1981	1939	1939-1996	1939-2000
Paraguay	1946-2000	1946-2000	1981	1946	1946-1997	1946-2000
Peru	1942-2000	1942-2000	1942	1942	1942-1997	1942-2000
Uruguay	1955-2000	1955-2000	1955	1955	1955-1996	1955-2000
Venezuela	1920-2000	1920-2000	1938	1920	1926-1996	1920-2000
Costa Rica	1950-2000	1950-2000	1982	1950	1950-1997	1950-2000
Dominican	1947-2000	1947-2000	1981	1947	1947-1997	1947-2000
Guatemala	1923-2000	1923-2000	1981	1923	1923-1997	1923-2000
Honduras	1925-2000	1925-2000	--	1925	1925-1994	1925-2000
Mexico	1920-2000	1920-2000	1925	1914	1907-1996	1920-2000
Nicaragua	1958-2000	1958-2000	1980	1958	1958-1997	1958-2000
Panama	1946-2000	1946-2000	1982	1946	1947-1996	1947-2000
Salvador	1939-2000	1939-2000	1983	1939	1939-1997	1939-2000

Table A2: Results from Prais-Winsten Regressions

(11-11-05)

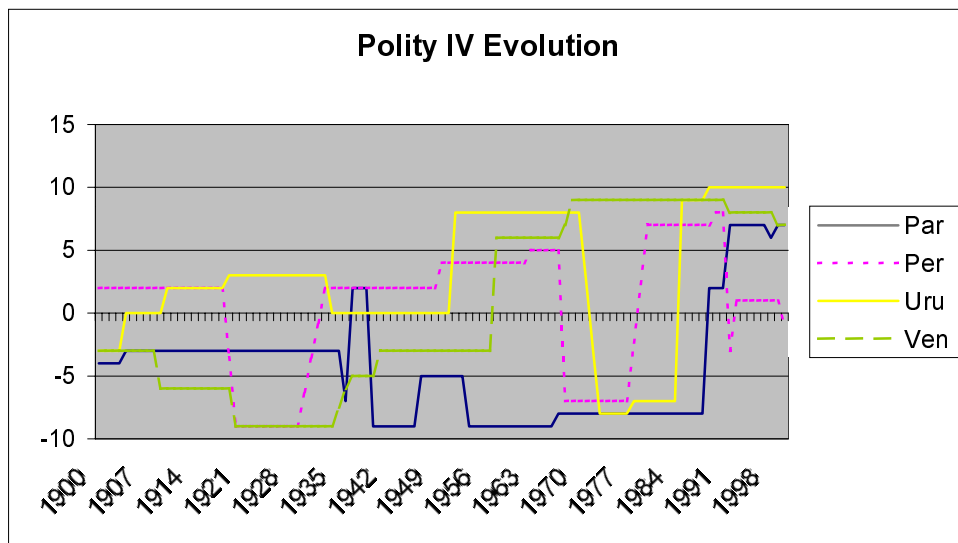
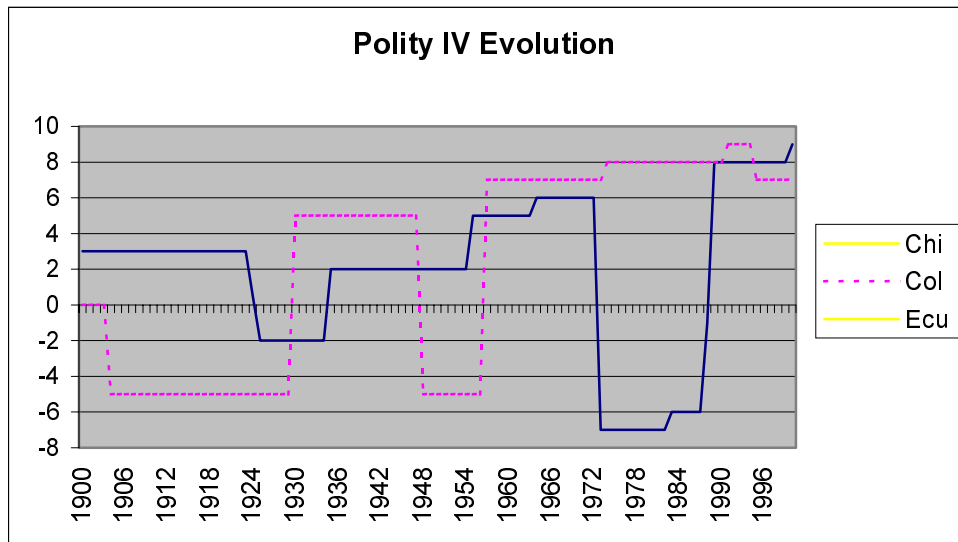
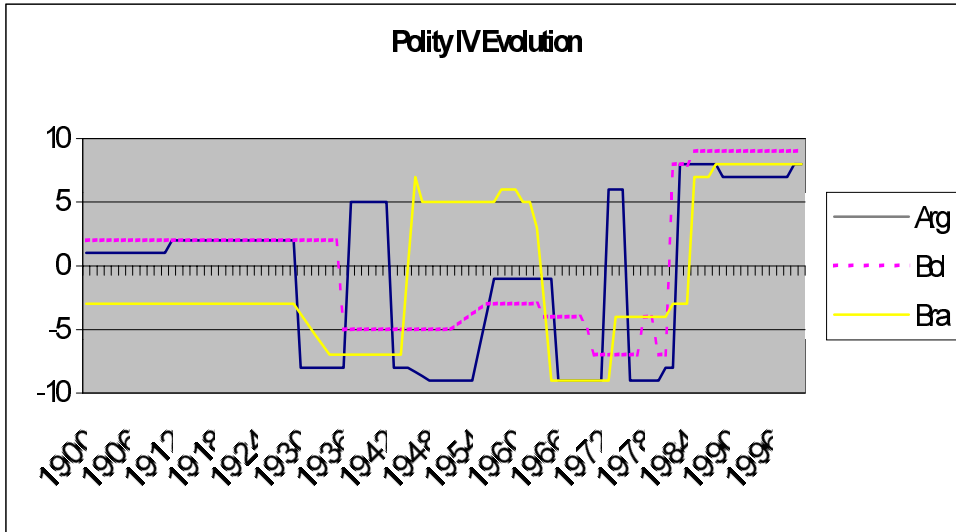
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Government expenditure	Government expenditure	Government revenue	Government revenue	Income tax	Income tax	International debt	International debt	Roads	Roads
Democracy	-1.662 (0.363)***		-1.497 (0.364)***		5.985 (0.960)***		38.891 (6.927)***		19.090 (3.264)***	
New democracy		-1.144 (0.486)**		-1.413 (0.447)***		3.610 (1.155)***		62.869 (10.284)***		13.146 (4.540)***
Established democracy		-1.948 (0.398)***		-1.543 (0.405)***		7.195 (1.011)***		25.796 (7.626)***		23.248 (3.372)***
Observations	1130	1130	1085	1085	690	690	1045	1045	1194	1194
# of countries	18	18	18	18	17	17	18	18	18	18
Standard errors in parentheses										
* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.										

