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Does Democracy Produce Quality of Government?

Nicholas Charron
Victor Lapuente

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THE QUALITY OF GOVERNMENT INSTITUTE
Department of Political Science
University of Gothenburg
Box 711
SE 405 30 GÖTEBORG

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Carl Dahlström
The Quality of Government Institute
Department of Political Science,
Göteborg University
Box 711
SE 405 30 Göteborg, Sweden
carl.dahlstrom@pol.gu.se

Victor Lapuente
The Quality of Government Institute
Department of Political Science,
Göteborg University
Box 711
SE 405 30 Göteborg, Sweden
victor.lapuente@pol.gu.se

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Abstract:

This paper analyzes the effects of political regimes over state capacity or the quality of government (QoG): do democratic states perform better than authoritarian ones? Previous studies on this puzzle point to a nonlinear relationship between democracy and government quality. We argue that QoG is a function of both forces of supply (leaders which have the power to make reforms) and demand (citizens' desire for mid-to-long term investments over short term needs), the latter of which is a function of economic development. In democratic states, leaders have stronger incentives to improve QoG after a certain degree of wealth is reached, while in poorer countries they have little incentive for long-term bureaucratic investments. Thus we predict that the relationship between democracy and QoG is conditional, based on economic development. With over 125 countries in our sample, we test our hypothesis using time series, panel data and spatial models and find strong empirical support for our claim.

Keywords: Democracy, governance, development, corruption, democratization

Nicholas Charron
Victor Lapuente

Research Fellows
The Quality of Government Institute
Department of Political Science
University of Gothenburg
victor.lapuente@pol.gu.se
nicholas.charron@pol.gu.se

1. What is the effect of democracy on quality of government?

There is a general acceptance among scholars and policy-makers on the crucial role of government institutions for the welfare of its citizens. "Good governance", "state capacity" or "quality of government" foster social and economic development.[1] Dysfunctional and corrupt government institutions play a central role in many of the world's most pressing economic and social problems (Rothstein and Teorell 2008: 166).[2] While the socio-economic consequences of what, for the sake of simplicity, this paper calls "quality of government" (QoG) are well understood, its causes remain unclear and subject to controversy.[3] An intriguing unsolved debate is the one regarding the impact of political regimes on QoG. Put simply, do democratic states work better than authoritarian ones?

Many theoretical reasons have been put forth as to why democracies should exhibit higher QoG than autocracies.[4] However, the empirical evidence in favor of the democratic hypothesis is, at best, mixed. In the first place, qualitative literature has provided exhaustive case studies showing how corruption has increased -and QoG decreased- after moves towards democracy. That would, for example, be the case of many developing countries after decolonization (see Lemarchand 1972 on Africa, Scott 1972 on Southeast Asia, Wade 1985 on India, or Sayari 1977 on Turkey), of several post-communist countries after 1990 (see Varese

[1] Although there is a large literature on the two-way causality between institutions and economic development (and we deal with this issue later in the paper), there is also a solid body of evidence showing causality from institutions to income (e.g. Acemoglu, Johson and Robinson 2001, Rodrik and Trebbi. 2004. For a review, see Pellegrini and Gerlagh 2007).

[2] Rothstein and Teorell (2008) offer a review of the main literature on the consequences of quality of government. For a non-academic review, see *The Economist* 13-03-2008.

[3] By Quality of Government we are referring in this paper to what others in the literature have termed "State Capacity" or "Administrative Capacity" (Bäck and Hadenius 2008) –that is, the capacity a state has to perform its activities in an *efficient way and without corruption*. Thus, following this literature we are primarily concerned with accounting for variation in public sector bureaucratic performance and corruption. We borrow the term "Quality of Government" (QoG) from Rothstein and Teorell (2008), because the term "Capacity" has been more extensively used to depict the size or the level of resources –or even the capacity to raise taxes- a state has while we are more interested in how the state takes advantage of the resources it manages – that is, in its "quality". Nevertheless, as already mentioned, QoG could be interchangeable here by the standard definitions in the literature of state capacity or administrative capacity.

[4] We discuss such reasons in greater detail in the following section of the analysis.

