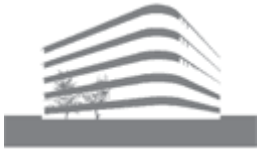

Constitutions and democratic breakdowns

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Constitutions and Democratic Breakdowns

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This paper forms part of a collective research project on Empirical Democratic Theory coordinated by José María Maravall and Ignacio Sánchez-Cuenca. Previous papers of the project include:

1. José María Maravall, *The Political Consequences of Internal Party Democracy*, (2003/190)
2. Ignacio Sánchez-Cuenca, *How Can Governments Be Accountable If Voters Vote Ideologically*, (2003/191)
3. Belén Barreiro, *Explaining the Electoral Performance of Incumbents in Democracies*, (2004/200)
4. Paloma Aguilar and Ignacio Sánchez-Cuenca, *¿Gestión o representación? Los determinantes del voto en contextos políticos complejos*, (2005/220)
5. Sonia Alonso, *Enduring Ethnicity: The Political Survival of Incumbent Ethnic Parties in Western Democracies*, (2005/221)

Abstract

This paper develops and empirically tests a theory of the impact of political institutions (presidentialism, federalism and proportional representation) on the stability of democratic regimes. The paper first introduces a complete model describing how the underlying distribution of assets and preferences across individuals shapes the choice of the type of political regime (democracy vs dictatorship). It then examines how different constitutional frameworks modify that choice. Holding the structural or economic parameters of the model constant, the paper shows that (1) proportional representation may have a positive but small effect on democratic consolidation; (2) presidentialism may reduce the chances of democratization, but only under certain conditions (an economy with concentrated fixed assets) and for reasons not considered in the literature -- it bolsters the rent-seeking capacity of politicians; and (3) federalism, and particularly a system of sovereign nations, is likely to foster democratic institutions: as wealthy nations split or establish credible safeguards from poor areas, the chances of democracy increase. To estimate the effect of a country institutional characteristics and economic conditions on the survival of democratic regimes, the paper employs Cox proportional hazard models on a sample that covers all democratic spells from mid 19th century through the end of the 20th century.

Ever since the emergence of political theory, political thinkers have debated which political institutions foster democracies, individual freedoms and good governance. Aristotle's analysis of different types of constitutional regimes and their political effects was retaken and elaborated upon by most modern philosophers. Referring to the history of the Roman republic as well as to contemporary evidence from Venice and other Italian cities, Machiavelli discussed at length the conditions underlying successful republican states in his *Discourses on the First Ten Books of Titus Livy*. In the *Spirit of Laws* Montesquieu described in painstaking detail the foundations, structures and operation of monarchies, aristocracies and democracies and the potential causes of their decay. In turn, John Stuart Mill's *Considerations on Representative Government* examined the constitutional basis of a successful representative democracy.

Contemporary political scientists rekindled the debate on the potential effects of different constitutional structures in response to successive waves of democratic breakdowns across the world in the 20th century. In an influential essay, Ferdinand Hermens argued that the fall of the Weimar republic was partly caused by an extremely fragmented party system in turn fostered by proportional representation (Hermens 1942). Linz, among others, identified presidentialism as an important culprit in the instability and fall of several democratic regimes in Latin America (Linz 1994; Linz and Valenzuela 1994). More recently, the search for the 'right' institutions to strengthen democracy has been bolstered by a growing formal literature stressing the equilibrium-inducing role of institutional rules and searching for 'self-enforcing' constitutional norms.

Despite the recent drive to identify the impact that formal rules and constitutions may have on democratic stability, our understanding of their contribution to the eventual survival of democracies is incomplete both theoretically and empirically. From a theoretical point of view, neoinstitutionalist scholars have explored the impact of institutional arrangements without taking into account the preexisting economic and social conditions within which institutions operate. Yet, in looking at constitutions as if they were operating in a social vacuum, the institutionalist approach has disregarded the claim, made by a substantial body of democratic theory, connecting democratization to social and economic development (and a correlated set of cultural practices,

educational values and economic structures).[1] From an empirical point of view, studies on the consequences of constitutions are still relatively circumscribed. Most studies have focused on presidentialism and its effects and they have only looked at the period after World War Two (Stepan and Skach 1994; Przeworski et al. 2000).

Given the shortcomings of the current literature, the purpose of this article is straightforward. Its aim is to assess the impact of different constitutional arrangements (the type of electoral system employed to choose the legislative body; the relationship between the executive and the legislative branches; and the level of political decentralization) on the stability of democracy, conditional on the underlying non-institutional variables (such as the level of development, the distribution of wealth or the degree of ethnic fractionalization). Accordingly, the article is organized as follows. The first part of the article offers a theoretical discussion of the mechanisms through which different electoral laws, presidentialism (as opposed to parliamentarism) and federalism may shape the probability of a democratic breakdown. This theoretical discussion is backed up with descriptive statistics of the distribution of democratic breakdowns for different constitutional structures and social and economic variables. The second part of the article then tests the theoretical discussion employing Cox proportional models to estimate the effects of a country institutional characteristics and social conditions on the survival of democratic regimes. Our universe of cases encompasses all sovereign countries from mid 19th century to the end of the 20th century.

This article shows that changing the constitutional framework of a country has a moderate to small impact on the stability of a democratic regime. A democracy does not collapse as long as its political actors have no incentives to deviate from complying with its electoral outcomes. Politicians and voters have, in turn, little interest in rejecting an (unfavorable) democratic result when the political decisions the electoral majority adopts differ moderately from the preferred positions of the minority. This only follows when the distribution of wealth and the range of

[1] See Lipset (1959), Cutright (1963), Przeworski et al. (2000) and Boix and Stokes (2003) on economic development and democratization. On the structure of society and democracy see, in turn, Moore (1966), Luebbert (1991), Rueschemeyer et al. (1992) and Boix (2003). The neoinstitutionalist literature has been handicapped by a second theoretical flaw. No formal models, which have abundantly employed to account for varying equilibria within already well-established democratic regimes, have been developed to link different types of constitutions to the stability of regime.

political preferences among voters are relatively homogeneous. By contrast, as the interests and the distribution of assets among voters become more polarized, democracy becomes harder to sustain since the electoral minority will grow more alienated from the decisions taken by the majority. In relatively homogeneous, non-polarized polities, constitutional rules become relatively superfluous to the survival of democracy. Democracy is a self-enforcing mechanism regardless of the constitutional institutions that are employed to govern the country. In polarized societies, unfortunately, rewriting the constitution to prop up the democratic edifice is likely to be of little help. If it reinforces the position of the majority, it reduces even further the incentives of the minority to comply with the democratic outcome. If particular constitutional guarantees are put in place to protect the minority, the majority has also strong incentives to challenge the legal framework in order to 'democratize' it even further.

Although generally speaking democracies survive or collapse as a function of their underlying social conditions, constitutional structures matter in two circumstances. Presidential regimes are less stable in developing countries. Presidents (in contrast with prime ministers, who need the continuous support of a legislative majority in parliamentarian regimes) are endowed with enough institutional tools to increase their hold in power, appropriate assets and expand their political basis of support without suffering much effective constant control from the legislative branch. Presidents can take particular advantage of their powers in countries where wealth is mostly immobile and therefore unable to flee from state control. Democracy then collapses through two alternative paths. As presidents expropriate and shift the distribution of assets to their benefit and the benefit of their supporters, democracy weakens and true electoral competition wanes. Alternatively either the legislative branch or, more often, a third party, such as the army, intervenes to block presidential overreach. This is followed by considerable conflict and the establishment of a dictatorial regime by one of the parties in contention.

Federalism reduces the level of political conflict and bolsters the chances of democratic consolidation for two reasons. First, federalism decentralizes the policy-making process to smaller and generally more homogeneous territories, thereby lessening the differences between electoral winners and losers and raising the incentives of all parties to comply with the electoral outcome. Second, the jurisdictional fragmentation that accompanies federalism reduces the ability of

politicians to seek rents and accumulate resources and therefore minimizes the likelihood of distorted democratic procedures.

THEORY. THE CONDITIONAL IMPACT OF POLITICAL INSTITUTIONS

To model the impact of different institutional arrangements on democratic stability, it is convenient to think of contemporary (representative) democracies as a composite of two games. In the first place, a democratic regime is a procedure through which its citizens decide (by casting a vote or a sequence of votes) how to govern themselves. More specifically, it is a procedure through which the majority of the population determines the position (or welfare) of each member of the population (and therefore of the minority that has not agreed with that majority). In the second place, a representative democracy is a game in which the principal, the public, delegates into an agent, the politician or policy-maker, a given set of instruments to execute certain goals (generally speaking, those willed by the majority).

Democratic Compliance

Consider in sequential order the ways in which these two dimensions of any democratic procedure relate to its stability. If a democracy is a procedure in which the minority is subject to the will of the majority, a democratic regime will only become possible if the minority nonetheless accepts the electoral outcome. Since the definition and composition of the minority may vary with each issue or decision put to a vote, we can restate the same idea in more general terms. A democracy will only be possible if any participating agent accepts the possibility that the outcome generated by a popular vote may differ from its preferred alternative.

To shed more light on this proposition, consider it in a slightly more specific manner in the context of a representative democracy where two candidates compete for a given political office such as the presidency of the state. After both candidates engage in an electoral campaign and

voters cast their ballots, the candidate with most votes is proclaimed winner and assumes the presidency. The loser must wait for new elections to be held in the future to have a chance to be elected. In the mean time, he has to accept the decisions and the policy program of the elected politician. The electoral process carries no guarantees, in itself, that any of the two politicians will respect the terms and continuity of the procedure. The loser may abide by the election, accept the defeat and wait till the new electoral contest takes place. But, if it is too unsatisfactory for him to behave well, that is, if the current benefits of the office he is forsaking are too large, he may denounce the results and eventually stage a coup to grab the presidency by non-electoral means. In turn, the winner may have as well an incentive to use her tenure of the presidency to shift resources in her favor to boost her future electoral chances, to alter the rules of electoral engagement and even to postpone or cancel the new election.

A stable or successful democracy, that is, the uninterrupted use of free and fair voting mechanisms to reach any political decisions and to select public officials, will only take place if both the winner and the loser have an interest in complying with the outcomes of the periodic votes they employ to decide how to govern themselves.[2] This will be a function of two conditions. First, the smaller the policy differences between majority and minority, the higher the incentives everyone will have to comply with the democratic outcome since the losses experienced by the minority will tend to be negligible. The variance in policy preferences may have different sources. Preferences may vary along redistributive issues. In this case, the distribution of income is likely to determine the heterogeneity of policy preferences: the more unequal a society is, the more heterogeneous its distribution of preferences should be. Preferences may also vary according to religious and ethnic preferences – as fragmentation along those lines increases, heterogeneity should go up as well. Second, the likelihood of a stable democratic outcome will increase with the costs of overturning democracy – in more general terms, the probability of a stable democracy will rise as the political and organizational resources of both the majority and the minority become more balanced.[3]

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[2] For seminal analysis of democracy as an equilibrium resulting from a game in which no one has any incentive to deviate from complying with electoral results, see Przeworski (1991) and Weingast (1997).

[3] For an exploration of how both preference heterogeneity and organizational conditions sap democracies, see Boix (2003).

Representation and Policy Mandates

In contrast to classical democracies, contemporary democratic regimes are, above all, representative governments. Citizens delegate the capacity to set and implement policies in the hands of professional politicians elected to parliament and the executive. The interests of the principal (the public) and its agent (politicians) are not always identical – in fact, they may often be at odds. Even while partly acting on the interests of their potential electors (the wealthy, the middle class, the workers or a particular economic sector), policy-makers are likely to pursue their own political agenda. Even if they are honest, their ideas about what enhances the welfare of the public may differ from what the public itself wants. In some instances, politicians may be simply interested in enriching themselves while in office. Thus, a lack of information among the public both about the conditions under which politicians take decisions and about the precise nature of the policies they implement opens up the space for significant inefficiencies and corruption among politicians. Moreover, general elections are very crude mechanisms to make politicians accountable. Since they only happen from time to time, politicians remain isolated from any credible mechanism to check and correct their behavior. Because elections are fought over numerous issues, electors have to decide over the performance of politicians in the context of a very noisy environment. The electoral winner has substantial incentives to use her tenure of the legislative or the executive branch to shift resources in her favor to boost her future electoral chances, to alter the rules of electoral engagement and even to postpone or cancel the new election. In turn, the losers may respond by challenging the democratic outcome itself.[4]

With this very brief description of the mechanisms of democracy, we can now turn to the ways in which different constitutional traits (presidentialism, electoral systems and federalism) may affect the incentives of actors maintain a democratic regime.

Presidentialism

[4] On the literature of delegation and political accountability, see Przeworski, Stokes and Manin (1999) and Adserà, Boix and Payne (2003).

In an influential essay in the neoinstitutionalist literature, Linz (1994) has argued that, other things being equal, a presidential system is more likely to jeopardize democracy than a parliamentarian regime for three main reasons. First, since presidential elections consist in the selection of only one candidate, they generate a sharp zero-sum game in which the winner takes all while the loser is effectively deprived of all power. With political minorities excluded from the political game, any consensual politics are impossible to develop, the legitimacy of the constitutional regime becomes fragile and democratic breakdowns are more likely. Second, presidential elections raise the stakes of the electoral game excessively, hence increasing the level of political tension and ideological polarization. Finally, political conflict becomes so intense that the odds that, first, any of the candidates will behave 'properly' during the electoral campaign and that, second, they will accept the outcome after the elections, will be very low. Electoral manipulation will be rampant, the winner will resort to illicit strategies to secure his reelection in the future and the loser will be likely to challenge the outcome. Perhaps more important, the institution of the presidency endows its incumbent with substantial means to capture societal resources and to enlarge his power base.[5]

The first two reasons fall under the previous discussion over the extent to which institutions mediate the impact that preference heterogeneity may have on democratic stability. By contrast, the last reason is mainly related to the principal-agent dilemma that comes with representative government. As discussed shortly, neither of the two first claims, that is, that presidentialism generates a system of 'majoritarian' politics and that it polarizes both the party system and the electorate, seem to be inherent to presidential regimes. On the contrary, both of them may equally occur in parliamentarian constitutions. As for the third argument, it also seems wrong if we unconditionally apply it to all presidential regimes. Still, it may be valid in those countries that are abundant in immobile assets. Since those assets can be easily taxed and expropriated, presidential regimes may be more likely than parliamentary regimes to engender a dynamic of conflict resulting in a coup.

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[5] Linz (1994) also lists other several defective characteristics of presidentialism, such as the presence of a 'dual democratic legitimacy' (of both the executive and congress) and the temporal rigidity of the presidential mandate. For the purposes of the discussion that follows, these defects can be subsumed in the three problems already listed.

Presidential Majorities

To examine whether presidential systems intensify the power of the majority, assume a simple scenario with two candidates running for presidential office and each one of them promising a given policy (for example, a certain level of taxes and of redistribution). In a world with complete information (and full participation), they should converge on the same ideal policy B the one preferred by the median voter. Now, this scenario and the political solution it generates are in no way unique or specific to presidentialism. In parliamentary regimes the same result will occur, for precisely the same reasons. Parliament will end up voting for the median voter ideal point, that is, the policy preferred by the majority.[6]

Whether the policy approved under a presidential system will be a politically stable equilibrium, that is, whether the losers will accept the democratic outcome, will depend on the underlying distribution of interests. If the policy is too extreme (for example, taxes are too high) and the political resources at the disposal of the losers considerable, a coup will take place. Otherwise, democracy will remain in place. Yet, once more, the result is in no way different from what will happen under parliamentarianism: whether the policy voted by parliament will be acceptable to the losing side or not will simply be a function of the structural characteristics of the economy and the distribution of political resources.

Presidentialism and Political Polarization

A similar result emerges when we examine the claim that presidentialism breeds higher levels of political polarization than parliamentarianism. Keeping the distribution of voters' preferences constant, the electoral process leads to polarization if there is either uncertainty about

[6] Naturally both regimes lead to similar solutions provided that they have the same national median voter – that is, that parliamentarian regimes do not malapportion electoral districts in a way that shifts the parliamentarian median away from the median voter.

the distribution of voters or reputational problems among politicians. In those circumstances, either the contenders diverge in their policy promises or the winner, once in office, deviates from his electoral promise and imposes a different policy. If that policy is too skewed in relation to the median voter, political turmoil and the probability of an eventual coup should increase. But here again, there is nothing inherent in a presidential regime (vis-à-vis a parliamentarian constitution) that should increase the level of uncertainty or the credibility problems of presidential candidates.

The President as an Expropriator

Consider the nature of the third claim about the dangers of presidentialism -- namely that it both raises the stakes of the game to such levels and gives presidents so much power that it jeopardizes the electoral process. A presidential system makes it easier for a single politician to behave as a harsh rent-seeker and, in fact, from the perspective of the owners of the assets, as a bandit, than a parliamentarian regime.

In a parliamentary system a simple majority suffices to topple the prime minister. Because the prime minister is strongly tied to (and by) the coalition of policy-makers that has put her in office, she can only accumulate more power and assets with difficulty. Precisely because an excessive accumulation of resources in her hands would reshape the balance of power between the prime minister and her parliamentary supporters, the latter have an incentive and the capacity (that comes from the prime minister reliance on parliamentary support) to get rid of her leader.