Table A3: Results from Prais-Winsten common AR(1) Regressions

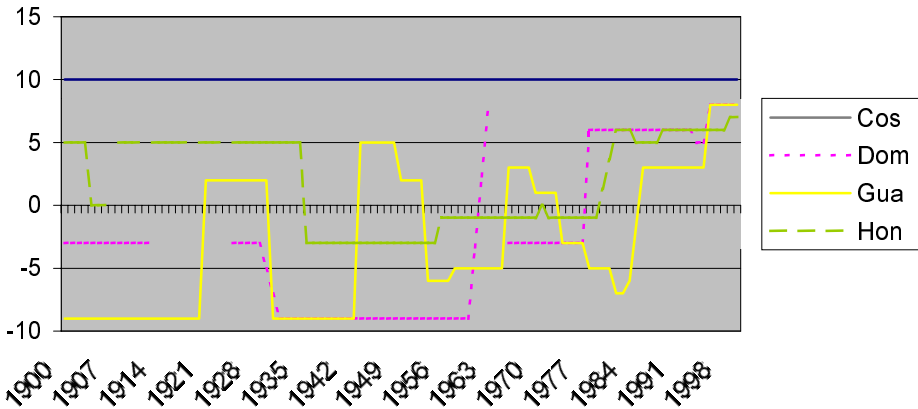
(11-11-05)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Government expenditure	Government expenditure	Government revenue	Government revenue	Income tax	Income tax	International debt	International debt	Roads	Roads
Democracy	0.101 (0.424)		-0.635 (0.307)**		1.812 (0.997)*		6.549 (12.564)		5.533 (1.995)***	
New democracy		0.358 (0.469)		-0.745 (0.332)**		1.006 (1.095)		10.437 (14.567)		4.766 (2.120)**
Established democracy		-0.266 (0.518)		-0.470 (0.382)		2.536 (1.147)**		0.718 (15.061)		7.660 (2.530)***
Observations	1130	1130	1085	1085	690	690	1045	1045	1194	1194
# of countries	18	18	18	18	17	17	18	18	18	18
Standard errors in parentheses										
* Significant at 10%; ** significant at 5%; *** significant at 1%. All regressions presented control for fixed and time (by decade) effects.										