1997 on Rusia), and of many Latin American countries after different waves of democratization (see Weyland 1998).

This has led to a number of significant quantitative studies, which have also explored what Harris-White and White (1996: 3) and Sung (2004: 179) define as the "contradictory" relationship between democracy and corruption. Studies in this literature have increasingly pointed to the existence of a *non-linear relationship* between democracy and quality of government. Generally speaking, in comparison with authoritarian regimes, democracy has a negative impact on QoG in the early stages of democratization. From there onwards, the effect becomes positive. This non-linear relationship has been explained by two different dimensions of democracy. One hypothesizes about the *level* of democracy and the other about the *time of exposure* to, or historically accumulated experience with democracy. The two dimensions have been tested independently. Regarding the level of democracy, it has been found, using continuous measures of political regimes, that QoG is highest in strongly democratic states, medium-high in strongly authoritarian regimes and lowest in states that are partially democratized. Due to the use of different empirical specifications, this non-linearity has been defined as either a U-shaped (e.g. Montinola and Jackman 2002), a J-shaped (e.g. Bäck and Hadenius 2008) or an S-shaped (e.g. Sung 2004) relationship. In relation to the time of exposure or historical experience with democracy, the finding is that younger democracies produce worse QoG than older ones (Keefer 2007: 804). In sum, the general idea in the literature is that *partial* or *young* democracies perform worse than authoritarian regimes and much worse than *full* or *older* democracies. The puzzle this paper addresses is thus why democracy seemingly impacts quality of government negatively in some cases and positively in others.

This analysis contributes to the theoretical and an empirical literature in a number of ways. First, we explore alternative mechanisms through which democracy may affect QoG. Although previous *institutionalist* studies offer several mechanisms, the question remains as to why democracy impacts government quality in *divergent ways* depending on its level/age. Based

on recent *culturalist* contributions to this literature as well as theoretical developments in economic history, this paper suggests that an additional explanation for this 'U-', 'J-' or 'S-' shaped relationship can be found in the interaction between some basic characteristics of a society and its political regime. It is necessary to complement institutional explanations with cultural arguments which account for the extent to which actors prefer to consume now rather than later. We argue this is determined by economic development. Thus this paper also serves as a synthesis between institutionalist and culturalist approaches to QoG.

In particular, this analysis argues that there is an interaction effect between the *supply* of QoG, determined by the incentives for rulers to provide bureaucratic efficiency and lower corruption (i.e. the level of democracy) and the *demand* for QoG from ordinary citizens on their government to make mid-to-long term investments in bureaucratic capacity. As a country's standard of living increases, so do the demands from citizens for future investments in the state. Essentially, we claim that the impact of democratization on quality of government is contingent upon levels of economic wealth: at low levels of economic development, democracy is expected to have a negative effect on QoG, while at higher levels a positive relationship is expected.

In addition to the previous alternative explanations to this hypothesis, this paper also offers the first systematic test of the effects on QoG of the two main dimensions of democracy pointed to in previous literature – level of democracy and time of exposure or historically accumulated experience with democracy. The results show that, when we include standard control variables and analyze cross-time and space variations, the impact of the two primary alternative hypotheses (i.e. level and time of democracy) on QoG drop out of significance when accounting for our central hypothesis. The type of political regime becomes relevant for explaining QoG only when interacted with the level of development of the country. The main empirical finding is that *poorer countries have higher quality of government under authoritarian rule while moderate-to-wealthier countries perform better under democratic rule*.

The remainder of the paper is organized as follows. Section 2 reviews the prevailing accounts for the non-linear relationship between political regimes and QoG. Section 3 develops the theory of the paper following recent contributions to the QoG literature by Welzen and Inglehart (2008) on the importance of citizens' values as well as contributions to economic history by Clark (2007) on the relevance of time preference rates. Section 4 describes the data and methods used in the time series comparative analysis (Section 5) and in the cross-sectional one (Section 6). Section 7 concludes.