By contrast, once he has won the presidential election, the presidential incumbent is only partly (or discontinuously) accountable to all the other branches of government. Presidents are elected for fixed terms and can be only removed for exceptional causes and by strong supramajorities. Unencumbered by the opposition, the president has more autonomy to seize assets, to organize extra-legal coalitions and eventually to impose a dictatorship. In cases of acute political confrontation, the congressional opposition or the armed forces, supposedly behaving as a moderating power, may even decide to launch a coup to preempt the actions of the president. This pattern of a strong presidential structure followed by extra-legal confrontation fits well the

experience of most Latin American democratic breakdowns (which represent 70 percent of all crisis in presidential democracies), some African cases and even the Nazi takeover of 1933.[7]

The capacity of the president to accumulate power and properties is, however, conditional on the nature of assets in the country. The threat of presidential expropriation looms large when the existing assets are very country-specific, that is, they are hardly movable, and probably when they are concentrated in a few hands. In those circumstances, a strong executive simply gives its holder an excellent opportunity to grab those assets. By contrast, rent appropriation by politicians decreases as assets become more mobile since, in response to the threat of distortionary regulation or outright expropriation, their holders can shift them away from the policy-maker.[8] Accordingly, mobile capital renders presidential systems pretty harmless. In other words, whereas presidential systems are especially dangerous in underdeveloped countries, they should exhibit similar rates of democratic breakdown than parliamentarian regimes in developed economies. Thus, adopting presidentialism is probably a bad idea in sub-Saharan Africa and a substantial part of Latin America. It may also be an error in post-socialist economies rich in natural resources. But it should have no deleterious consequences in developed economies with relative equality and highly mobile assets.

To get a first cut at the extent to which democratic stability varies by type of constitutional regime and social and economic conditions, I proceed as follows. First, I calculate the probability of democratic breakdown, that is, the ratio of the total number of cases of democratic breakdown over the total number of annual observations of democracy for a universe of case that roughly extends from the first half of the 19th century through the end of the 20th century. The definition of democratic political regime is taken from Boix and Rosato (2001), where all sovereign countries from 1800 to 1999 are coded as either democratic or authoritarian. Countries are coded as democracies if they meet three conditions: elections are free and competitive; the executive is accountable to citizens (either through elections in presidential systems or to the legislative power

[7] A possible implication is that the weaker the legislative branch (Congress), the more autonomy presidents may have. Congress is particularly weak when its party system is very fragmented and therefore unable to build majorities to make the president accountable.

[8] See Adserà, Boix and Payne (2003) for a formal discussion and empirical test.

in parliamentary regimes); and at least 50 percent of the male electorate is enfranchised. Next, I classify regimes as either presidential or parliamentarian. The definition of a regime as 'presidential' includes strictly presidential systems as well as semi- presidential constitutions. The coding of countries as either presidential or parliamentarian has been done using Cox (1997), IDEA (1997), Linz and Valenzuela (1994), Shugart and Carey (1992) and the Keesing's Contemporary Archives. Finally I compare the rate of democratic failure between presidential and parliamentarian regimes. The comparison is drawn both over all the cases as well as for different levels of per capita income, level of industrialization and urbanization, the extent of inequality and the degree of ethnic fractionalization. These four broad measures should approximate our theoretical intuitions about what causes democratic breakdowns (and hence the impact of types of constitutional regimes).

Figure 1. Presidentalism, Development and Democratic Breakdown

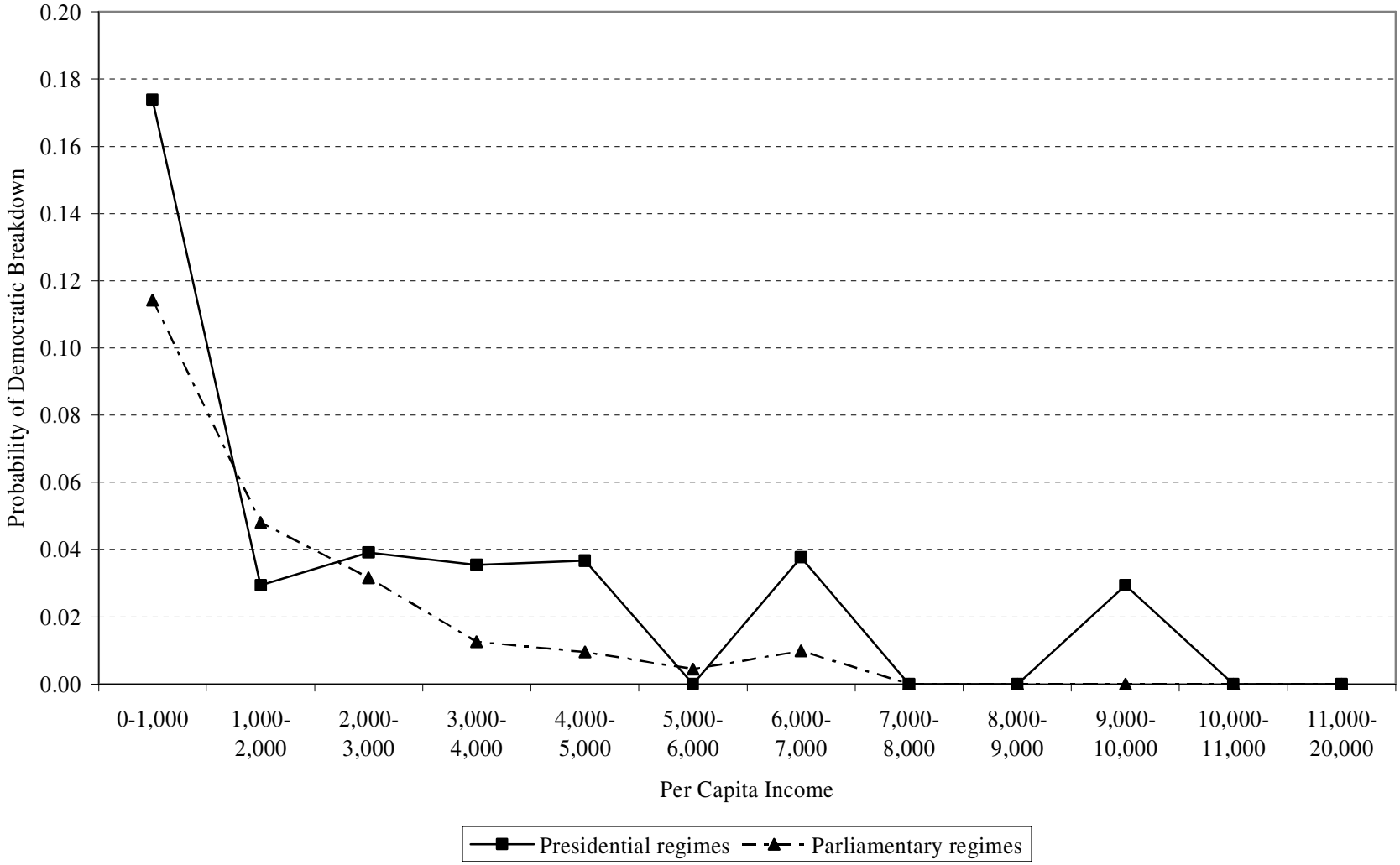


Figure 2. Presidentalism, Industrialization and Democratic Breakdown

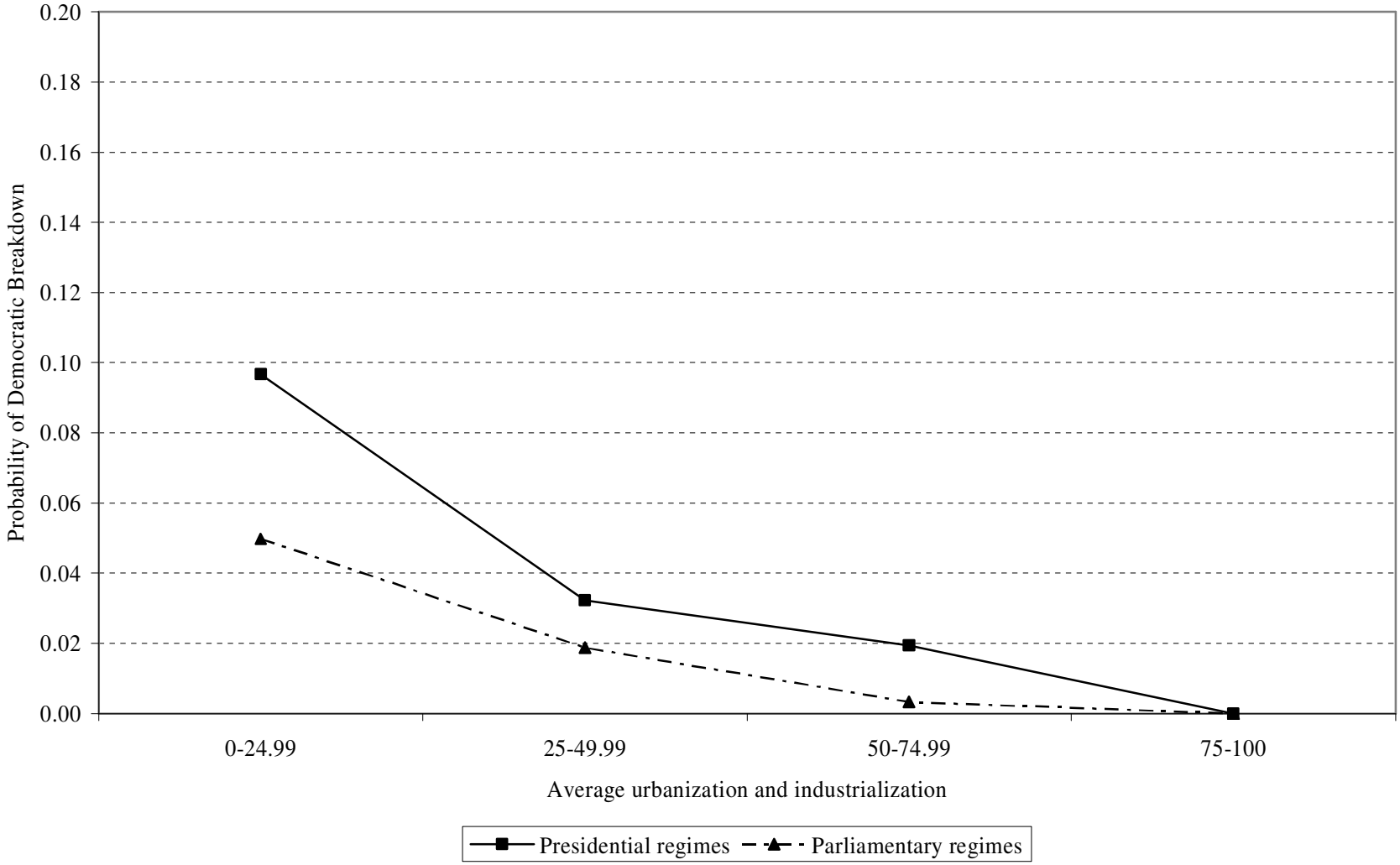


Figure 3. Presidentialism, Rural Inequality and Democratic Breakdown

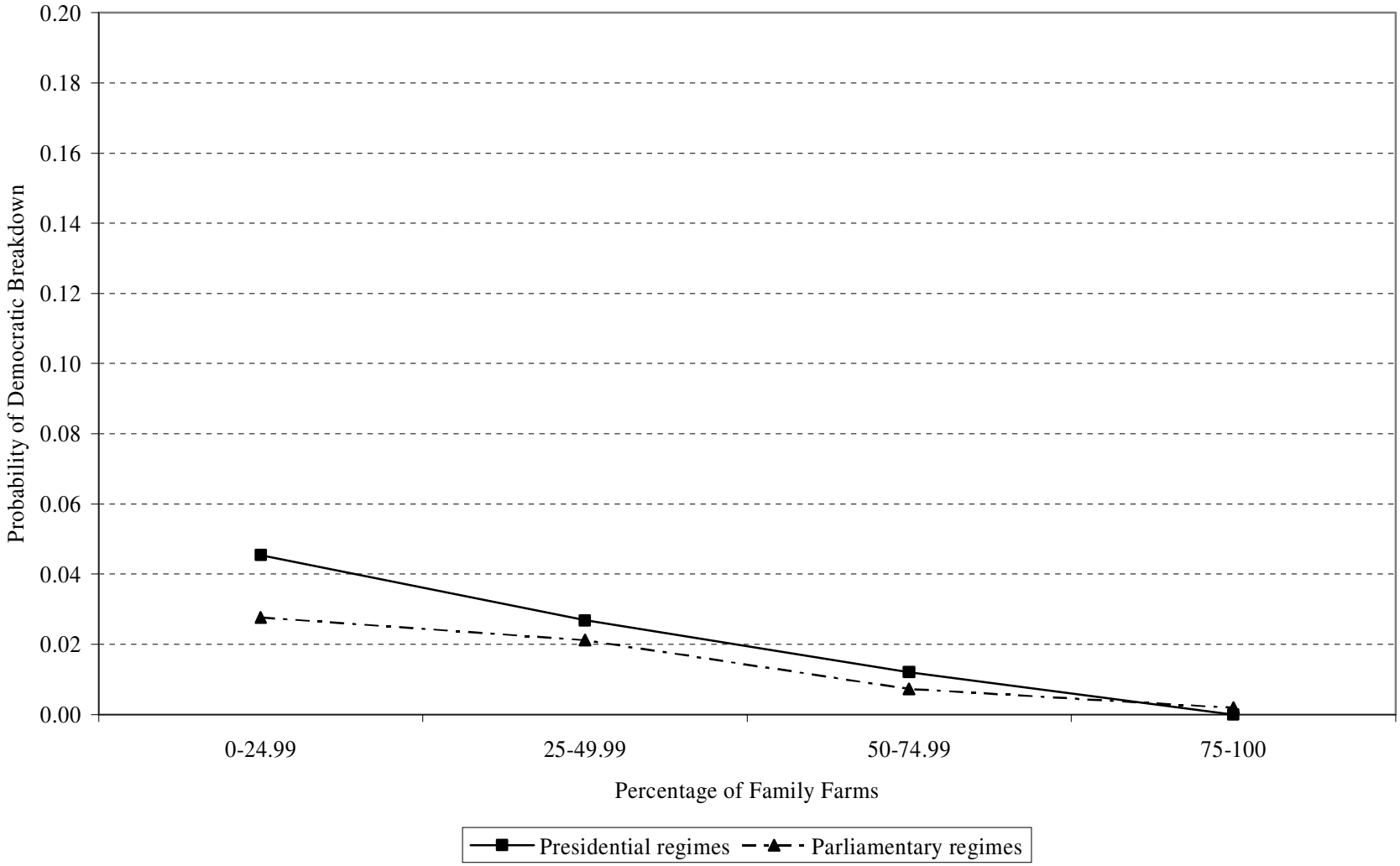
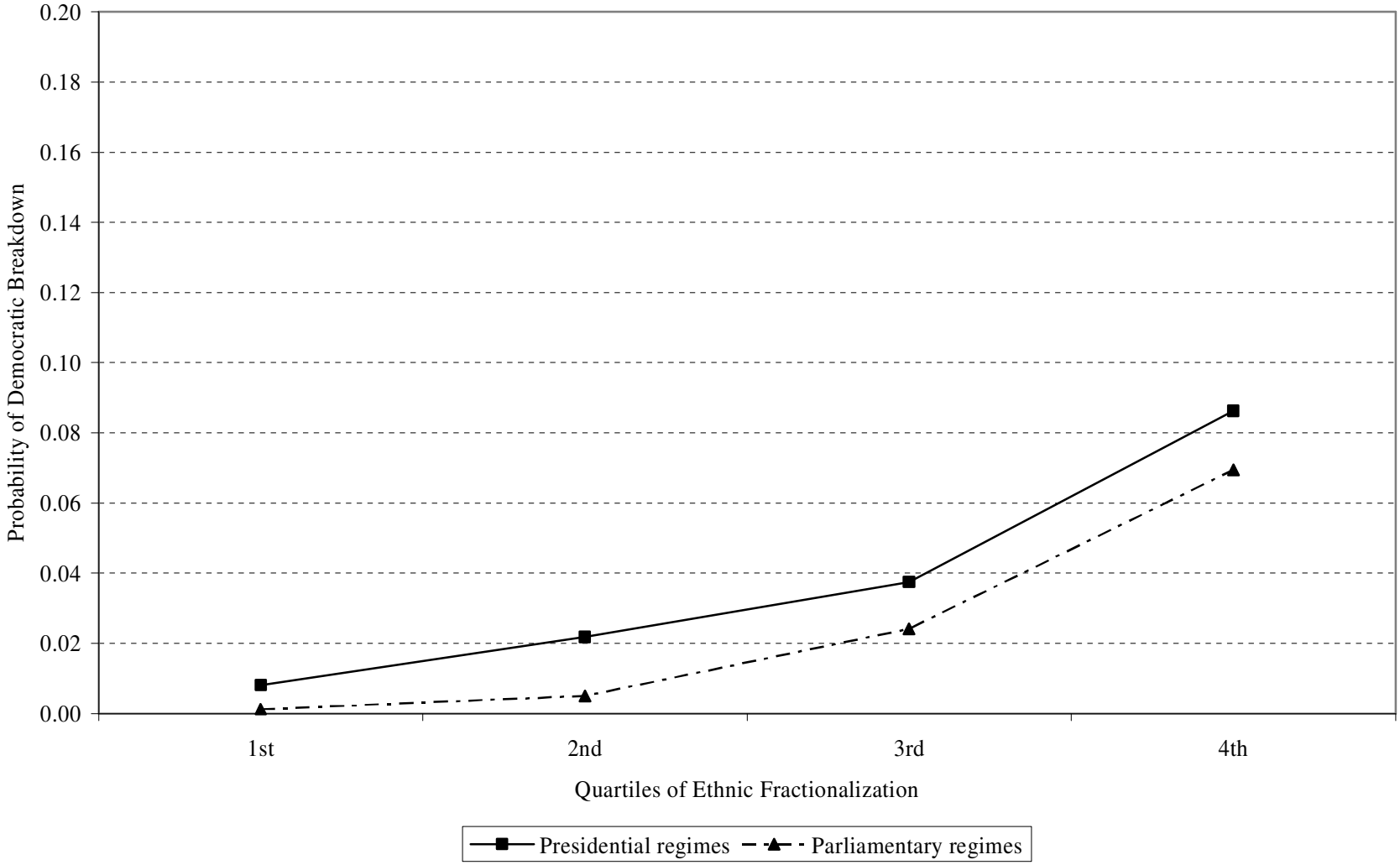


Figure 4. Presidentalism, Ethnic Fractionalization and Democratic Breakdown



As already noticed in Stepan and Skach (1994) and Przeworski et al. (2000) among others, presidential systems have a higher rate of failure on average. Whereas the annual probability of democratic breakdown among presidential regimes is 2.9 percent, it is only 1.3 percent among parliamentary regimes. Still, as is apparent from looking at Figure 1, where I display the probability of democratic breakdown of each type of regime for different income segments, the distribution of presidential breakdowns is skewed. In line with the recent quantitative literature on democratic crisis, the likelihood of experiencing a democratic breakdown declines with per capita income (Przeworski et al 2000; Boix and Stokes 2003). Within that trend, presidential regimes have a higher annual rate of failure than parliamentarian regimes in low and medium levels of per capita income. By contrast, for high levels of development (over $8,000), neither presidential nor parliamentary regimes have experienced any democratic crisis (with the exception of Argentina in 1976).[9]

Figure 2 reproduces the probability of democratic breakdown for different levels of industrialization and urbanization. As in Figure 1, at low levels of industrialization, presidential regimes are more brittle than parliamentarian systems. But their stability becomes similar as they become highly industrialized.