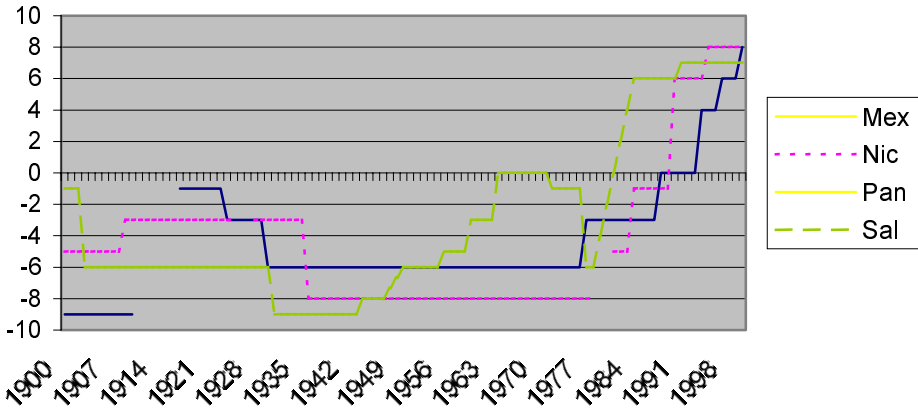
Graph 1: Polity IV



Polity IV Evolution

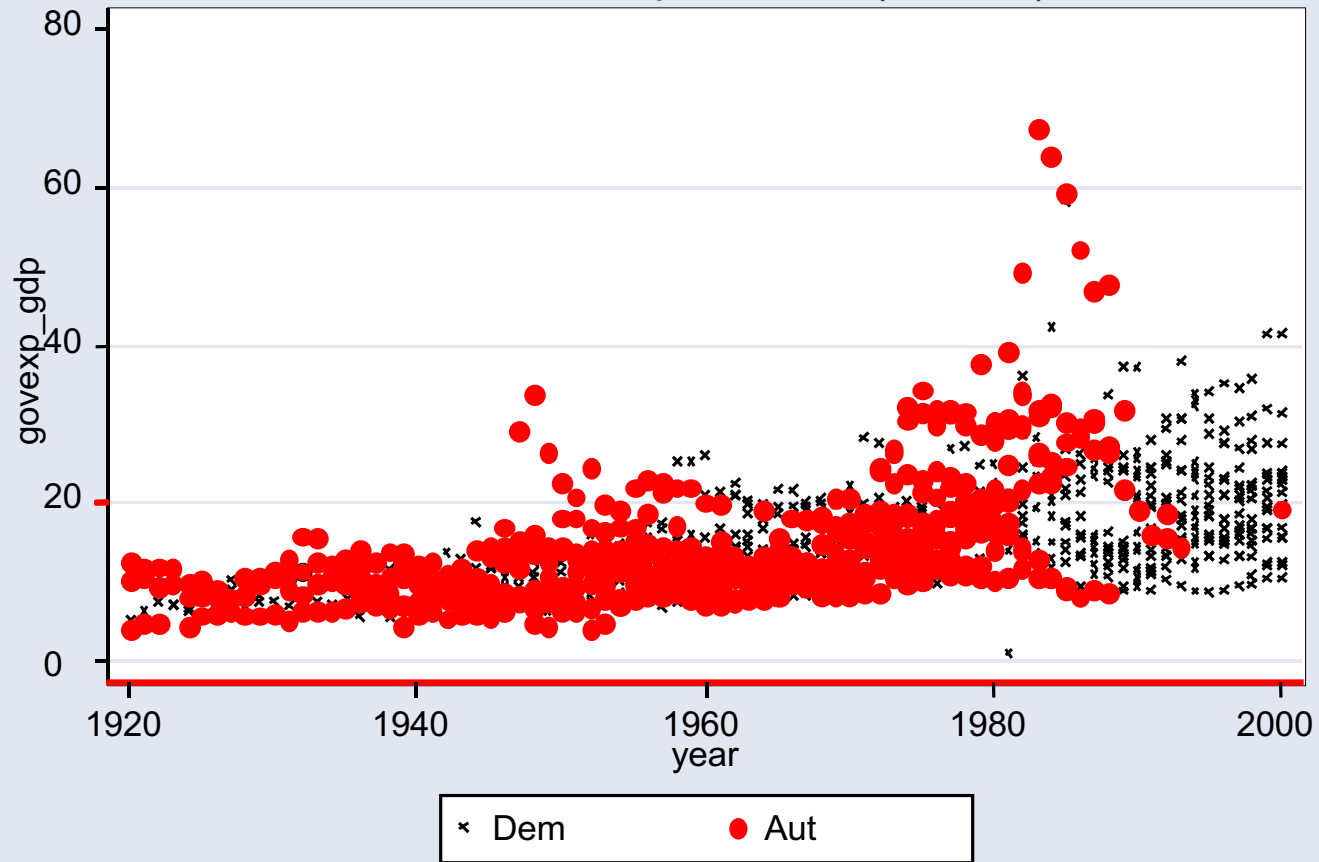