2. The Puzzle: The Non-Linear Effect of Democracy on Government Quality

Montinola and Jackman (2002) present the first large-N cross-country analysis showing that the effect of democracy on the level of corruption is *significant* but *nonlinear*. The best performers would be highly democratic countries while some authoritarian countries would exhibit only slightly less corruption than countries at intermediate levels of democracy. Despite the originality of their results, Montinola and Jackman's (2002) study is limited by the low number of observations (66) and by the cross-sectional nature of the analysis. The cross-sectional design becomes especially relevant when there is reason to suspect the existence of a reverse causality between the independent and dependent variables. The probability of a notable two-way causality between democracy and QoG makes it difficult to assess the real impact of the former over the latter by analyzing one single point in time. While cross-sectional analyses allow us to test the strength of a correlation between two or more variables, only time series can demonstrate causality in the sense of Granger (1969) – if 'X' at time 't' significantly impacts 'Y' at 't'+1 (with 'Y' at time 't' also known). This is especially salient when discussing concepts such as the process of democratization and QoG, which are certainly expected to change over time. How one impacts the other diachronically is of vital importance for understanding this relationship.

Bäck and Hadenius (2008) address both limitations by analyzing a larger dataset and using time series. Their empirical model, which addresses the direction of causality, represents the starting point of this paper's statistical analysis. Bäck and Hadenius (2008) show a curvi-

linear relationship between the level of democratization and "administrative capacity" over time using panel data. They confirm the existence of a significant relationship between democracy and administrative capacity that is negative at low levels of democratization, yet positive at high levels. This is shown with a statistically significant squared variable in their primary statistical model (Bäck and Hadenius 2008:11). While reporting this 'J' shaped relationship over time between these two variables is a substantial contribution to the literature, the mechanisms - through which democracy impacts government quality in divergent ways depending on its level- that they propose are more debatable.

Bäck and Hadenius's hypothesis is that administrative capacity is the result of two types of steering and control: from above (for which authoritarian regimes are better equipped by virtue of their hierarchical and repressive capacity) and from below (which democracies enjoy thanks to a more extensive press freedom and electoral participation). Therefore, countries with low levels of democracy are in a delicate position. While they have lost the top-down control capacities of dictatorships, the institutions of bottom-up control (e.g. active voters, free media) are only partially in place. This is an original theoretical proposition and, in addition, Bäck and Hadenius offer a detailed account of the different arrangements that characterize top-down and bottom-up control systems in dictatorships and democracies respectively.

Nevertheless, their theory lacks micro-foundations –we do not know *who* decides to exert control, *why* and *when*. Therefore, it is not clear how some theoretical statements are derived. For example, in full democracies there seems to be a "synergy between the two forms" of control in which "the direction is applied in dialogue and cooperation" and "the statutory auditing is combined with a more popular and social form" (2008: 16). This structuralist depiction in which individuals are absent leaves us with several uncertainties: what does a 'synergy' mean? How does it arise? Which particular individuals decide to cooperate and why? More importantly, Bäck and Hadenius' theoretical framework requires a strong underlying assumption on actors' preferences, which can be considered overly optimistic. All rulers and all citizens are expected to

be interested in increasing administrative efficiency and reducing corruption. None of them seem to derive utility from corrupt activities. If rulers (in a dictatorship) and citizens (in a democracy) cannot improve QoG it is not because they are not interested, but because the proper control instruments are not in place. Although not stated explicitly, corruption and administrative mismanagement are assumed to solely be the work of and exclusively benefit state officials. These would take advantage of their privileged access to resources when well-intentioned rulers and citizens lack efficient control mechanisms.

In contrast, Keefer and Vlaicu (2007) and Keefer (2007) provide a theory with micro-foundations for understanding the non-linearity between democracy and QoG, as well as an empirical test. Unlike Bäck and Hadenius, the key element is not the level of democracy, but the time of exposure or experience a country has had with democratic institutions. Young democracies fall short of older democracies in several indicators of government performance because of the inability of their politicians to make credible pre-electoral commitments to voters. Building reputations as providers of good public policies is costly for politicians and it takes time. Thus, while politicians in older democracies may be in conditions to achieve it, politicians in younger democracies may prefer to rely on patrons, whose clients trust them but not the citizens. The result is that younger democracies will tend to over-provide clientelistic policies –including corrupt practices- instead of public goods. [5]