Figure 3 displays the probability of democratic breakdown by the percentage of family farms over the total area of holdings.[10] The percentage of family farms captures the degree of concentration and therefore inequality in the ownership of land.[11] The probability of democratic

[9] Per capita income, which is expressed as PPP $ of 1996, is based on data from Maddison (1995) and Bourguignon (2003). I mainly employ Maddison, who reports a continuous series for most countries starting in 1870 and then single-point data for 1820 and 1850. For the period before 1870 I reconstruct the data series by interpolation. For those countries not included in Maddison, I employ the estimates supplied by Bourguignon (2003) for the world (divided in 46 different regions) since 1820 (and mostly for every twenty years) to calculate all missing data.

[10] This measure, gathered and reported by Vanhanen (1997), is based on defining as family farms those "farms that provide employment for not more than four people, including family members, [...] that are cultivated by the holder family itself and [...] that are owned by the cultivator family or held in ownerlike possession." (Vanhanen 1997: 48) The definition, which aims at distinguishing `family farms' from large farms cultivated mainly by hired workers, is not dependent on the actual size of the farm -- the size of the farm varies with the type of product and the agricultural technology being used.

[11] An extensive literature has related the unequal distribution of land to an unbalanced distribution of income. In fact, for the period after 1950, and excluding the cases of socialist economies, the correlation coefficient between the Gini index and the percentage of family farms is -0.66. For countries with a per capita income below $2,000 the correlation coefficient is -0.75.

breakdown declines as rural inequality falls. Presidential regimes are about twice more unstable than parliamentarian in countries where less than 25 percent of the agricultural land is exploited through family enterprises. The negative impact of presidentialism disappears, however, in relatively equal economies.

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Finally, Figure 4 shows the performance of presidentialism and parliamentarism by the level of ethnic fractionalization (from the quartile with the lowest level of fractionalization to the one with the highest index) for the period from 1950 to 1999.[14] The yearly probability of democratic breakdowns increases with ethnic fractionalization. Whereas in essentially homogeneous countries it is less than 1 percent, it jumps to around 7 percent in highly fractionalized states. Presidential

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[14] The index of ethnic fractionalization, recently developed by Alesina and his collaborators (2002), measures the probability that two randomly selected people from a given country will not belong to the same ethnic group. In the index, ethnic groups are defined in each country according to linguistic or racial characteristics – which one is employed depends on what cleavage is considered to be dominant in each case.

systems perform worse than parliamentary regimes systematically – the difference, however, is small.[15]

Voting Mechanisms and the Case of Proportional Representation

In principle, the stability of a democratic regime should not be fundamentally affected by the electoral system in place. Assuming a one-dimensional policy space and well-behaved utility functions, both majoritarian and proportional representation systems will lead to the adoption of the policy preferred by the median voter. In a plurality system, politicians will converge on the median voter's ideal point (Shepsle 1991). In a proportional representation system, although politicians may not converge on the median voter, actual policy (in parliament) will depend on the median parliamentarian (Laver and Schofield 1990). It is also safe to predict that the median parliamentarian will be close to the median voter (Huber and Powell 1996).[16]

Still, one may think of three ways in which different mechanisms of representation may have different effects on the survival of democracies. In the first place, whereas under proportional representation the median parliamentarian (representing the median voter) does not vary over time, in non-PR systems, and given partial divergence among competing parties (Alesina and Rosenthal 1995), the average policy will be equal to the median voter ideal point over time, but it will vary from election to election. Now, if the sectors at the two opposite sides in the policy space are risk averse, the introduction of proportional representation should make a democracy

[15] Both Boix (2003) and Adserà and Boix (2004) show that the interaction of ethnic fractionalization with presidentialism generates statistically insignificant coefficients. Thus, a shift to parliamentarism does not seem to be a solution to the problems of ethnic heterogeneity.

[16] Notice that the equivalence in policy outcomes under both electoral systems is based on the assumption that electoral districting is such that the national median voter at election time remains so in parliament (through his representative). This is the case if the whole country is a single district (as in the case of direct presidential elections or pure proportional representation elections). The assumption is broken if electoral districts are carved so that the median voter ceases to be decisive in the policy-making process.

more stable since the agents' expected utility will not be inherently diminished by repeated swings in the outcome.[17]

In the second place, proportional representation increases the likelihood of having multiparty coalitions (Laver and Schofield 1990), therefore raising the number of partners in government. The multiplicity of coalition partners reduces the rent-seeking possibilities of one of those agents at the expense of all others. Although this result may have no consequences in countries rich in mobile assets, in asset-specific countries proportional representation should reduce the number of regime crisis and democratic breakdowns (in the same way that parliamentarism does vis-à-vis presidentialism).

Finally, imagine that politicians value the intrinsic benefit of office beyond (or in addition) to the implementation of their ideal policies. Proportional representation systems are likely to spread out office-benefits across parties more widely than majoritarian systems and hence may be better at securing the support of a broader range of public opinion.

Some scholars wrongly maintain that majoritarian and proportional representation parliaments have different effects over policy and thus democratic stability because they coordinate political actors through different mechanisms. Whereas Westminster regimes produce two parties and solid one-party majorities that govern excluding the rest of social actors, proportional representation structures are more conducive to the representation of minorities (which are left aside in a plurality system) in government through broad ministerial coalitions. Proportional representation systems therefore reduce the incentives any one may have to stage a coup against democracy. This argument is mistaken because it conflates the institution of proportional representation with the practice of consociationalism (a system in which several parties belonging to very different political subcultures govern together). Proportional representation may be indeed a necessary condition to have consociationalism. But it is never a sufficient condition. Thus, once parliament has been elected, and always assuming one-dimensional policy space, the median voter's bliss point constitutes an equilibrium in both systems.

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[17] If we further assume that risk-aversion declines with per capita income, majoritarian electoral rules should lead to even more instability than proportional representation in poor economies.

To put it differently, consociational practices may enhance the survival of democracies (a point we do not examine here). But proportional electoral systems alone do not generate any more stability than majority systems through this channel.

To study the impact of electoral rules on democratic stability, I define as proportional representation regimes those cases in which the electoral system employed to elect the main legislative chamber is based on electoral districts that are larger than one seat and use proportional allocation rules. In turn, chambers elected on the basis of plurality or two-round single-member districts are coded as majoritarian systems. In those cases in which the main legislative chamber is elected through a mixed system (with a fraction of the seats allocated through proportional representation and the rest through majoritarian mechanisms), I code them as proportional representation if the majority of the seats are assigned through proportional methods and as majoritarian otherwise. On average, majoritarian regimes exhibit a slightly higher proportion of democratic breakdowns (with an annual rate of 2.3 percent) than proportional representation systems (a yearly rate of 1.5 percent). The underperformance of majoritarian systems is concentrated in very underdeveloped societies. In countries with a per capita income below $1,000, the probability of democratic breakdown is more than twice higher in majoritarian systems than in proportional representation. Above $1,000, the type of electoral system does not seem to make any impact on the survival of a democracy.