Poliy IV Evolution

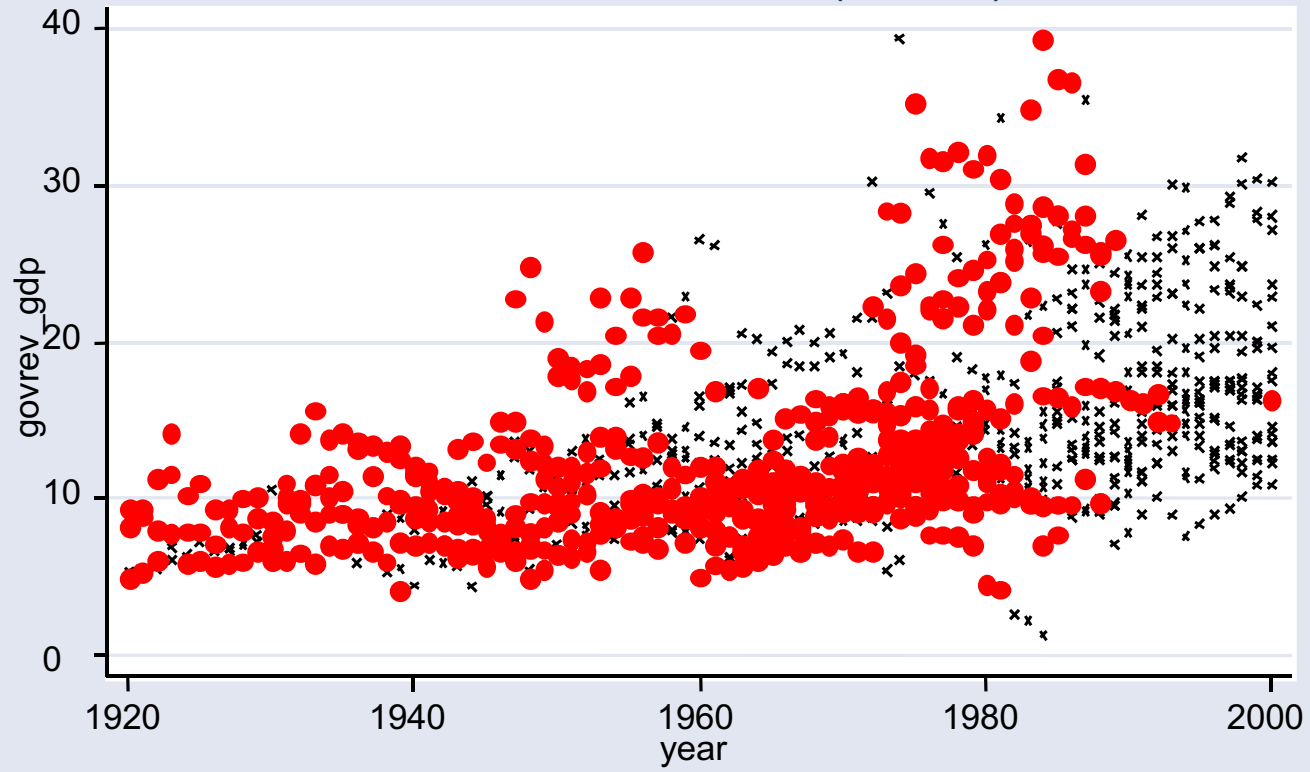


Graph 2: Dependent variables

Government expenditure (%GDP)