Keefer and Vlaicu (2007) assume that credibility is costly to build for the provision of public goods. Nevertheless, one can also expect corrupt exchanges to be subject to severe and costly credibility problems. As shown by several authors, the relationship between politicians' credibility and corruption could also be the opposite to Keefer and Vlaicu's: the more difficulties politicians have to credibly promise that particular corrupt practices will continue in the future, the lower the size of bribes rent-seekers are willing to pay (McChesney 1987; Montinola and

[5] In particular, Keefer (2007) shows that younger democracies under-provide non-targeted goods (e.g. universal education, secure property rights), over-provide targeted goods (e.g. jobs and public work projects), and are more corrupt.

Jackman 2002). In addition, relying on patron-client relations can also be very costly, as the literature on corrupt electoral systems has demonstrated. For example, studies on the Victorian Britain show that sustaining clientelistic networks of support amounted to on average £1,885 for a typical borough.[6] Not only *good* policies do require trust (and money) between rulers and constituencies, but *bad* policies require them as well.

Empirically, Keefer (2007) shows how more years of democracy is correlated with better government performance. Yet he does not control for the *level* of democracy and excludes countries that have never had a competitive election, implying that it is mainly the time of exposure to democracy that matters. However, it is plausible to think, as Bäck and Hadenius (2008) show, that the level - and not only the age - of democracy may affect politicians' ability to build reputations. Keefer (2007) is conscious of another flaw in his analysis: the problematic use of the variable *age of democracy* as a proxy for the mechanism of his theory -the acquisition of political credibility. Of course it is not only a function of the years of democracy that matter, but what happens during those years in terms or reputation building. For this reason, to test this credibility hypothesis, in our empirical analysis -thanks to the use of time series - we can replace age of democracy with a simple measure of the accumulated experience with democracy throughout time a country has.

After reviewing Bäck and Hadenius (2008) and Keefer (2007), the empirical question remains as to which one of the two dimensions really matters for QoG. Is it the *level of democracy* –i.e. the extent to which political leaders are subject to fair and competitive elections in a particular moment- or the *time of democracy* –i.e. the experience accumulated by politicians in building reputations across time? This paper tests both hypotheses for the first time simultaneously. In addition, following Keefer, we consider that "...it is clear that democratic experience alone is far from a necessary condition for credibility" (2007: 820) and therefore

[6] Put in terms of what a person earned in 2006, this would imply campaign costs above £1,500,000 for each candidate in each constituency (Kam 2008).

additional explanations are needed to resolve this puzzle. Thus, we argue that these previous models are underspecified and our analysis explores a new theoretical mechanism to better understand the nonlinear relationship between political regimes and QoG. As developed in the next section, we argue that quality of government is motivated by two primary factors: the citizens' preferences for it (demand side) and the rulers' incentives to create it (supply side). In sum, methodologically, this paper follows the comparative advantage of each one of these two contributions to the literature. Like Keefer and Vlaicu (2007), this paper offers a theory with micro-foundations. Like Bäck and Hadenius (2008), we explore cross-time variations as well as cross-sectional ones.

3. Theory: Demand and Supply of QoG

The "Demand Side" of QoG: Culturalist Theories

The theoretical arguments reviewed in the previous section share a common *institutionalist* approach. That means that the preferences of actors –following standard rational-choice assumptions- are kept fixed and the explanation for different levels of QoG depends on how institutions shape the incentives of individuals. Moreover, they tend to be *supply* side explanations. The key actors are the ones who supply QoG: rulers.[7] The incentives of rulers change from one particular type (or sub-type) of political regime to another and that leads to better or worse QoG. The demanders of QoG (i.e. citizens) play, if any, a minor role. The inhabitants of a country are assumed to be hard-working individuals, would-be inventors ready to develop new technologies if rulers provide them with good institutions and low corruption.[8] Nonetheless, there is an extensive and alternative body of theory and evidence showing, as Przeworski and Limongi (1993: 53) put it, that "it is by no means clear that the villain is

[7] QoG would depend on "the incentives and constraints that face those who make governmental and legal decisions" (Clague et al. 1996: 243).