Figure 5. Electoral System, Development and Democractic Breakdown

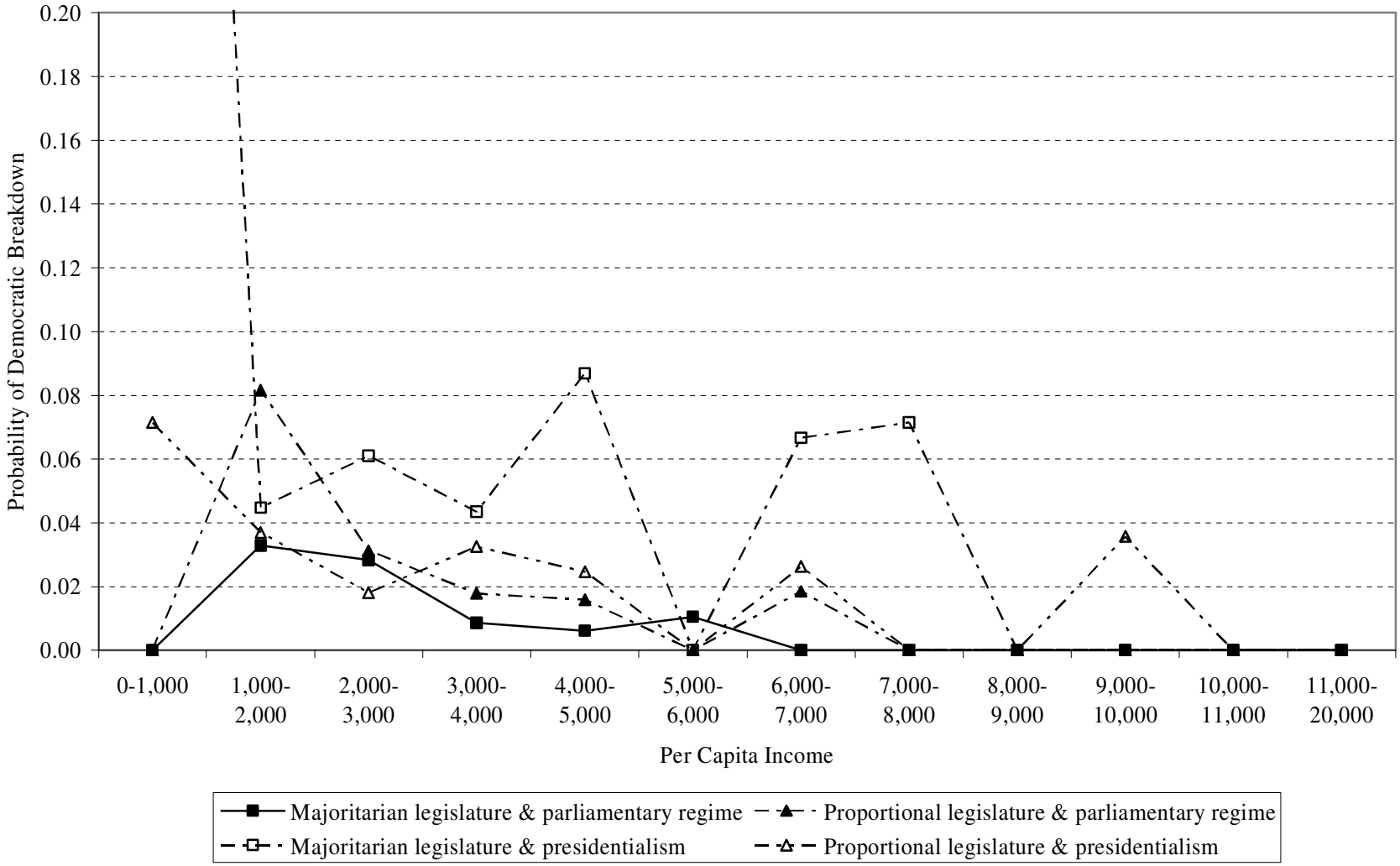


Figure 6. Electoral Rules, Industrialization and Democratic Breakdown

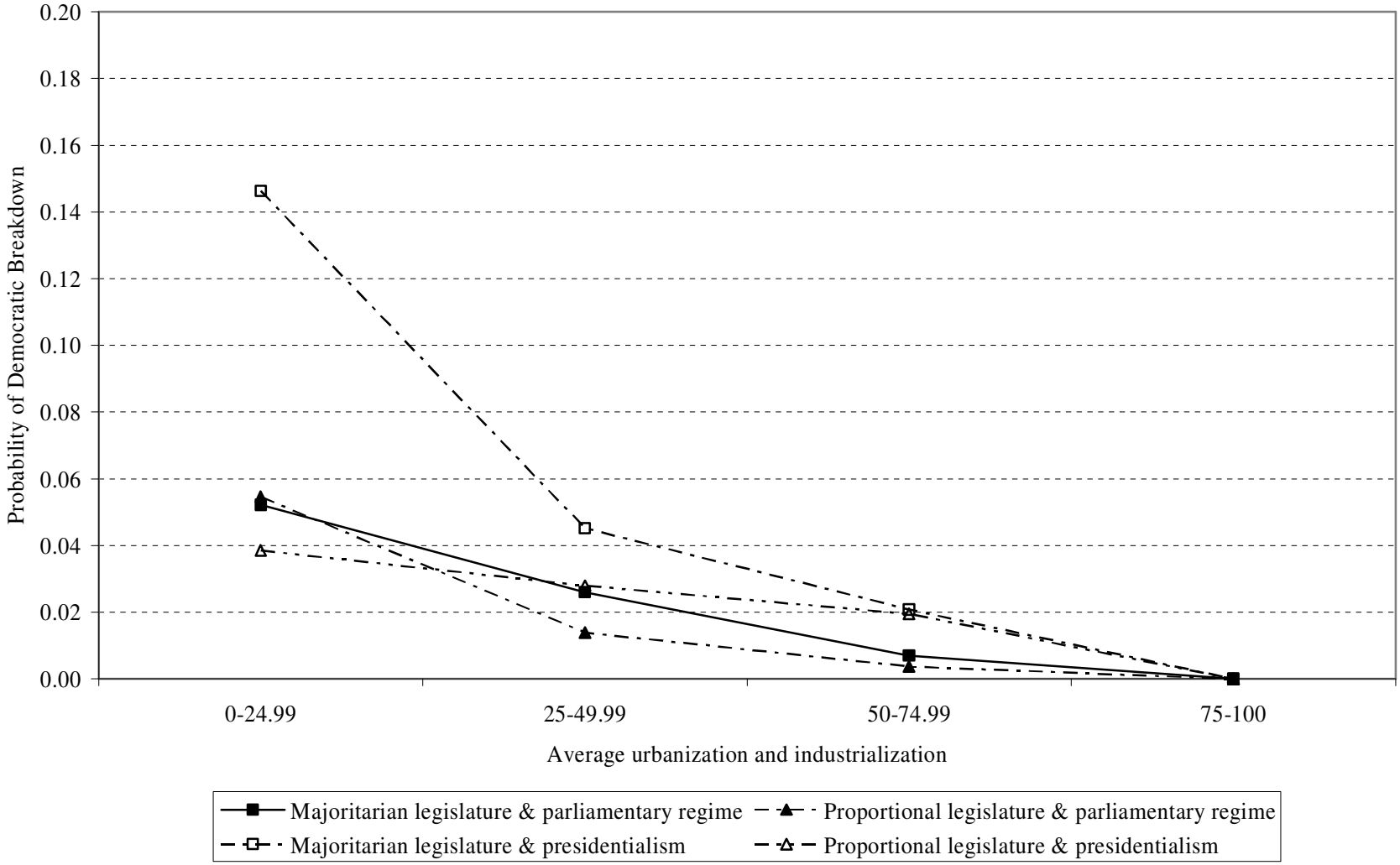


Figure 7. Electoral System, Rural Inequality and Democratic Breakdown

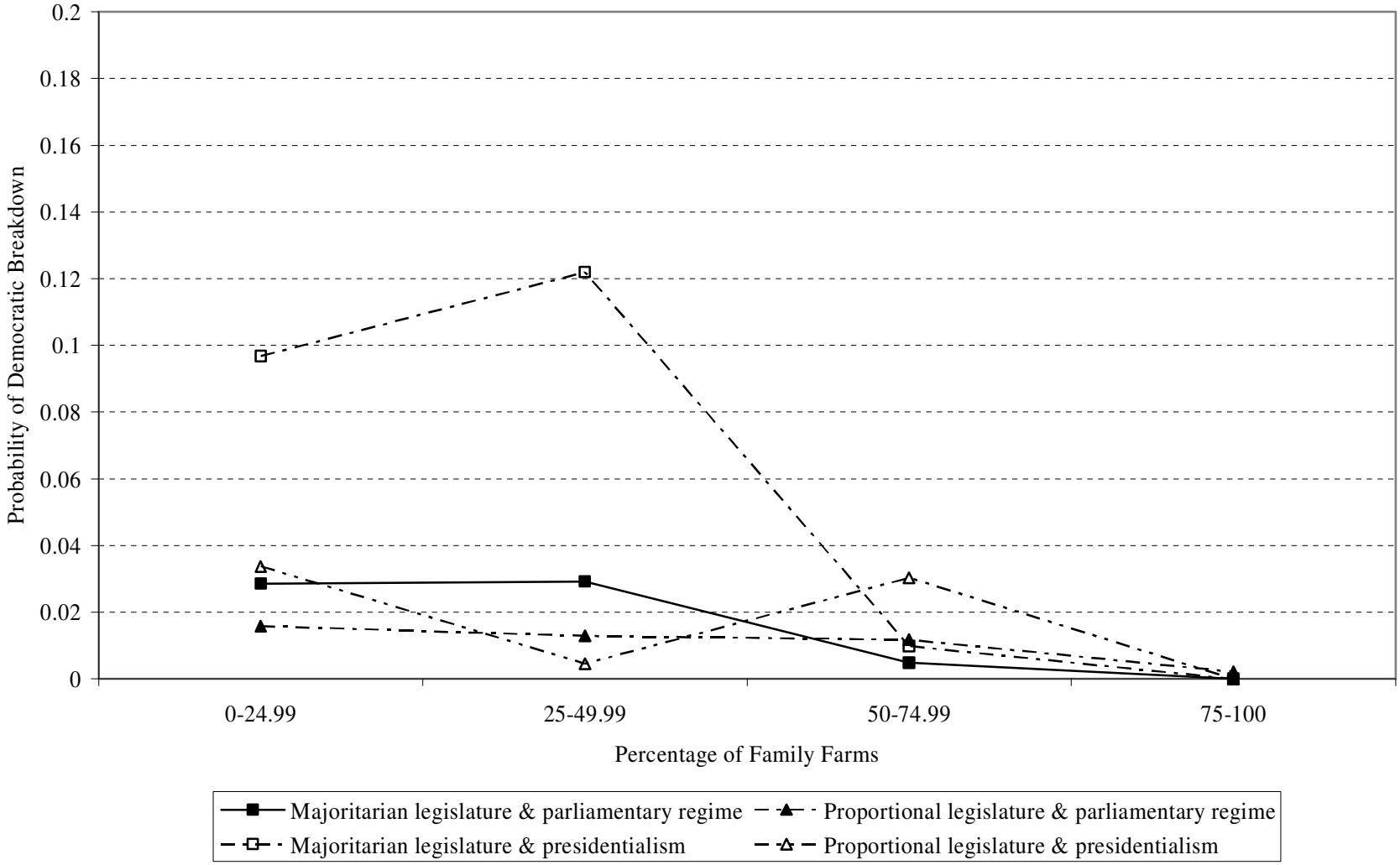
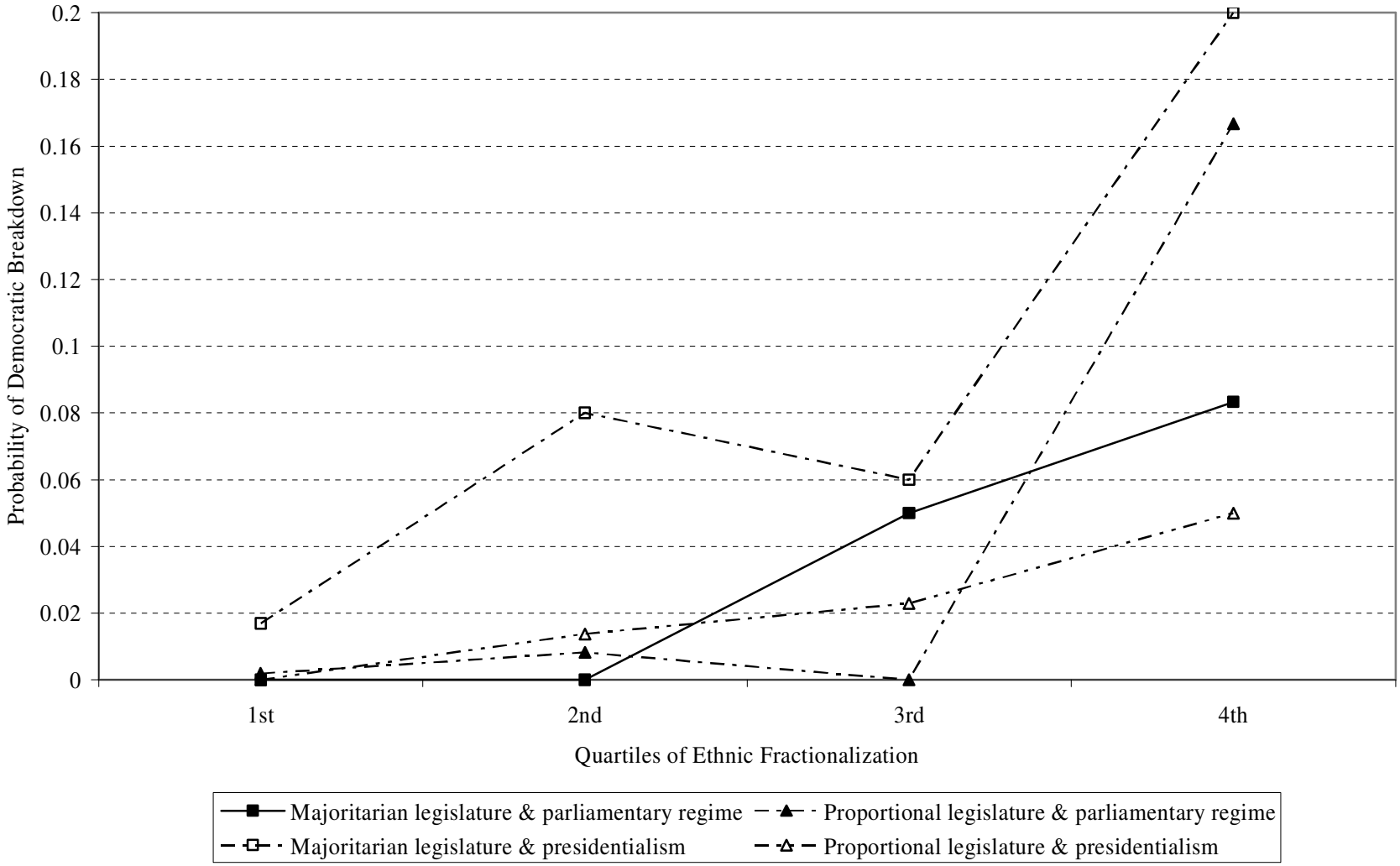


Figure 8. Electoral System, Ethnic Fractionalization and Democratic Breakdown



Since the impact of electoral regimes may be ultimately mediated by the type of executive in place, Figures 5 to 8 display the probability of breakdown both by type of electoral law and executive-legislative system. Below $8,000, presidential systems with majoritarian congresses are much worse than any other combination. Above $8,000 the constitutional arrangement does not make any difference. A similar pattern obtains for levels of industrialization (Figure 6) and rural inequality (Figure 7). A high breakdown rate takes place only in underdeveloped areas under presidential regimes and majoritarian legislatures.

Figure 8, which explores the relationship between ethnic fractionalization and electoral system, shows too that the combination of majoritarian legislatures and presidential executive is the worse system by far. Among the top quartile of countries in terms of ethnic fragmentation, proportional representation and parliamentarism comes second (with a probability of breakdown of over 16 percent). The result changes in the third quartile – majoritarian electoral rules are worse. In the second quartile, all systems except presidentialism jointly with the use of majority rule in the election of congress are very stable. Finally, in highly homogeneous countries none of the four combinations makes any difference.

Political Decentralization

Federalism should strengthen democratic regimes for two reasons which have to do with the two dimensions of democracy described in the first section of the paper respectively.

In the first place, a federal system accommodates inter-territorial heterogeneity and therefore minimizes political conflict. In a territorially heterogeneous country, the minority regions (in terms of their wealth or their religious or linguistic preferences) will only consent to a democratic system in which the rest of the country (the majority of regions) sets policy if the benefits that come from the union, such as trade gains from having a common market and security gains which accrue as a result of a reduction of internal and external military threats, outweigh the set of transfers and regulations that the majority may imposed on the minority. If the costs of taxation exceed the benefits of trade and peace to the point of jeopardizing a democratic union, a

partial solution to achieve some form of integration without falling into authoritarianism would consist in limiting the degree to which all the regions pool their assets and authority together. This strategy would imply maintaining most political decisions in the separate hands of each region joining the union and then enumerating, in a relatively strict manner, the policy domains (such as free movement of labor and capital) in which common decisions are taken and the procedures according to which they should be taken. To put it differently, as the level of inter-territorial heterogeneity rises, and holding constant trade and peace gains, a higher degree of political decentralization (and, in a related manner, giving stronger guarantees to every territory vis-B-vis the other members of the union) should make democracy more feasible at the national level.[18] The United States supplies a good historical example of federalism as a guarantor of democracy. The survival of relatively democratic regimes in the North Eastern and Western areas of the United States in the 19th century was dependant on the maintenance of a de facto confederate system -- where states enjoyed nearly complete sovereignty over taxes and the legality of slavery. With a very centralized state, those units would have been affected by the harsh inequalities of the South and a democratic system would have been harder to sustain. Indeed, it was the assertion of the federal government, under and administration opposed to slavery, which led to the American civil war.

The creation of several tiers of government through federalism should contribute to democratic stability by making it harder for any politician to accumulate excessive resources and assets and to rig the electoral process for two reasons. In the first place, federalism multiplies the number of centers of power, which then control and cancel each other out -- in the same way that parliamentarian regimes may be better than presidential institutions at constraining the executive. Second, the fragmentation of power across several territories is an artificial procedure to increase the mobility of private assets. As territorial jurisdictions multiply in an otherwise unified trade and

[18] Naturally, this is a partial solution since although the low-income regions would rather have this type of weak union to no union at all, they would prefer complete political integration (with tax and transfer powers in the hands of all the union) over any other alternative constitutional arrangement.

monetary area, economic agents can escape more easily from the confiscatory policies of any given policy-maker. In anticipation of this behavior, politicians restrain themselves accordingly.[19]

Figures 9 to 12 display the likelihood of breakdown of federal and non-federal systems, organized by the same economic indicators employed in previous figures. In addition, they report as well the same data for federal systems distinguishing between parliamentarian and presidential executive-legislative relationships. On average federalism has a moderately lower breakdown rate than unitary states. The introduction of federalism reduces the breakdown rate from 3.3 percent to 1.9 percent in presidential systems and from 1.5 percent to 0.4 percent in parliamentary systems.

The combination of parliamentarism and federalism clearly behaves as a democratic stabilizer. Almost no federal parliamentarian system has experienced a democratic breakdown. The results for federal presidential systems are more ambiguous. At low income levels they behave like unitary systems. At middle income levels, they are better with the glaring exception of the Argentine crisis of 1976 (Figure 9). Federal systems have fewer transitions to authoritarianism for all levels of industrialization and urbanization except one (Figure 10). For different levels in the distribution of rural property, the differential impact of federalism is absent or negligible (Figure 11). Finally, federal regimes (with presidentialism) are generally much worse in ethnically very fragmented countries – but this result is based on just 10 observations (Figure 12).

[19] See Myerson (2004) for a formal discussion in which federalism encourages good behavior and the electoral selection of 'good' politicians.