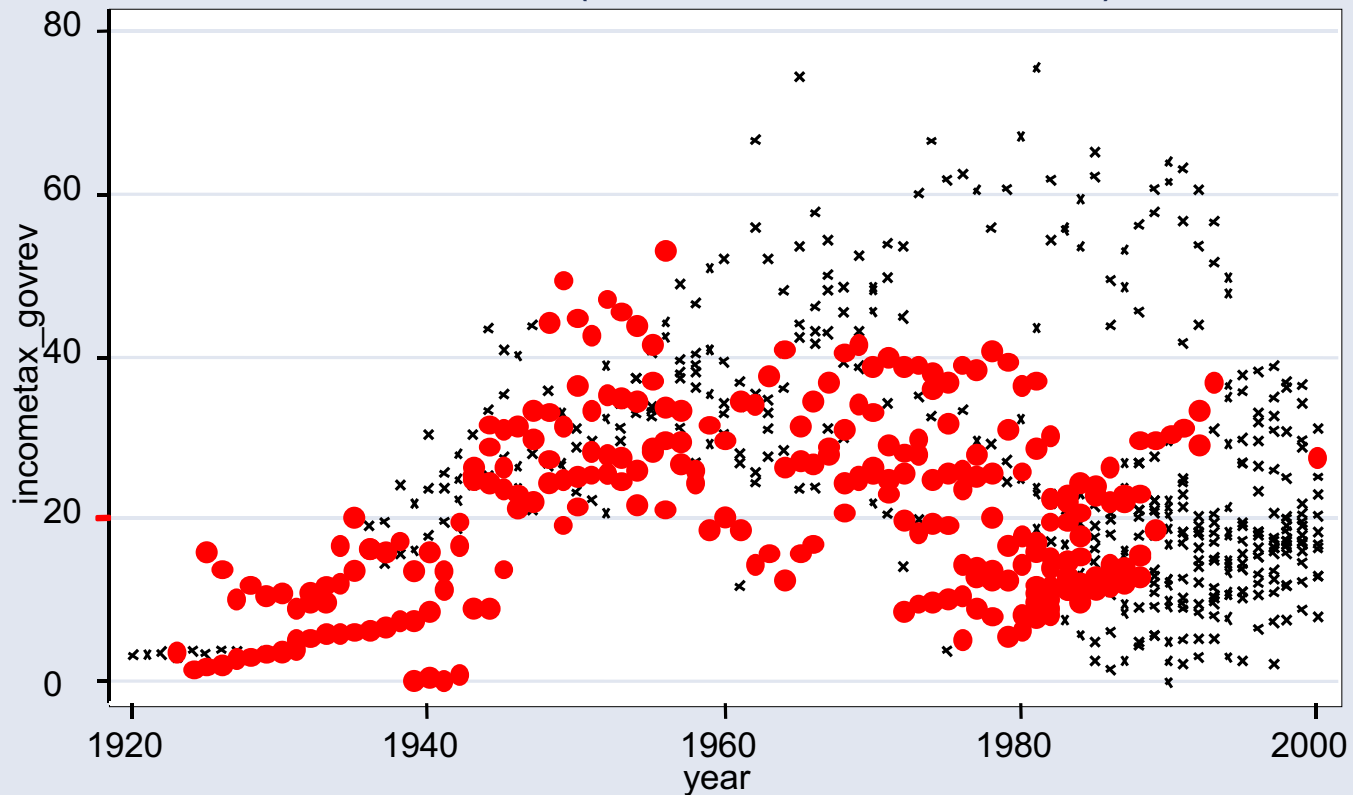


Government revenue (%GDP)