[8] As Clark (2007: 210) points out, "the preferred assumption [by political economy institutionalists] is that the desires and rationalities of people in all human societies are essentially the same. The medieval peasant in Europe, the Indian coolie, the Yanomamo of the rain forest, the Tasmanian Aboriginal, all share a common set of aspirations and a common ability to act rationally to achieve those aspirations. What differs across societies, however, are the institutions that govern economic life."

necessarily the ruler." In this analysis, we intend to explore these claims further using insights from *culturalist* approaches.

For *culturalist* theories, political institutions (e.g. the characteristics of political regimes) are kept fixed and what would drive the change in QoG would be the variation in social preferences or values. Unlike institutionalists, it would not be rulers, but "ordinary people", using Welzel and Inglehart's (2008: 126) term, that constitute the main driving force. A country's QoG would be the result of the prevailing values in its society. There is less agreement though in the exact content of those good/bad values for government.

Earlier culturalists argued that corruption stems from (immoral) social norms that emphasize "tribal loyalty" rather than the rule of law (Banfield 1958; Wraith and Simkins 1961). More recent versions, on the contrary, establish the relevant distinction between "survival" versus "self-expression" values (Welzel and Inglehart 2008). Similar to classic modernization theories, and actually using several times the term "modernization", Welzel and Inglehart (2008) argue that economic development increases individuals' resources, making them more articulate and better equipped to participate in politics. Instead of being focused on day-to-day survival, citizens will give priority to freedom of choice and, generally, to self-expression values. In those circumstances, citizens will be able to mount more powerful collective actions and place pressure on elites to provide good governance.

Welzel and Inglehart (2008) show the strong statistical association between, first, the level of economic development and the prevalence of self-expression values in a society, and, second, those values as a proxy for good government.[9] Despite the fact that their empirical analysis does not control for other relevant variables (unlike institutionalist approaches and this

[9] In addition, building on the more elaborate empirical evidence from Inglehart and Welzen (2005), Welzen and Inglehart (2008: 136-137) re-interpret the results of two notable recent contributions on the relationships between democracy and economic development –Boix (2003) and Acemoglu and Robinson (2005)- as a support for their hypothesis. The main variables in both studies, according to Welzen and Inglehart, would be proxies for the degree of modernization –or the prevalence of self-expression values - in a given society.

paper do), Welzel and Inglehart (2008) shed some light on what for institutionalists were outliers. For example, the relatively "modern" East Germany and Czechoslovakia by the early 1990s, or Spain by the late 1970s, were able to build higher QoG than an institutionalist theory would predict given their short experience with democracy. However, as previously discussed, cross-sectional correlations of the sort provided by Welzel and Inglehart (2008) do not probe either the direction of the causality -maybe good governance produces self-expression values-[10] or the existence of causality at all –self-expression values can be correlated with other variables such as educational levels.

Generally speaking, the main problem with cultural explanations is the problematic scientific tractability of values. Evidence shows us that there are examples of high QoG in different parts of the world in different periods of time, but particular social values are changing continuously both cross-time and cross-nationally. Similar to culturalist approaches, we argue that people's motivations and values play an important role on good governance, but we focus on a value which can travel well across time and space: time preference or subjective future discount rate. That is, that, everything else being equal, people prefer to consume now rather than later. This value has been extensively used by economists, but overlooked in the QoG literature. Its main advantage is that it is neutral in terms of preferences –i.e. it does not matter *what* people want to consume, but *how* they want to consume it. As a result, future discount rate, which could be defined as a *content-free* value, may travel well across societies with different characteristics.