Figure 9. Federalism, Development and Democratic Breakdown

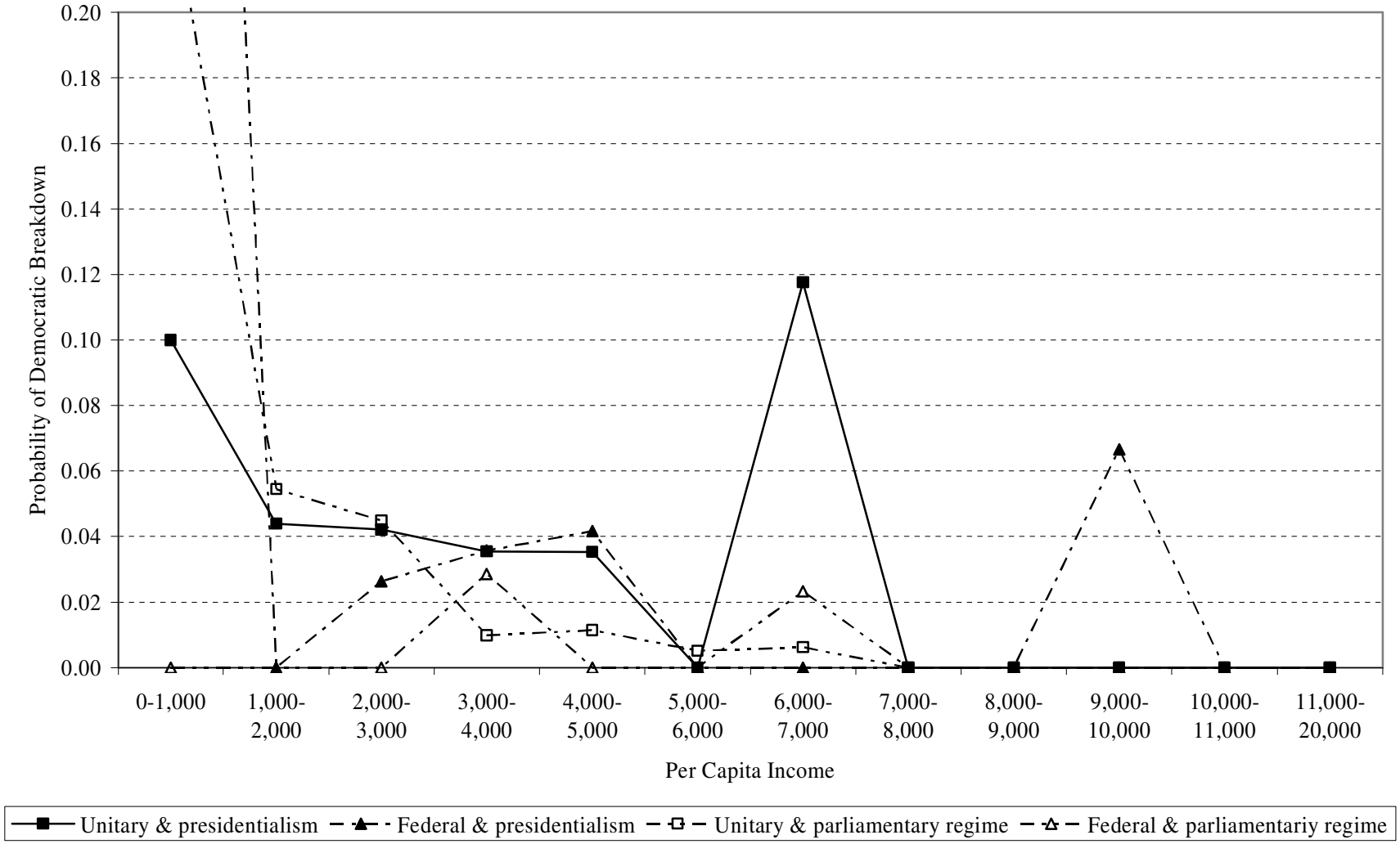


Figure 10. Federalism, Industrialization and Democratic Breakdown

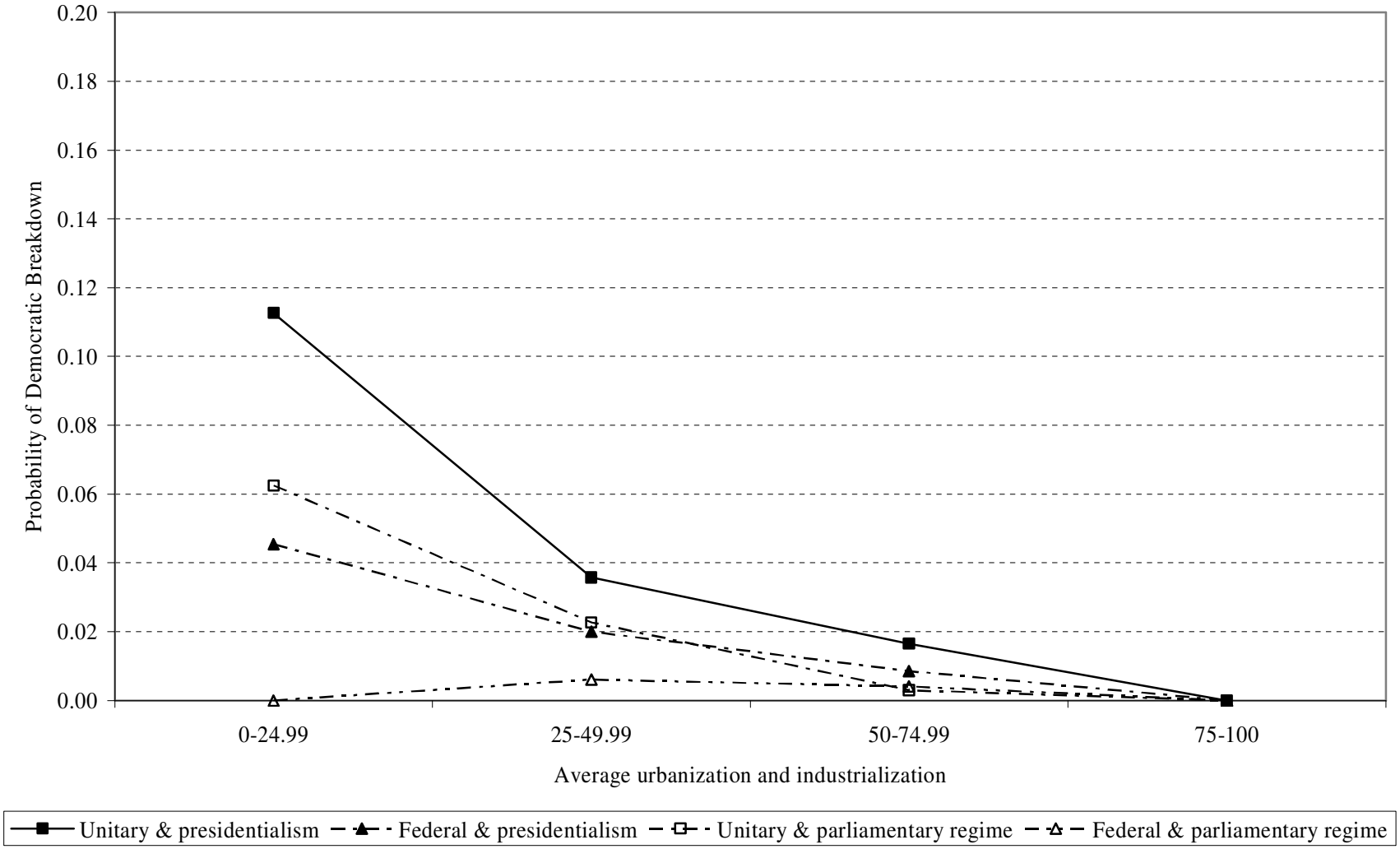


Figure 11. Federalism, Rural Inequality and Democratic Breakdown

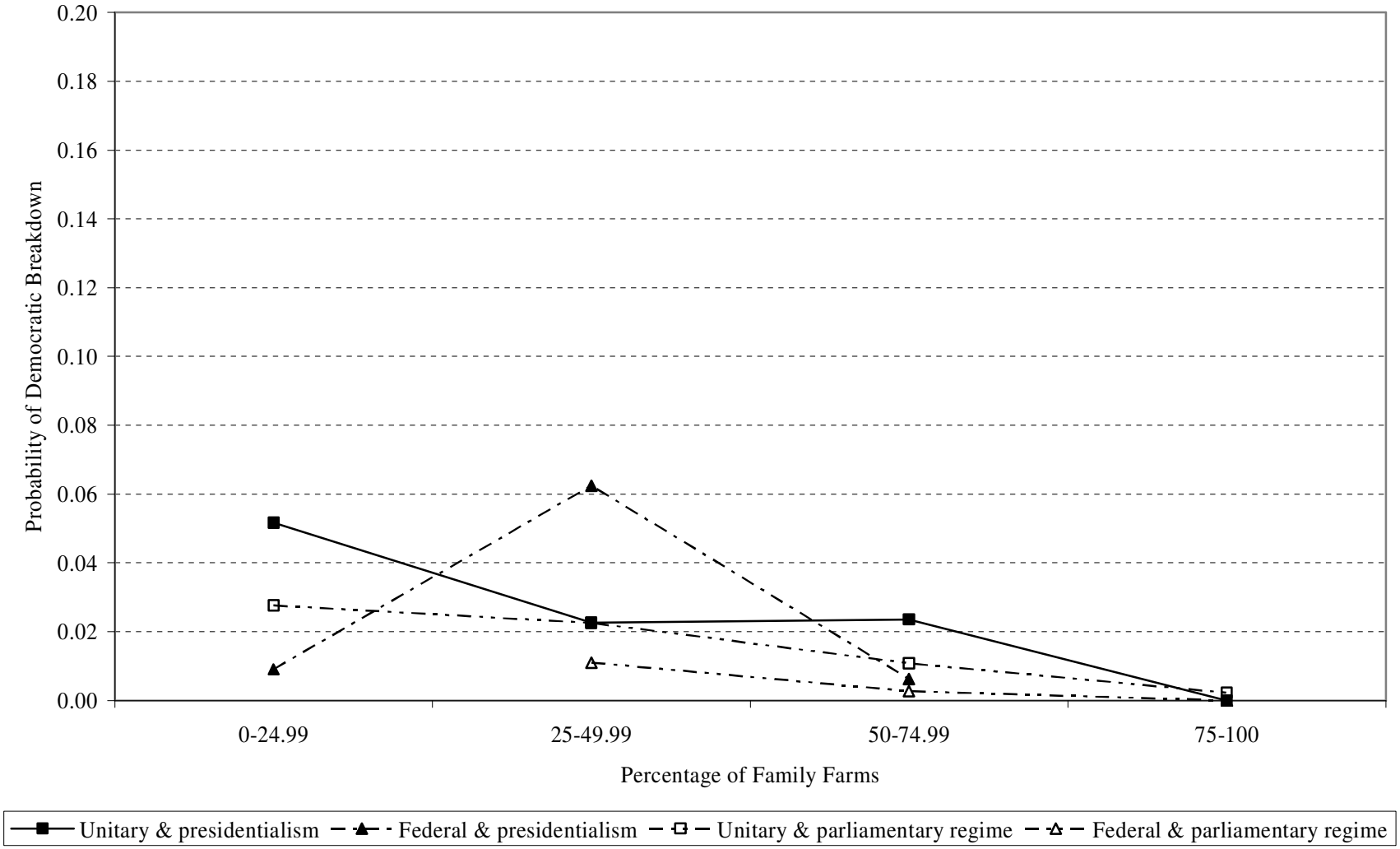
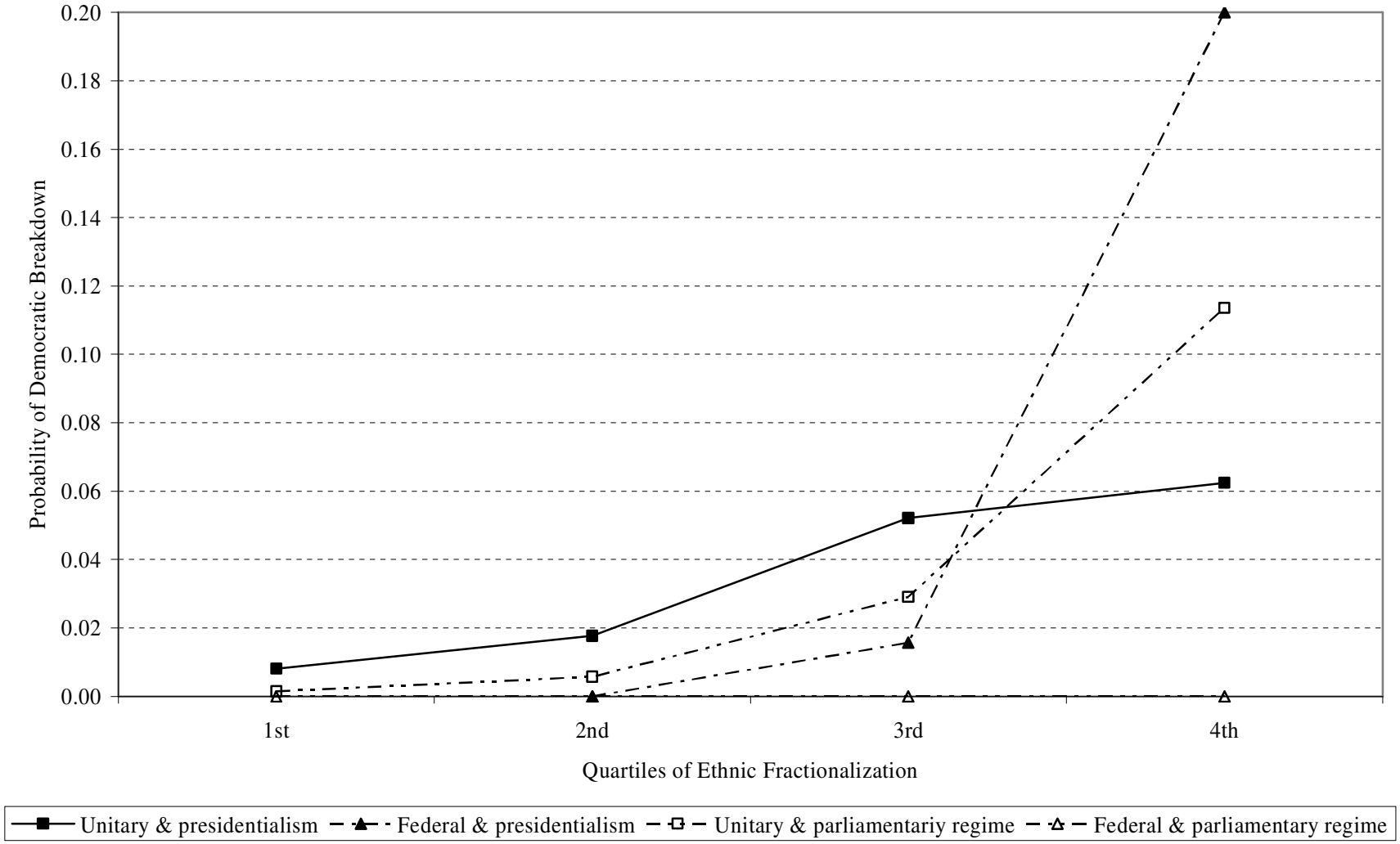


Figure 12. Federalism, Ethnic Fractionalization and Democratic Breakdown



EMPIRICAL ANALYSIS

Estimation Method

To test the potential impact of different constitutional frameworks on democratic stability, I use Cox proportional hazard models to estimate the effect of a country institutional characteristics and economic conditions on the survival of democratic regimes. In this model, for countries $i = 1,\ldots,N$, each entering a state (i.e. the starting year of a democratic spell) at time $t = 0$, the (instantaneous) hazard rate function for country i at time $t > 0$ is assumed to take the proportional hazards form:

$$\lambda_{it} \quad \lambda_0(t)\, exp(X'_{it}\beta)\, \gamma_i$$

where λ_{it} is the hazard function of the country i at time t; $\lambda_0(t)$ is the baseline hazard function that takes a non-parametric form; $exp(.)$ is the exponential function; X_{it} is a vector of covariates summarizing observed differences between individual countries at t; and β is a vector of parameters to be estimated. Thus, Cox's partial likelihood model allows derivation of the estimates of the coefficients β from a proportional hazard model without placing any restrictions on the shape of the baseline hazard. I incorporate γ_i, a Gamma distributed random covariate with unit mean and variance $\sigma^2=\mu$, to describe unobserved heterogeneity between countries to account for those countries that undergo more than one transition in our sample. Results are robust to estimating robust errors by clustering on countries, alternatively, and can be obtained from the author.

Data

The political data set is taken from Boix and Rosato (2001), where all sovereign countries from 1800 to 1999 are coded as either democratic or authoritarian. Countries are coded as democracies if they meet three conditions: elections are free and competitive; the executive is accountable to citizens (either through elections in presidential systems or to the legislative power in parliamentary regimes); and at least 50 percent of the male electorate is enfranchised. This data set includes 68 transitions from democracy into authoritarian regimes out of 174 democratic

periods (the remaining 106 cases are democracies still in place in 1999 or disappeared as a result of either foreign occupation, partition or inclusion in a larger state).

The independent variables are:

1. Proportional representation: a dichotomous variable that takes the value of 1 if the electoral system employed to elect the main legislative chamber is based on proportional representation, 0 otherwise. In those cases in which the main legislative chamber is elected through a mixed system (with a fraction of the seats allocated through proportional representation and the rest through majoritarian mechanisms), we code them as 1 if the majority of the seats are assigned through proportional methods and 0 otherwise.

2. Presidentialism is a dummy variable coded 1 for the presence of presidential and semi-presidential systems, and 0 otherwise. Both the proportional representation variable and the parliamentarism variable have been built based on Cox (1997), IDEA (1997), Linz and Valenzuela (1994), Shugart and Carey (1992) and the Keesing's Contemporary Archives.

3. Federalism: a dichotomous variable taken from Downes (2000) and coded 1 for federal systems and 0 otherwise.

4. Per capita income expressed as PPP $ of 1996. I employ two data sets for per capita income:

(a) A small data set that includes per capita income as reported in the Penn Wold Tables 6.1 (Summers-Heston 2000), covering the period from 1950 to 1999, plus data from Maddison (1995). The Maddison data set provides observations for the period previous to 1950, essentially for developed countries and some large Asian and Latin American cases. The Maddison data has been adjusted to make it comparable with the Summers-Heston dataset. The combination of both data sets gives us a panel of over 7,600 country-year observations for the period 1850 to 1999. I call this data set, data set "alpha".

(b) A larger data set which extends the previous data set in two ways. First, it interpolates the data between non-continuous country-year observations reported by Maddison (who reports, for some countries, data for 1820 and 1850 but in most cases does not start continuous series until 1870). Second, it employs the estimates supplied by Bourguignon (2003) for the world (divided in 46 different regions) since 1820 (and mostly for every twenty years) to calculate all missing data. This second data set or data set, called "beta", contains almost 15,000 country-year observations of per capita income -- that is, 89 percent of all years of sovereign countries. Although this data set is a fragile one -- for example, it does not allow us to calculate yearly growth rates, it overcomes one serious problem of the first data set: the overrepresentation of developed countries. Whereas in the first (smaller) data set, 50 percent of the observations have a per capita income above $3,371 (in $ of 1996), in the second (larger) data set, the median per capita income is $1,732. In other words, about 5,600 country-years with a per capita income lower than $1,800 are missing in the shorter data set.

5. Percentage of family farms over the total area of holdings.

6. The index of occupational diversification, also developed by Vanhanen, which is the average of the percentage of non-agricultural population and the percentage of urban population. The urban population is defined as population living in cities of 20,000 or more inhabitants. This index also covers the period from 1850 to 1999. It has a mean of 33 percent and varies from 3 to 99 percent.

7. The level of ethnic fractionalization, computed as one minus the Herfindhal index of ethnolinguistic group shares, with new data gathered and calculated in Alesina et al. (2003).

8. Religious fractionalization, also computed as one minus the Herfindhal index of religious groups, also taken from Alesina et al. (2003).

9. Percentage of Muslims, Catholics and Protestants, taken from LaPorta et al. (1999).

10. Economic growth rate (in the year before the observed event).

Per Capita Income and Political Institutions

I first consider the effect of political institutions on the survival of democracies, alone and conditional on per capita income. Table 1 reports the likelihood of transitions from democracy into authoritarianism for electoral systems (Model 1), presidentialism (Models 2 and 3) and federal arrangements (Model 4) separately and for all institutions together (Model 5) for the period 1820 to 1999. For each model (except Model 3) I have run two estimations -- the first one employing the small data set 'alpha' and the second data set 'beta'.

Proportional Representation

Model 1 in Table 1 shows that both per capita income and the coefficient for proportional representation are negative – they diminish the likelihood of a democratic breakdown -- and statistically significant in data set 'alpha'. In data set 'beta', which has 17 failures more than the estimation with the first data set, the coefficient for proportional representation remains quite stable in size but it loses all statistical significance. To capture the effects of different electoral systems, I simulate the joint effect of per capita income, electoral rules and their interaction in Figure 13.[20] More specifically, I simulate the evolution of the survival rate, that is, the proportion of democracies that will be still in place at each point in time, for majoritarian and proportional representation regimes at three different levels of per capita income ($1,000, $4,000 and $15,000).

[20] The simulations are done based on the data 'beta' column of each Model.