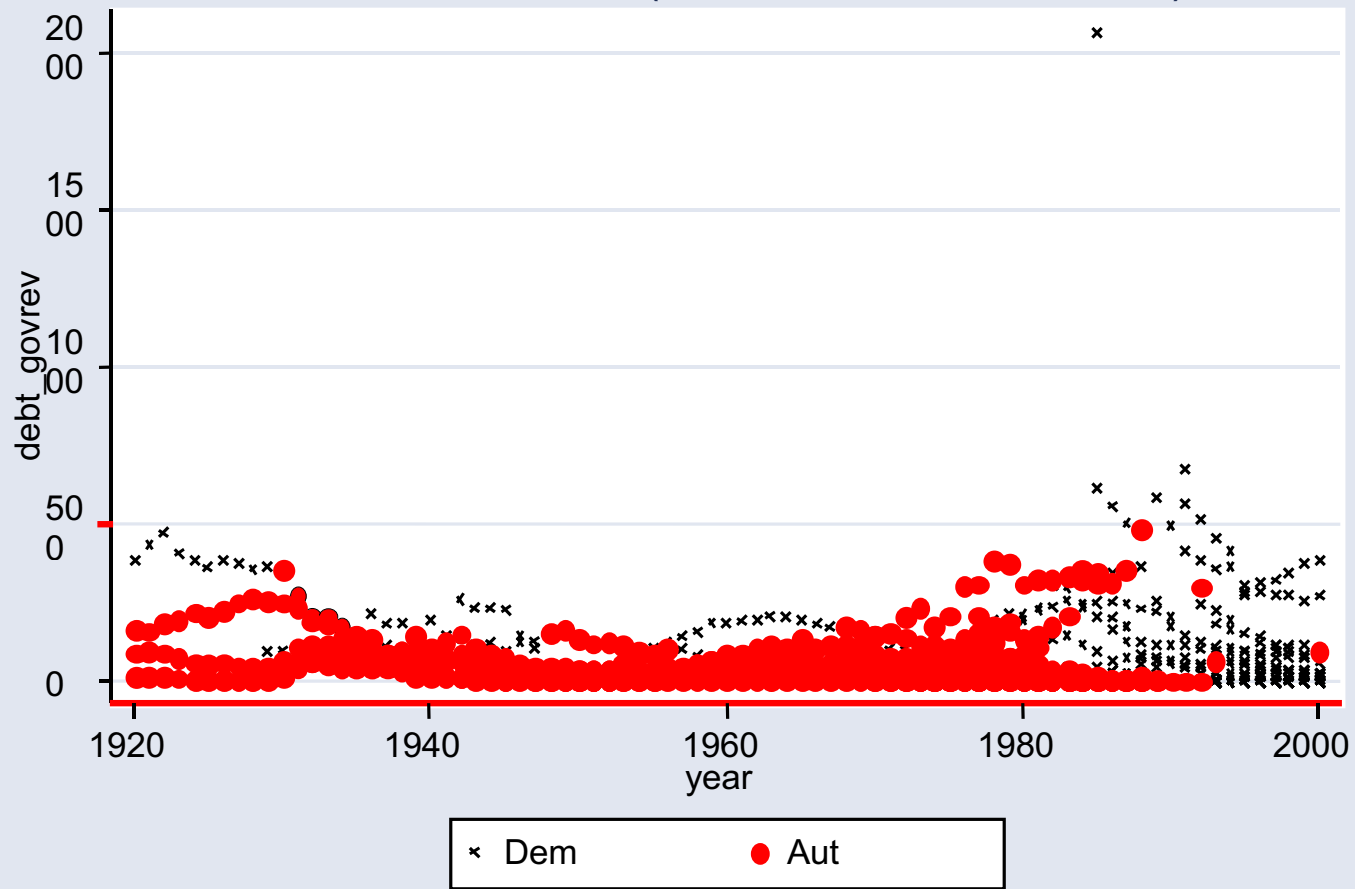
x Dem ● Aut

Income tax (% Government revenue)