The "Demand Side" of QoG: Economic History and the "Future Discount Rate"

'Values' are receiving increasing attention in economic history. As Clark (2007) argues, the available evidence indicates that the advent of democracy in Britain and the security of property rights it implied (i.e. the traditional institutionalist explanation) was not the only factor driving the decrease in interest rates that would eventually lead to the industrial revolution. There was an

[10] See the work of Rothstein (with Eek 2006, with Uslaner 2006, and with Stolle forthcoming) for evidence and theoretical discussions on how good government may affect social values, like the degree of inter-personal trust.

unnoticed but relevant cultural change in the Britain of those years: the spread of "middle-class culture" throughout the society (2007: 259). Unlike previous culturalist explanations, Clark mostly focuses on a measurable aspect of Britain's culture that has been overlooked in the literature: time preference or '*future discount rates'*. He offers evidence showing that the risk premium element of interest rates (i.e. the one which could be affected by institutions) did not decisively change during the decades before the industrial revolution. Thus, what drove the decline in interest rates was the other relevant component of them: the subjective future discount rate. Following extensive research by anthropologists and economists, Clark assumes that the future discount rate (or the degree of "impatience") sharply declines with income: richer individuals have a lower time preference rates than poorer individuals. Nevertheless, once an individual has lowered her future discount rate, meaning once she has become more patient, drops in income will hardly alter it.[11]

In sum, (democratic) institutionalist theories of the industrial revolution - focused mostly on the behavior of rulers - should be complemented with other explanations accounting for the behavior of the vast majority of the society - such as variations in subjective future discount rates. Similarly, we contend here that the interplay between time preferences and democracy helps explain the emergence of QoG.

Following these insights in economic history as well as the culturalist approaches reviewed above, we assume that a country's 'future discount rate' is a function of its economic development. As a country becomes more economically developed, its future discount rate is expected to decrease - that is, it becomes 'less impatient'. Two problems may arise with this assumption that future discount rates can be measured by income. First, it is not based on an economic theory which accurately describes the exact mechanisms through which income affects discount rates. These mechanisms are not self-evident in the literature. To start with, as

[11] Economists have thought of time preference rates as being hard-wired into people's psyches (Clark 2007:172; for a full description of this approach, see Rogers 1994).

economists and anthropologists have shown, the existence of time preference in consumption cannot be derived from consideration of rational action (Clark 2007:172).[12] Despite the lack of a unifying theory, evidence systematically shows correlations between income and lower future discount rates. In general, the finding in economics is that poor people tend to have a higher propensity to consume vis-à-vis invest for future consumption.[13] Although we acknowledge that this assumption - not supported by a rational theory - might be controversial, we argue that it is less controversial than assuming a null impact of income on future discount rates, thus ignoring the body of evidence that points out a relationship between those variables. The fact that something remains irrational for standard economic theory (e.g. poorer people, if they were fully rational, *should* be more patient than they are) does not make it false.

Secondly, it can be argued that what drives the drop in future discount rates is not income *per se*. It is probably that other factors, such as an increase in the standards of livings, or in the educational levels or in the self-expression values noted by Welzen and Inglehart (2008), which allow individuals to think less myopically. The unavailability of reliable panel data on these other alternative variables - together with the fact that there are strong correlations between these factors and income levels - induces us to use income as a proxy for all these factors that would affect what some people would define as the level of "sophistication" or "modernization" of a society –or, as we prefer to call it here, the subjective future discount rate prevailing in a society.

As a society's future discount rate decreases, its willingness to invest long term increases. Put simply, it is plausible to expect that lower income societies (countries with high future discount rates) will demand different goods from government institutions than higher income societies. Because investments in improving bureaucratic capacity (QoG) are costly and

[12] The most extreme cases of high discount rates have been found in pre-market societies. One of the most standard examples would be the case of the Hadza of Tanzania depicted by Woodburn (1980: 101): their future discount rate was so high that, when collecting berries, to ease the present harvest they often cut entire branches from the tree without any regard to future loss of yield.
[13] See Kaldor (1955: 2) for an earlier formulation of this idea and Clark (2007: 172) for a review of the evidence from experiments and anthropologists' research.

require patience to benefit from potential improvements, lower income societies are expected to over-value a State able to deliver goods for *immediate consumption* (e.g. patronage jobs, direct cash through clientelistic exchanges) and will under-value States which undertake medium-to-long term investments in administrative capacity (e.g. develop a meritocratic recruitment system, start the legal steps for enacting and implementing rule of law, fight favoritism and corruption), which are a function of the discount rate.