Table 1. A Survival Analysis of Democracies as a Function of Constitutional Structures and Per Capita Income, 1820-1999

	MODEL 1		MODEL 2		MODEL 3 Legislature Elected through Majoritarian	MODEL 3 Legislature Elected through Propor. Repr.	MODEL 4		MODEL 5		MODEL 6	
	DATA α	DATA β	DATA α	DATA β	DATA α	DATA β	DATA α	DATA β	DATA α	DATA β	DATA α	DATA β
Per Capita Income (in thousand $)	-0.611*** (0.175)	-0.480*** (0.156)	-0.539*** (0.158)	-0.532*** (0.127)	-0.622*** (0.230)	-0.603*** (0.218)	-0.479*** (0.126)	-0.466*** (0.101)	-0.375*** (0.095)	-0401*** (0.085)	-0.739*** (0.221)	-0.554*** (0.153)
Proportional Representation [a]	-1.147** (0.435)	-0.912 (0.633)									-1.209*** (0.419)	-0.633 (0.612)
Proportional Repr. * Per Capita Income	0.000** (0.000)	0.171 (0.183)									0.000 (0.000)	0.067 (0.189)
Presidentialism [b]			-0.412 (0.622)	-0.540 (0.514)	-0.030 (0.825)	-1.412 (0.913)					0.003 (0.739)	-0.008 (0.591)
Presidentialism * Per Capita Income			0.327** (0.182)	0.322** (0.156)	-0.399 (0.277)	0.417 (0.249)					0.237 (0.185)	0.184* (0.174)
Federalism [c]							-0.725 (0.890)	-1.307** (0.706)			0.938 (0.908)	-1.490** (0.748)
Federalism * Per Capita Income							0.218* (0.198)	0.330** (0.154)			0.176 (0.184)	0.305** (0.168)
Federal Parliamentarian									-2.112 (1.712)	-2.372** (1.144)		
Federal Parliamentarian * Per Capita Income									0.123 (0.404)	0.342* (0.189)		
Log-Likelihood	-138.05	-219.89	-170.50	-246.31	-93.97	-81.52	-162.69	-247.28	-171.48	-246.54	-135.47	-215.72
Prob>Chi2	0.0000	0.0002	0.0007	0.0001	0.0119	0.0220	0.0009	0.0000	0.0004	0.0000	0.0007	0.0007
Wald (Chi2)	23.31	21.72	16.91	22.44	10.97	9.63	16.46	23.80	17.95	25.67	25.29	25.23
No. of observations	2870	3344	3114	3636	1427	1909	3105	3637	3114	3636	2870	3336
No. of subjects	108	127	130	146	57	79	128	147	130	146	108	125
No. of failures	38	55	44	60	30	25	42	60	44	60	38	55

[a] Dummy variable. Proportional Representation=1. [b] Dummy variable. Presidentialism=1. [c] Dummy variable. Federalism=1.
Estimation: Cox Proportional Hazard Model. Standard errors in parenthesis. *** p<0.01; ** p<0.05 ; * p<0.10.

Figure 13 shows that for low levels of development the survival rate is very low. Only about 50 percent of democracies reach their sixth year in countries with a per capita income of $1,000 – this level of per capita income corresponds to the twenty-fifth percentile in the sample. By their 15th year the survival rate is about 25 percent. This contrasts with survival rates close to unity in countries with a per capita income of $15,000. Conditional on the effect of per capita income, the impact of different electoral rules is as follows. For low and medium levels of per capita income, the survival rate is higher under proportional representation than under majoritarian systems. Thus, for example, in a country with a per capita income of $1,000, the survival rate stands at 58 percent among proportional representation cases and at 32 percent for majoritarian cases in the tenth year after the transition to democracy. At a per capita income level of $4,000, the difference is much smaller – 80 percent versus 76 percent. In high-per-capita-income countries proportional representation is slightly worse. But the difference is negligible.

Presidentialism

Model 2 in Table 1 considers in turn the effect of presidentialism. Presidential regimes alone have no statistically significant impact on the stability of democratic regimes. Still, the coefficient of presidentialism interacted with development is significant.[21] To facilitate the interpretation of these results, Figure 14 simulates the joint effect of per capita income, constitutional rule and their interaction. Parliamentarian and presidential regimes fare very similarly in countries with low per capita income (parliamentary regimes seem to be slightly worse). Non-institutional factors are here too dominant and condemn most cases to failure. Differences are substantial, however, for medium levels of development. Presidential regimes are there much worse than parliamentarian regimes. Ten years after a democratic transition, the survival rate is 86 percent for parliamentary regimes and 72 percent for presidential constitutions. Twenty years after the transition, survival rates are 69 percent and 46 percent respectively. As per capita income increases, the performance gap between the two types of executives declines.

[21] The results for presidentialism are not robust to the exclusion of a single (and crucial) case: Argentina. They are robust, however, to the introduction of Argentina as a dummy variable.

Figure 13
Estimated Survival for Different Electoral Systems and Levels of Per Capita Income

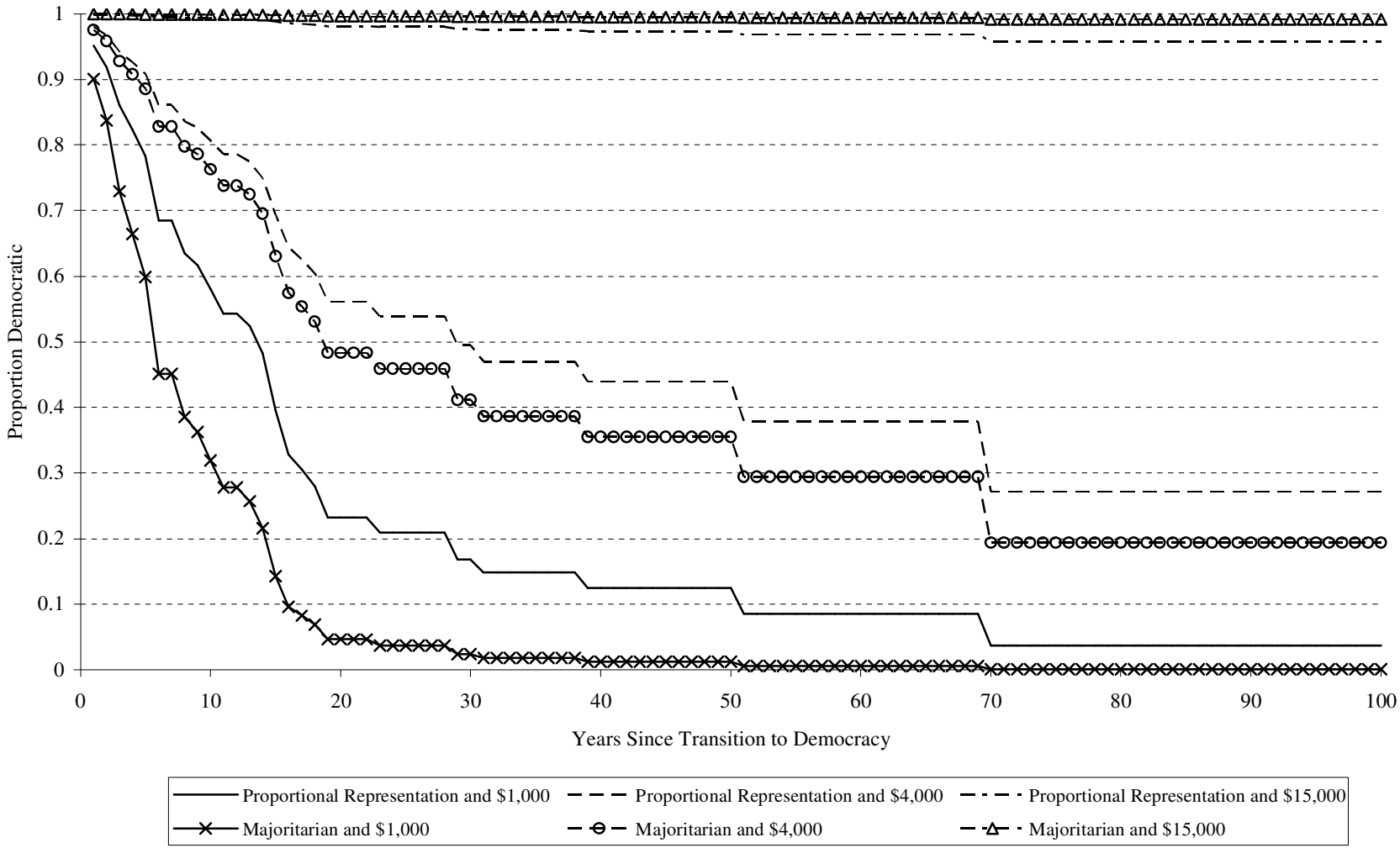
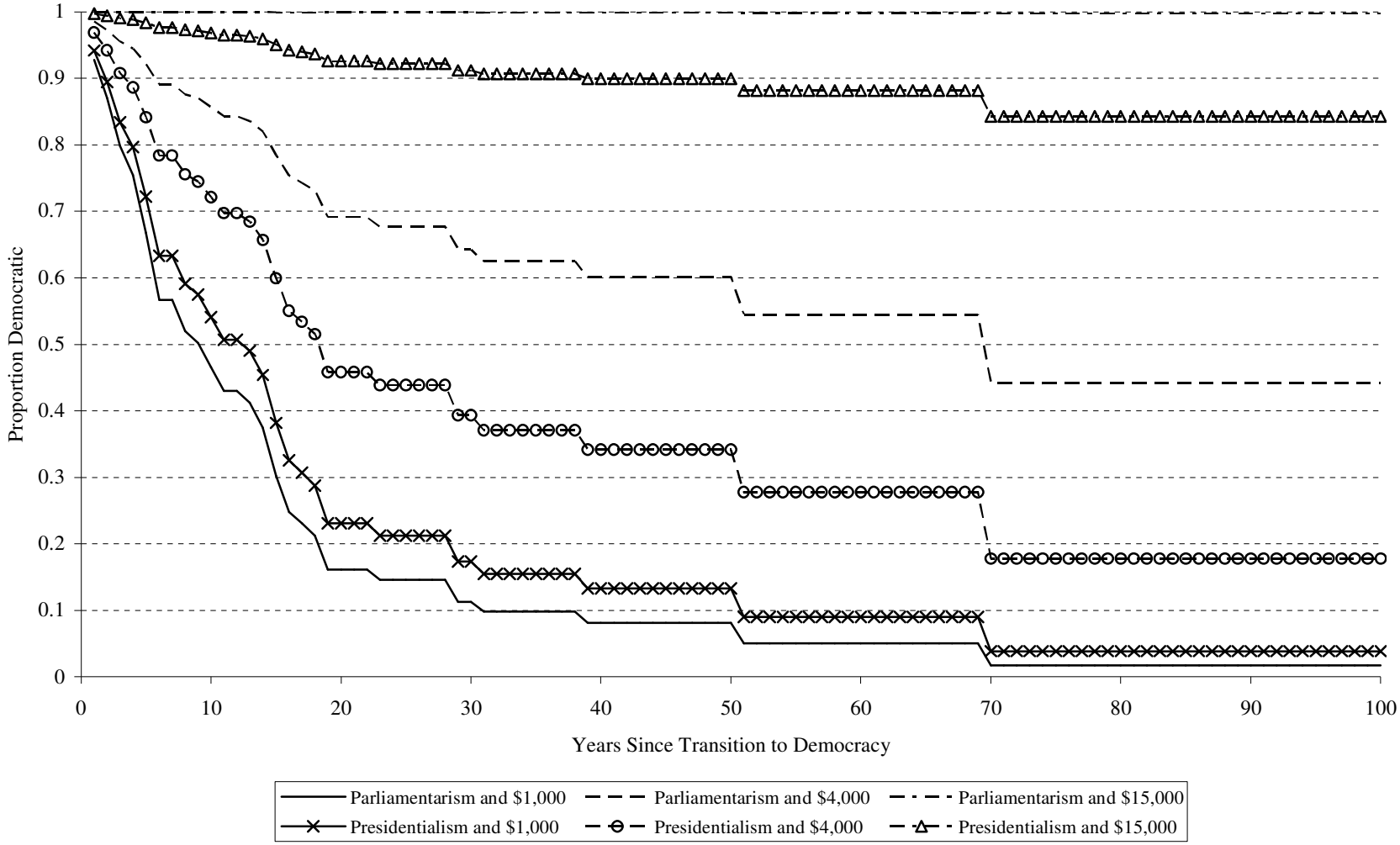


Figure 14
Estimated Survival for Different Executive-Legislative Regimes and Levels of Per Capita Income



According to analysis displayed in Figures 5 to 8, the negative effect of presidentialism (relative to parliamentarian regimes) seemed to vary with the type of electoral regime employed to elect the legislature. Model 3 in Table 1 estimates the probability of democratic survival in two separate subsamples: countries with legislatures elected through proportional representation and countries with legislatures elected through majoritarian systems. In the latter case, presidentialism reduces the probability of democratic breakdown in conjunction with income. In proportional representation cases, presidentialism alone strengthens democracy but then weakens the latter as countries develop. In neither case, however, are coefficients statistically significant. Figure 15 simulates the results for three different levels of development. For low and medium levels of per capita income, having a congress elected with proportional representation seems to stabilize democracies, at least in the first years after the transition to democracy. By contrast, presidential systems with majoritarian congresses are better performers in rich countries.

Federalism

Model 4 in Table 1 tests the impact of federalism. As predicted, federalism reduces the likelihood of breakdown – although according to the positive sign of the interactive term, this effect lessens with development. The simulations of Figure 16 show that at very low levels of development ($1,000), unitary democracies are more likely to collapse than federal democracies. The survival rate after 15 years is 67 percent in federal states yet only 34 percent in unitary countries. The differences narrow as per capita income goes up. For high levels of development, federal states are slightly more brittle. However, this last result seems to be driven by just one country. Once we exclude Argentina from our estimations, federal and unitary states are equally stable at high levels of per capita income.

Figure 15
Estimated Survival for Presidential Regimes with Different Electoral Rules and Levels of Per Capita Income

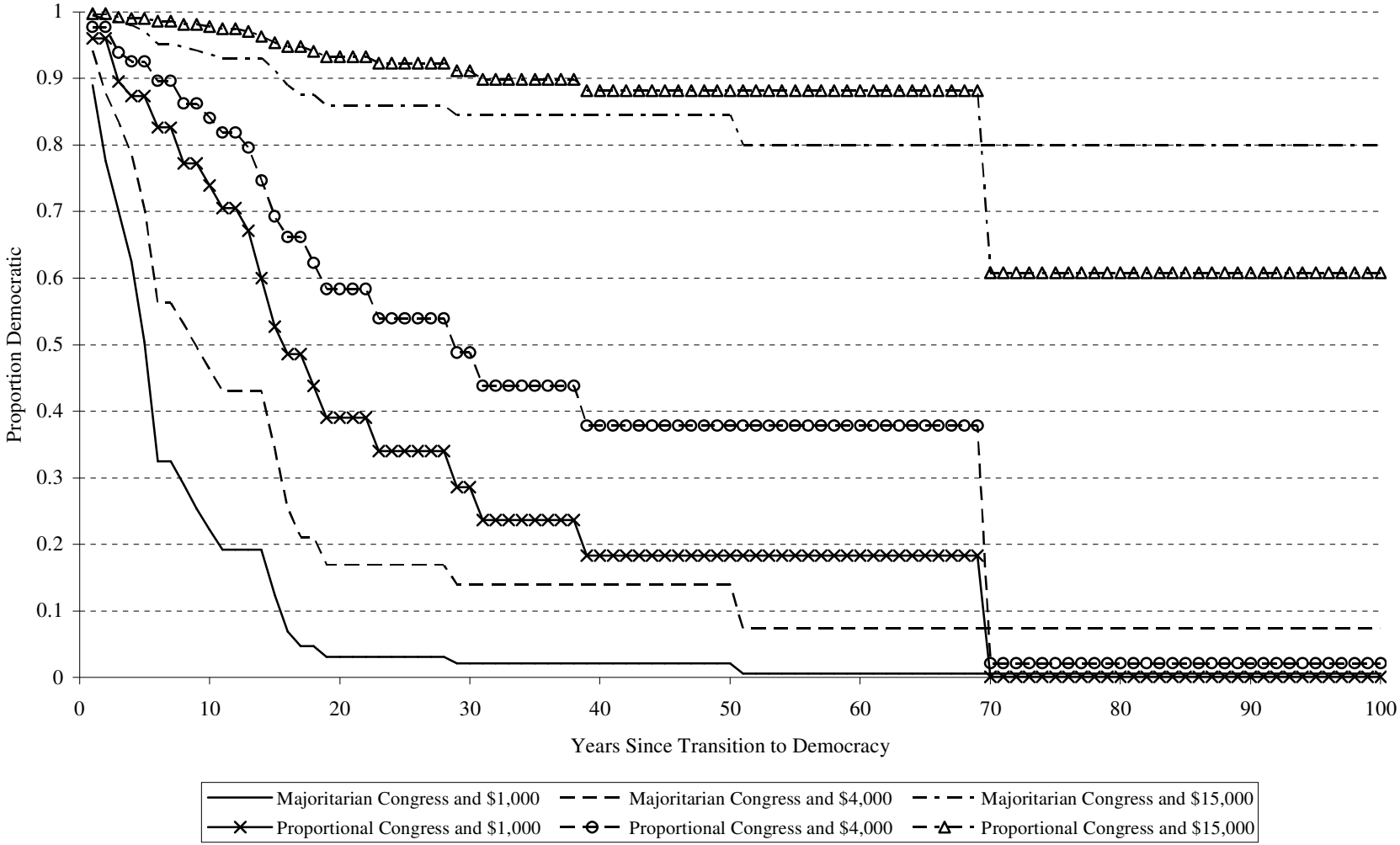


Figure 16
Estimated Survival for Different Territorial Structures and Levels of Per Capita Income