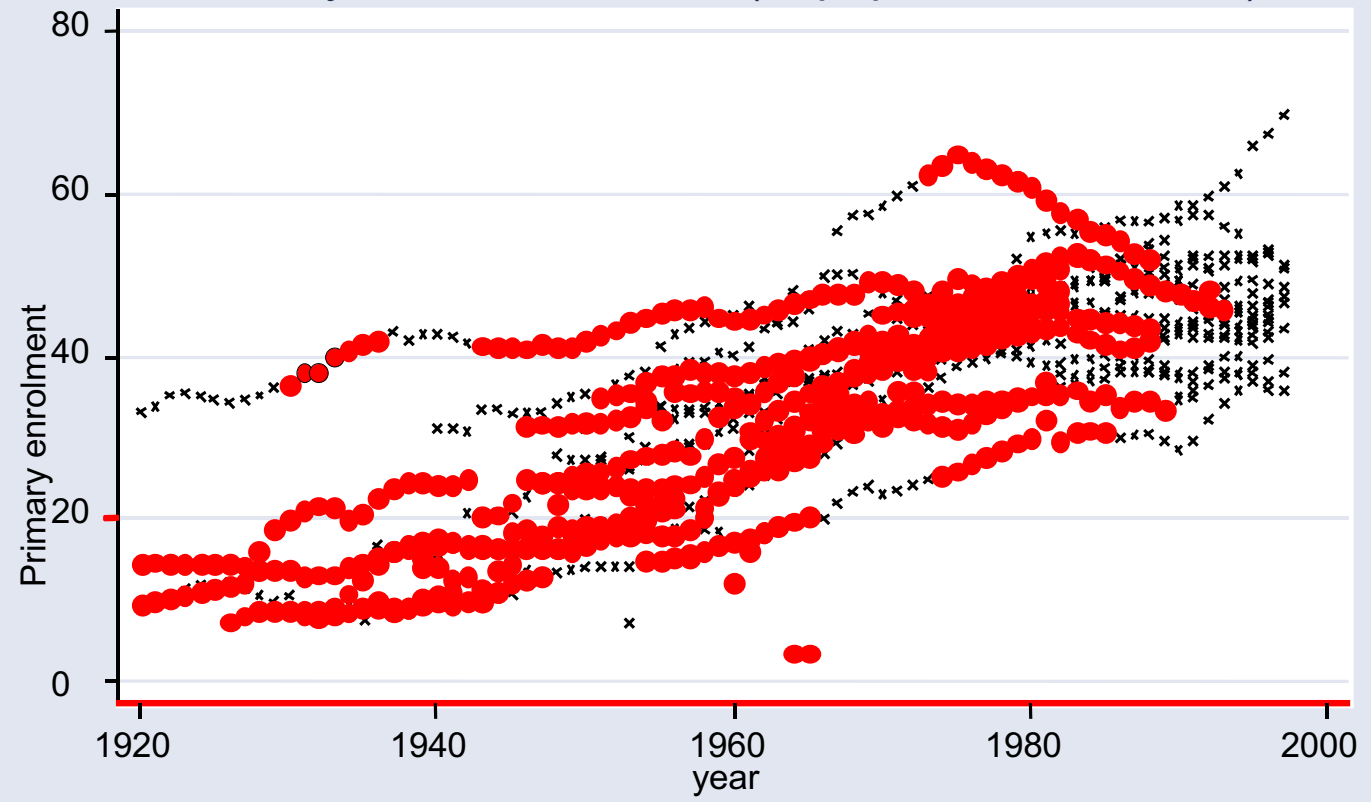


x Dem ● Aut

International debt (% Government revenue)

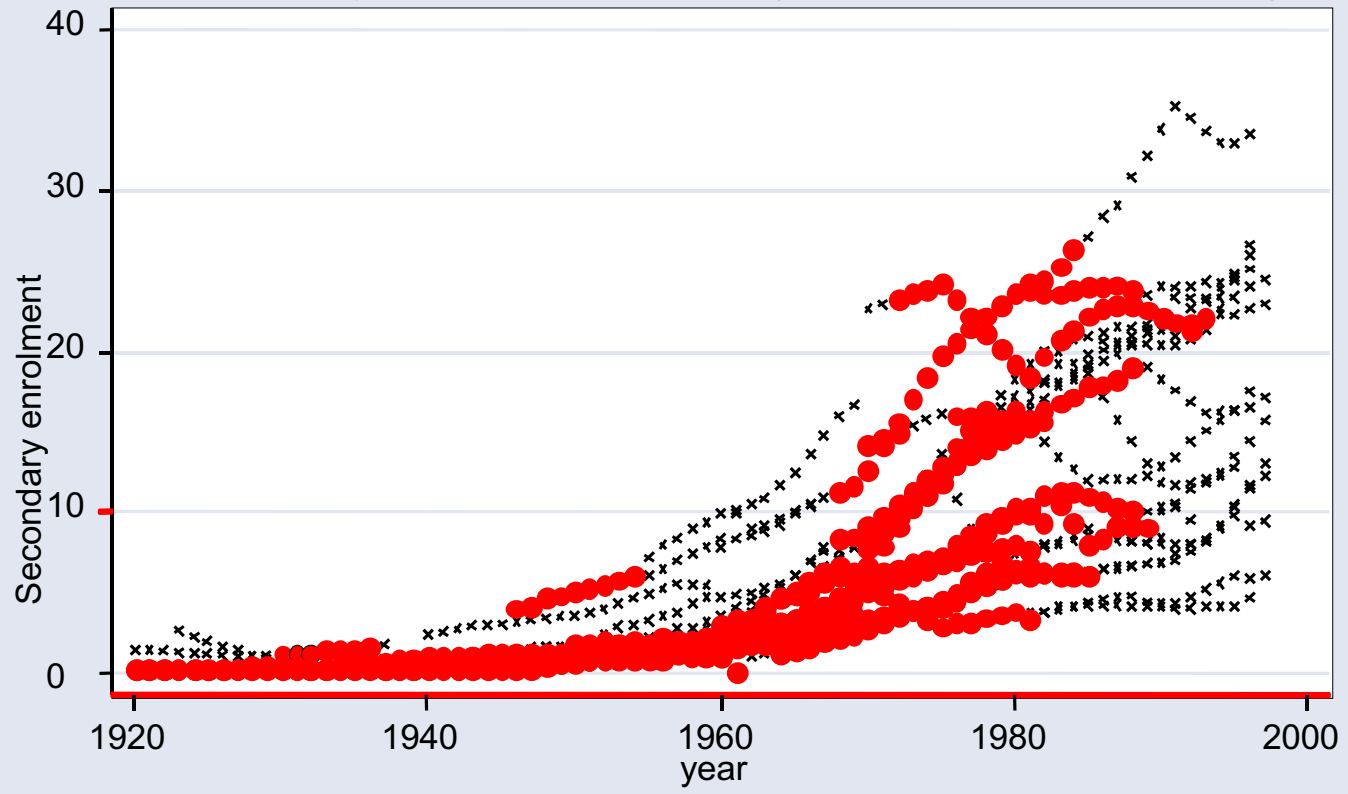


Primary school enrolment (% population under 15)