It is important to note here that we do not claim people with higher future discount rates *prefer* corruption and rent-seeking or, following traditional culturalist ideas, that they find corruption morally correct. Actually, most humans, irrespective of their cultural background, tend to perceive corruption as something wrong.[14] People who heavily discount their future simply are relatively less ready to pay the short-term costs of building QoG. On the contrary, higher income societies in which individuals posses lower time preference rates will place higher pressure on the State to undertake (costly at short- but beneficial at medium- and long-term) investments in building administrative capacity and reduce corruption.

The "Supply Side" of QoG: Political Institutions and the Interaction Effect

Different social demands for good governance cannot totally explain the observed level of QoG. It is necessary to take into account the "supply side" as well. Institutions can be expected to shape rulers' incentives. For the sake of simplicity, we only consider here the most basic scenario. We use the simplest assumption of culturalist approaches in relation to citizens - i.e. the future discount rate is dependent on the income. And we also use the simplest assumption of institutionalist or political economy models regarding rulers: that, democratic rulers derive their utility from being re-elected –which means to be responsive to citizens' demands or, at least, to the interests of a relatively large constituency. Autocrats, on the contrary, are responsive solely to

[14] One intuitive proof is that in almost all contexts the suitcase with the money is passed below the table (*The Economist*, "The Etiquette of Bribery", Dec 19th 2006).

their interests –being them to maximize their revenue (Olson 1993) or maximize their survival in power (Bueno de Mesquita et al. 2003).

Figure 1 shows the level of QoG predicted as a result of the interplay between the future discount rates of citizens and the institutional incentives of rulers. Democratic rulers in low-income countries can be expected to be responsive to citizens' demands for goods of *immediate consumption*, such as patronage jobs or clientelistic policies. Or, using the terminology of Welzen and Inglehart, in low income countries people's self-expression values - which would lead to demand better QoG - would be "subordinated to the needs for subsistence" since "survival is precarious" (2008: 133). Rulers will lack incentives to undertake costly medium-long investments in improving administrative efficiency (e.g. meritocratic reforms) and the result will be a low QoG. This prediction is similar to the literature that in the 1950s and 1960s emphasized that democracy unleashes pressures for immediate consumption. Democracy would generate an explosion of demands for current consumption, reducing investment and hence retarding growth.[15]

*****Figure 1 about Here*****

On the contrary, in low-income societies, the existence of a ruler with a counter-balancing low future discount rate may be beneficial for QoG relative to low-income democracies. Obviously, dictators may simply fulfill the immediate consumption demands of most or some of their fellow citizens. Actually, many autocrats do so, as the stereotypical example of the African Kleptocrat shows. Nevertheless, as Bates (2001) illustrates, unless dictators control sufficient resources on their own (e.g. natural resources or substantial foreign aid, from which they can extract resources effortlessly), their survival in office and their capacity to amass revenue will critically depend upon the capacity of others to produce economically (2001:102). Thus, there are reasons to argue that many dictators will behave, using Olson's

[15] See, for example, Galenson (1959) - who argued that "the more democratic a government is, the greater the diversion of resources from investment to consumption"- or Huntington (1968). For a critical review of this literature, see Przeworski and Limongi (1993: 54-55).

(1993: 567) terminology, as a "stationary bandit" with an "encompassing interest in his domain". It may benefit many autocrats to invest in the provision of a peaceful order and other public goods that increase productivity - such as, for instance, to build QoG.

The paradigmatic examples of dictators who heavily invested in the development of QoG would be those of the Asian "tigers", like Park of South Korea, or of Southern European countries, like Franco of Spain. A large body of literature shows that QoG was not achieved by these rulers *despite* their lack of responsiveness to citizens' demands, but, quite the opposite, *because* of it (Przeworski and Limongi 1993: 56). It was not the state's responsiveness to society, but "state autonomy" as the literature refers to, that led to improvements in QoG. The insulation of rulers from citizens' demands for immediate consumption goods allowed the former to undertake the costly investments in building administrative capacity. Generally speaking, the autonomy of autocrats from the high distributional pressures existing in a developing economy would increase the government's ability to provide public goods and impose short-term costs (Haggard 1990: 57).