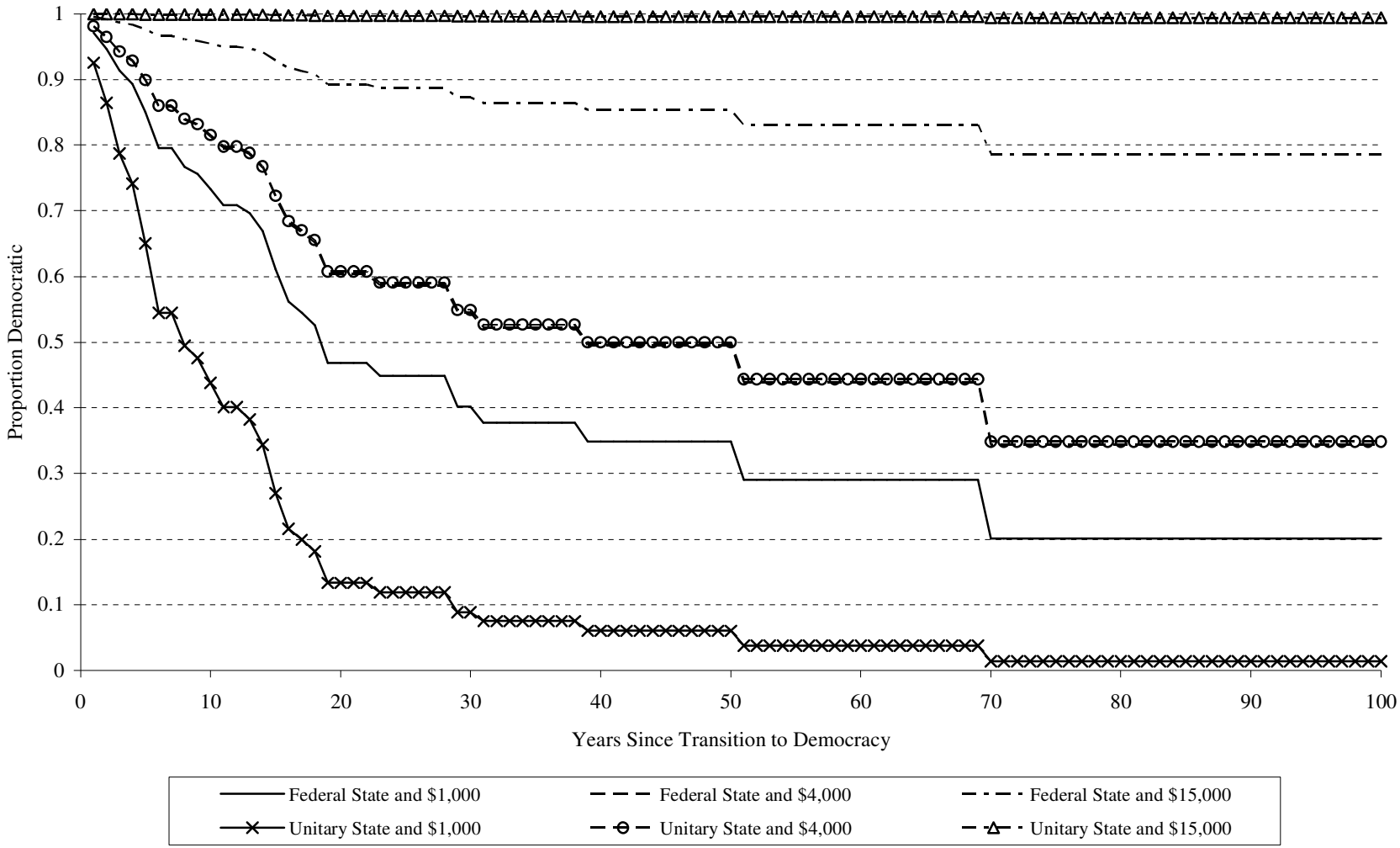
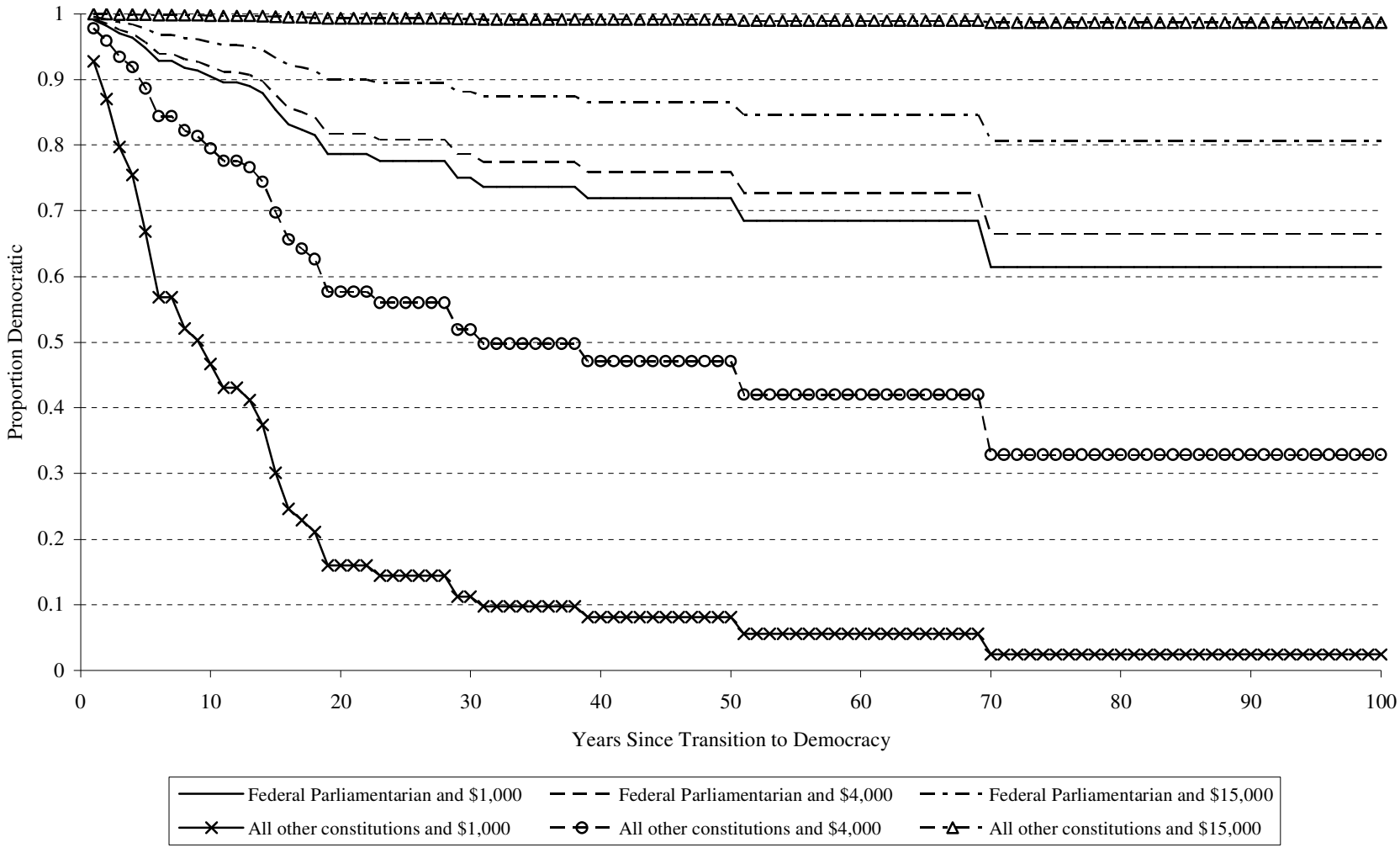


Figure 17
Estimated Survival for Federal Parliamentarian Regimes and Levels of Per Capita Income



Model 5 in Table 4 examine the impact of federal parliamentarian systems. As expected from the descriptive data above, that system has a powerful stabilizing effect on democratic institutions. Figure 17 simulates the results. Except for high levels of income, federal parliamentarian regimes are much more stable than other constitutional structures even in very poor countries. Federal parliamentarian regimes are likely to perform so well for two reasons. First, decentralization leads to lower levels of interregional conflict and a more widespread distribution of power. Second, without a president who may topple the balanced territorial equilibrium, federalism retains all its credibility as a guarantor of democracy and minority rights.

Finally, Model 6 tests the impact of all variables together. In the data set 'alpha' only proportional representation remains significant. Federalism is not statistically significant although its coefficient is stable relative to Model 4. In the larger data set "beta", presidentialism is significant in interaction with per capita income. All in all, it is federalism that remains strongly significant with very stable coefficients.

Robustness Tests

To confirm the validity of the results reported in Table 4, we have proceeded to run the models with single-country deletion. Results are robust to the exclusion of single countries – with the exception of Argentina for presidential regimes. I have also controlled for land area, population, ethnic fractionalization, religious fractionalization, the proportion of Catholic, Protestant and Muslim believers, the lagged growth rate and regional dummies. Again, the results in Table 4 do not vary with the introduction of those controls. Among these control variables, ethnic fractionalization reduces the rate of democratic survival. The growth rate increases it. Population slightly reduces the probability of a democratic breakdown. In the following subsection I turn to examine ethnic fractionalization in more detail.

Endogeneity

In exploring the role that different constitutional structures may have on the reduction of democratic instability, we need to address the extent to which the existence of particular institutions may not be endogenous to the causes of breakdown. That is, it may be the case that it is only countries that have certain characteristics that make democracies successful which in turn choose successful institutional rules (e.g. federal parliamentarism).

I tackle this issue by instrumenting our institutional traits for a different set of variables that are arguably exogenous to the success of democratic regimes. For presidentialism I have identified five variables that explain the choice of executive: the log of the area of the country, year, two dummies for Africa and Latin America, and, particularly, the variable "Presidential Preconditions." This latter variable is built as follows: it predicts presidentialism in non-colonized countries that moved to democracy through violence (civil wars or revolutions), in former colonies that either became independent through violent means, and in former colonies that achieved their independence peacefully from metropolis governed by presidential regimes. In a probit model to explain the choice of presidentialism, all five variables are significant at the 0.01 level and together result in a pseudo-r2 equal to 0.58. In turn, federalism is instrumented through the same variables plus being a former British colony – in a probit model, the pseudo-r2 is 0.34. Electoral systems are instrumented through log of population, year, former French colony, former British colony and former United States-administered territories – the pseudo-r2 is 0.39.

Table 2 reports the models of Table 1 now with institutional variables instrumented – that is, we employ the fitted value of electoral systems, presidentialism and federalism (alone and in the interactive term) obtained through the probit estimations. Income is taken from the 'beta' data set. Generally, the coefficients do not change relative to the estimations in Table 1, with the exception of the interactive term of electoral system and per capita income, which becomes much larger. The statistical significance of the electoral systems and presidentialism variables goes up. By contrast, federalism and its interactive term become statistically insignificant in Model 3 – although they border the significance test at 10 percent. When all constitutional rules are regressed,

presidentialism and federalism are significant and in line with the results of Table 1. All in all, the results in Table 1 seem to hold up to the instrumentation of constitutional rules.

Table 2. A Survival Analysis of Democracies as a Function of Constitutional Structures and Per Capita Income, 1820-1999

	MODEL 1	MODEL 2	MODEL 3	MODEL 4
Per Capita Income (in thousand $)	-0.874*** (0.258)	-0.622*** (0.157)	-0.439** (0.117)	-1.018*** (0.242)
Proportional Representation [a]	-0.924 (0.750)			-1.167 (0.786)
Proportional Repr. * Per Capita Income	0.650** (0.311)			0.529* (0.287)
Presidentialism [b]		-0.738* (0.594)		-0.568 (0.674)
Presidentialism * Per Capita Income		0.485*** (0.180)		0.360* (0.186)
Federalism [c]			-1.338 (1.111)	-1.770 (1.142)
Federalism * Per Capita Income			0.261 (0.343)	0.404 (0.370)
Log-Likelihood	-230.54	-228.41	-232.38	-226.57
Prob>Chi2	0.0000	0.0002	0.0001	0.0001
Wald (Chi2)	24.86	19.53	21.10	29.38
Number of observations	3302	3302	3302	3302
Number of subjects	142	142	142	142
Number of failures	57	57	57	57

[a] Dummy variable. Proportional Representation=1. [b] Dummy variable. Presidentialism=1. [c] Dummy variable. Federalism=1.
Per capita income taken from 'beta' data set.
Estimation: Cox Proportional Hazard Model. Models 2 and 4 has been estimated without parametric frailty test. Standard errors in parenthesis. *** p<0.01; ** p<0.05 ; * p<0.10.

Ethnic Fractionalization and Political Institutions

As discussed in the theory section, preference heterogeneity, fed by ethnic differences, may jeopardize democracy. In the robustness tests performed on the models of Table 1, ethnic fractionalization was never statistically significant. Still, Table 3 displays a set of models which add a measure of ethnic fractionalization and its interaction with constitutional structures to the basic set-up of Table 1 (where I employed income and institutions as independent variables).

Since the measure of ethnic fractionalization only starts in 1950, the sample shrinks by about 40 percent and the number of democratic failures by more than a third. Moreover, the covariates seem to be plagued by collinearity problems. Hence results should be interpreted with caution. In all models ethnic fractionalization has a strong negative impact on democratic survival. Model 1 shows that proportional representation stabilizes democracies although (according to simulated results not shown here) not to the point of overcoming the effects of ethnic divisions: the estimate of electoral system alone completely counteracts the slightly negative coefficient of the interaction of fragmentation and electoral rules. By contrast, presidential regimes minimize the negative impact of ethnic fractionalization considerable more: the negative coefficient of the interactive term "presidentialism*ethnic fractionalization" cancels out any negative effects of ethnic fragmentation. Finally, contrary to theoretical expectations, Model 3 shows that federalism does not mediate in any way in ethnically diverse societies: the coefficient of the interactive term of federalism and ethnic fractionalization turns out to be positive.

Political Institutions, Property Distribution and Industrialization

Table 4 extends the same analysis to the period 1850 to 1997, now interacting the type of constitution with the percentage of family farms and with the index of occupational diversification, which is the average of non-agricultural population and urban population. These estimations have two advantages. First, they employ variables that go beyond per capita income and thus proxy, even though in an imperfect manner, the underlying conditions we pointed to in the theoretical discussion. Second, they cover almost all democratic breakdowns.

Table 3. A Survival Analysis of Democracies as a Function of Constitutional Structures and Ethnic Fractionalization, 1950-99

	MODEL 4	MODEL 5	MODEL 6
Per Capita Income	-0.387**	-0.317**	-0.380***
(in thousand $)	(0.160)	(0.134)	(0.111)
Ethnic Fractionalization	2.084^^	3.733***	1.453*
	(1.293)	(1.372)	(0.847)
Proportional Representation [a]	-2.084^^		
	(1.546)		
Proportional Representation *	0.216^^		
Per Capita Income	(0.208)		
Proportional Representation *	0.357^^		
Ethnic Fractionalization	(2.028)		
Presidentialism [b]		1.558^^^	
		(0.274)	
Presidentialism *		0.079^^^	
Per Capita Income		(0.175)	
Presidentialism *		-3.171*	
Ethnic Fractionalization		(1.675)	
Federalism [c]			-4.196^^
			(2.729)
Federalism *			0.370**
Per Capita Income			(0.221)
Federalism *			4.520^
Ethnic Fractionalization			(3.417)
Log-Likelihood	-119.95	-147.07	-148.15
Prob>Chi2	0.0000	0.0000	0.0001
Wald (Chi2)	28.89	29.29	26.18
Number of observations	2051	2279	2280
Number of subjects	105	123	124
Number of failures	36	41	41

[a] Dummy variable. Proportional Representation=1. [b] Dummy variable. Presidentialism=1. [c] Dummy variable. Federalism=1.

Estimation: Cox Proportional Hazard Model. Standard errors in parenthesis. *** p<0.01; ** p<0.05 ; * p<0.10. ^^^ p<0.01 in joint test with variables of interactive term; ^^ p<0.05 in joint test with variables of interactive term.

Table 4. Annual Probability of a Democratic Breakdown as a Function of Constitutional Structures, 1850-97

	MODEL 1	MODEL 2	MODEL 3
Percentage of Family Farms [a]	-0.034***	-0.029**	-0.029***
	(0.011)	(0.012)	(0.009)
Index of Occupational Diversification [b]	-0.054***	-0.058***	-0.054***
	(0.016)	(0.012)	(0.010)
Proportional Representation [c]	-1.357^^^		
	(0.941)		
Proportional Representation *	0.015^^^		
Percentage of Family Farms	(0.015)		
Proportional Representation *	0.013^^^		
Index of Occupational Diversification	(0.020)		
Presidentialism [d]		-0.788^^^	
		(0.857)	
Presidentialism *		0.006^^	
Percentage of Family Farms		(0.016)	
Presidentialism *		0.022*	
Index of Occupational Diversification		(0.017)	
Federalism [e]			-1.780^^^
			(1.239)
Federalism *			0.006^^^
Percentage of Family Farms			(0.018)
Federalism *			0.036**
Index of Occupational Diversification			(0.021)
Log-Likelihood	-211.04	-248.70	-248.24
Prob>Chi2	0.0000	0.0000	0.0000
LR(Chi2)	34.25	33.18	36.77
Number of observations	3070	3341	3342
Number of subjects	126	146	147
Number of failures	55	62	62

[a] Area of family farms as a percentage of the total area of holdings. Source: Vanhanen (1997).

[b] Arithmetic mean of percentage of non-agricultural population and percentage of urban population. Urban population is defined as population living in cities of 20,000 or more inhabitants. Source: Vanhanen (1997).

[c] Dummy variable. Proportional Representation=1. [d] Dummy variable. Presidentialism=1. [e] Dummy variable. Federalism=1.