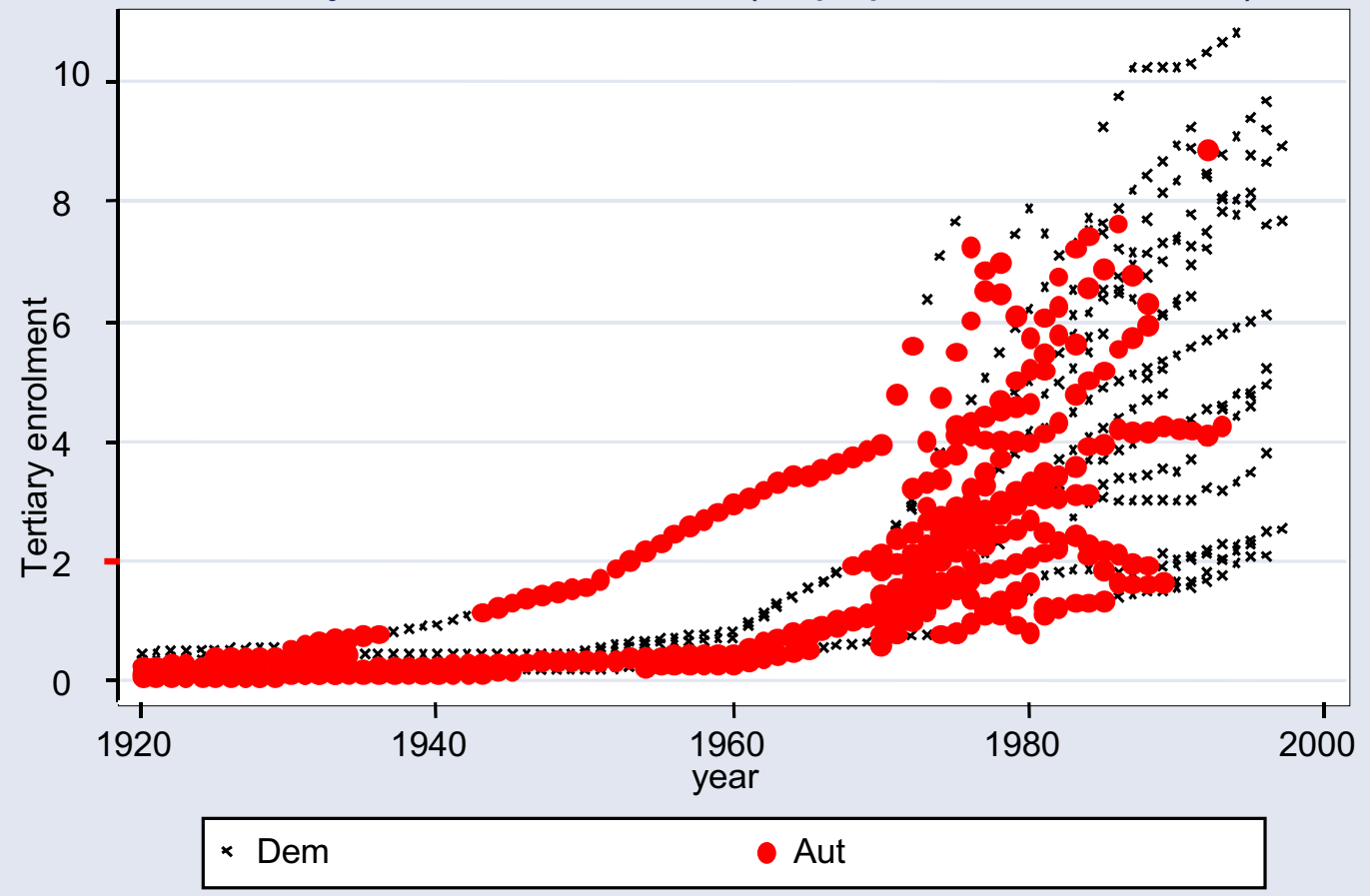
× Dem ● Aut

Secondary school enrolment (% population under 15)



× Dem ● Aut

Tertiary school enrolment (% population under 15)



Military participation (% population aged between 15-60)