Estimation: Cox Proportional Hazards Model. Standard errors in parenthesis. *** p<0.01; ** p<0.05 ; * p<0.10. ^^^ p<0.01 in joint test with variables of interactive term; ^^ p<0.05 in joint test with variables of interactive term.

In line with previous research, a more equally distributed land and higher rates of industrialization and urbanization contribute substantially to the survival of democratic regime (Boix 2003). In countries were the agrarian property is concentrated in few hands and the level of industrialization is low, democracies break down very quickly. Conversely, in countries with a

high proportion of family farms or very high levels of industrialization, democracies survive independently of the constitutional structure in place.

Model 1 in Table 4 examines the impact of the type of electoral rule on the survival of a democratic regime. Models 2 and 3 do so for presidentialism and federalism respectively. Their impact conditional on the distribution of land is minimal. Their effect in interaction with the level of industrialization and urbanization is stronger and requires its simulation. This is done in Figures 18 through 20.

Figure 18 simulates the effect of different electoral systems for different patterns of industrialization and industrialization (and a fixed proportion of family farms at its mean value). For the lowest levels of industrialization and urbanization, majoritarian electoral rules are correlated with more fragile democracies. Otherwise, that is, at high levels of development, the negative effect of majoritarian electoral rules declines.

The impact of the type of executive-legislative relations turns out to be marginal according to Figure 19. Underdeveloped economies break down early on, regardless of the executive in place. Developed countries are much more stable – within them, presidential regimes exhibit a slightly higher rate of authoritarian transitions.

Finally, Figure 20 simulates the impact of unitary and federal systems. Unitary states are much worse among agrarian countries. Their survival rate is about half the survival rate among federal cases. By contrast, federal states perform worse among industrialized and urbanized countries. As before, however, this result is mostly driven by Argentina – once this country is excluded from the sample, federal and unitary states perform equally well at high levels of development.

Figure 18
Estimated Survival for Different Electoral Systems and Levels of Industrialization

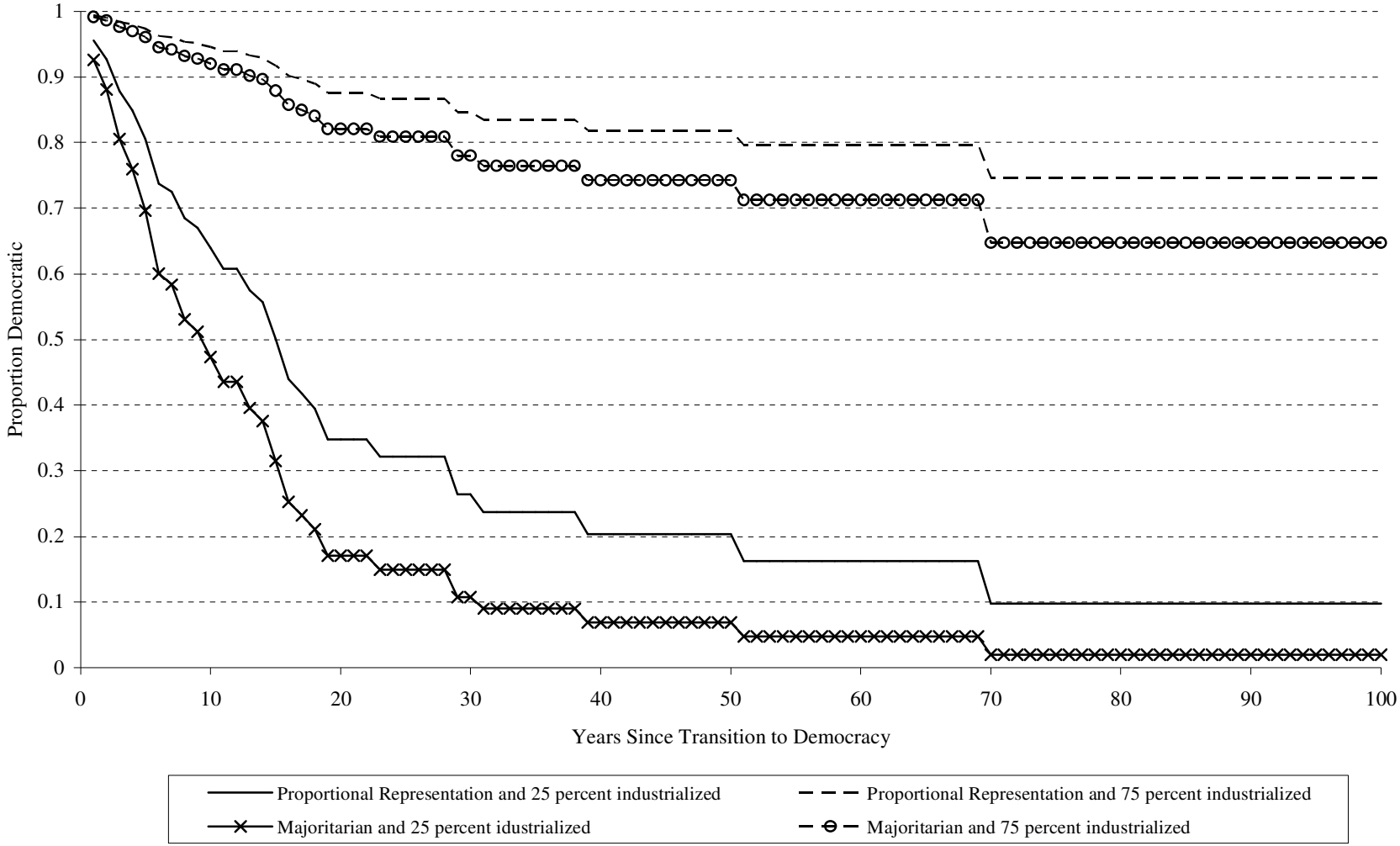


Figure 19
Estimated Survival for Different Executive-Legislative Regimes and Levels of Industrialization

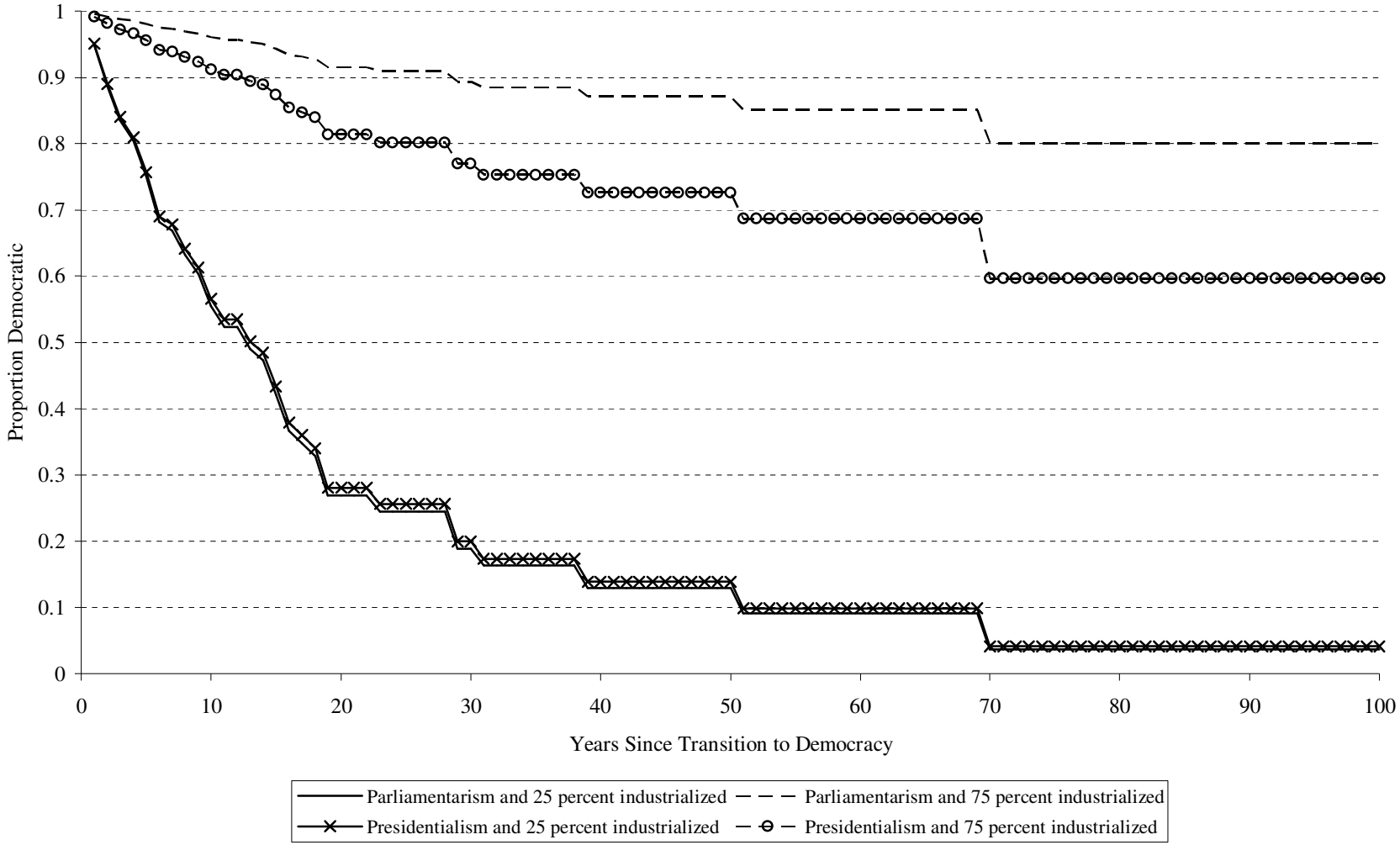
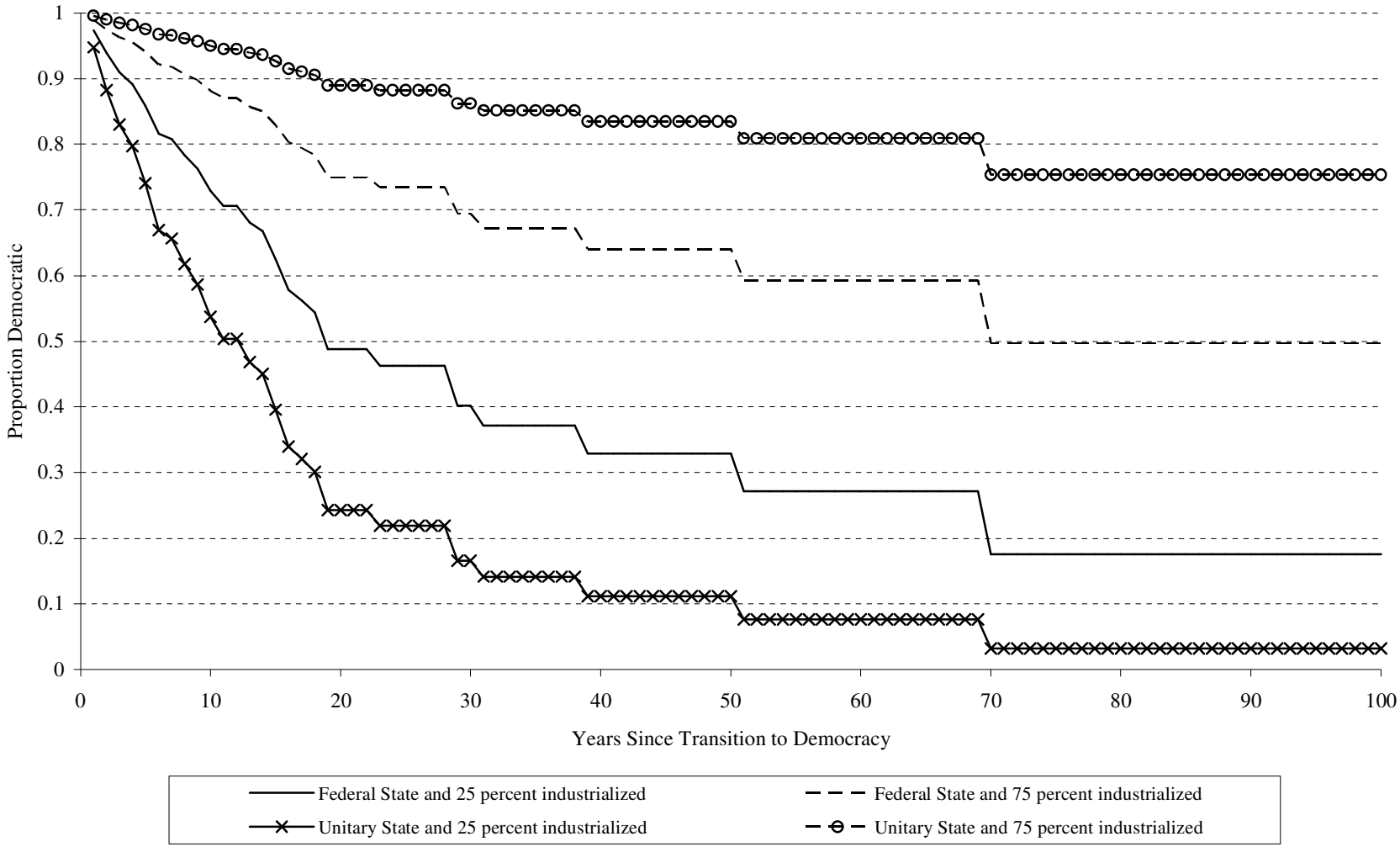


Figure 20
Estimated Survival for Different Territorial Structures and Levels of Industrialization



CONCLUSIONS

To date political science has explored the consequences of different constitutional settings, such as proportional representation, parliamentarism or federalism, without controlling for the distribution of interests and the levels of political mobilization in the countries under study. Yet the consequences of institutions can only be determined in the context of a fully specified model, that is, a model where preferences are described (and then allowed to vary for different types of constitutional designs). Accordingly, this paper theorizes about the conditions under which institutions, given an underlying distribution of preferences, may reduce democratic breakdowns. It then tests the theory by estimating the probability of democratic breakdowns in a sample that extends from 1820 to 1999.

Underlying economic and social conditions play by much a dominant role in the stability of democratic regimes. For any given constitutional structure, the probability of a democracy surviving for at least fifty years rises from less than 10 percent with a per capita income of $1,000 or a marginal industrial economy to 40 percent with a per capita income of $4,000, 80 percent for a per capita income of $8,000 and close to 100 percent for $15,000 or complete industrialization.

Within the strictures imposed by social and economic factors, constitutional structures play a relatively marginal role in most cases. The probability of democratic breakdown is about 10 percent lower in poor countries under proportional representation systems. This small difference disappears for highly developed countries.

Parliamentary systems have a bigger stabilizing effect (relative to presidential systems) but only in developing countries. In very poor countries (with per capita income of $1,000), parliamentary and presidential system are equally doomed. In turn, in developed countries the likelihood of survival is minimally affected by the type of executive system. But for middle-income countries, parliamentary regimes slash by two the probability of democratic breakdown (from 70 percent to 40 percent at the 50^{th} year).

Why should parliamentary regimes be safer for democracy in low- to middle-income countries? Contemporary democracies are a game in which the principal, the public, delegates into an agent, the politician or policy-maker, a given set of instruments to execute certain goals (generally speaking, those willed by the majority). Given self-interested politicians, the delegation of decision-making and policy implementation inherent to representative democracies may open up the space for significant inefficiencies and corruption among politicians. The electoral winner may have as well an incentive to use her tenure to shift resources in her favor to boost her future electoral chances, to alter the rules of electoral engagement and even to postpone or cancel the new election. In turn, the losers may respond by challenging the democratic outcome itself. Parliamentary mechanisms may then restrain the ability of rent-seekers and therefore reduce the instability of democratic regimes because the executive is subject to a confidence requirement of continued support from a majority in the legislature. As a result, the space for unchecked appropriation of wealth and power by the prime minister is much smaller. Presidential systems instead give much more autonomy to their incumbents through temporally rigid mandates, the use of veto powers, and the need for large majorities to impeach them. All these presidential tools became especially dangerous in economic settings in which economic assets are immobile and relatively concentrated and therefore easy to grab. In short, it is hard to envision many prime ministers acting as expropriators (unless their grip on their own parliamentary supporters is very tight). By contrast, we can name many presidents acting as expropriators – just think of Perón, Marcos or Chávez. Compare them with Indira Ghandi's flirt with a state of emergency in the mid 1970s.

Federalism reduces as well the probability of democratic breakdown. But it only does so in a consistent manner in combination with parliamentarism. The positive impact of federal parliamentarism is extremely powerful – to the point that it seems to be the only institutional mechanism that stabilizes democracy regardless of non-constitutional conditions in the country. Since the mid 19th century there have been only two breakdowns among federal parliamentarian systems – amounting to a breakdown rate of 0.4 percent. The estimated probability that a federal parliamentarian regime survives after 50 years of democracy is above 70 percent even for $1,000-per-income nations. Federalism matters because it creates relatively homogeneous subnational territories, thus minimizing the losses of the minority defeated in an electoral contest and

bolstering the chances the latter will accept its defeat. Federalism may also strengthen democracy by creating a decentralized decision-making process in which a large number of actors are needed to take decisions and no actor can act easily as a monopolist rent-seeker. The success of federal parliamentarism (as opposed to presidentialism in a federal system) seems to be related to the fact that parliamentary regimes sustain in a credible manner the federal pact made among regions to overcome their territorial differences. Once again, in most cases presidents are too powerful to guarantee the respect for the minorities enshrined in the constitution.

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