Having noted this, it is important to state that the level of QoG achieved in an authoritarian country cannot be the highest possible, since it is always subordinated to the predatory nature of rulers. Along these lines, the available evidence points out that even the most successful examples of "developmentalist" dictators with encompassing interests in their domains, like Park or Franco, provided rent-seeking goods to particular groups and exhibited certain records of corruption.[16] Similarly, since dictators are not (or do not need to be) responsive to citizens' demands, it is difficult to predict an increase or decrease in QoG when moving from lower-income autocracies to higher-income ones. On the one hand, richer countries can be expected to afford better institutions (Pellegrini and Gerlagh 2007: 5). On the other, the richer the country, the bigger the pool of resources from which a dictator can predate without the need to undertake costly investments for the provision of public goods or the protection of property

[16] E.g. see Tortella's (2000) or Garcia Delgado's (2000) accounts of Franco's industrial policy.

rights.[17] Therefore, despite the technical *capabilities* to enhance QoG can be expected to be higher in rich than in poor autocracies, the *incentives* of rulers to do so can be expected to be lower.[18]

In relation to rich democracies, the argument here is straightforward: in order to survive in office, democratic incumbents must be responsive to citizens with relatively low future discount rates interested in an administration capable of providing benefits at medium- long-term, such as rule of law to protect their property rights or investments in the development of human capital (e.g. health care, education). Democratic rulers, like corporate managers subject to competition, will try to signal to their shareholders-voters that they are the most competent ones to bring them stable prosperity. The evidence in support of this correlation between high-income democracies and good governance is overwhelming: the best performers in any ranking of QoG are rich democracies. In sum, the prediction of this theoretical section is that *the level of democracy will have a negative effect on QoG in lower-income countries, while it will have a positive impact in higher-income countries*.

4. Data and Methods

The Dependent Variable

This paper uses as a proxy for QoG the same variable as Bäck and Hadenius (2008) –which they call 'state capacity' and which covers 140 states from 1984-2002. The measure is a combination of two of the three indicators from the *Political Risk Services'* (PRS) ICRG data. These two components are 'bureaucratic quality' and 'level of perceived corruption' and are combined into a single index that ranges from '0' to '10', with higher values indicating better QoG. For

[17] As Bates (2001) claims in his comparison between resource-poor countries (e.g. Modern European Absolutist Monarchies, or post-colonial Asia), whose rulers invested heavily in building administrative capabilities, and resource-rich ones (e.g. post-colonial Africa), whose rulers relied on patronage-ridden corrupt administrations, the autocrats' incentives for providing QoG may be affected by country's initial level of resources or income.

[18] We are not in conditions here to empirically assess the notable within-autocracies differences in terms of QoG that are obvious to any observer: why do some dictators behave like South Korea's Park or Spain's Franco, investing in rule of law and meritocratic-Weberian administrations while others behave a la Mobutu? Using appropriate empirical proxies and a clear theoretical guidance that we lack for this analysis, future research should explore the potentiality of systematic within-autocracies differences in QoG.

bureaucratic performance, states receive a higher score when they are perceived to be able to withstand a change in government without experiencing traumatic disruptions of services and day-to-day administrative functions. States with high risk scores (or lower bureaucratic quality) are unable to adjust to a change in government and this tends to be disruptive with respect to policy formulation and implementation and daily administrative duties. The corruption element of the index assess whether potential corruption in the form of excessive patronage, nepotism, job reservations, 'favor-for-favors', secret party funding, and suspiciously close ties between politics and business is common or seldom. The mean value for this variable in the sample is 5.36 with a standard deviation of 2.4 and has a total of 2,437 observations.[19]

The Independent Variables

On the 'supply side', we measure Democracy as a combination of Freedom House and Polity scores, taken from the *Quality of Government Institute* database (Teorell et al 2008). This measure is standardized and ranges from 0-10, with higher scores equating higher levels of democracy. The average of Freedom House is the scaled from 0-10 and Polity is measured from 0-10 as well. The two measures are then averaged together. Hadenius & Teorell (2005) find that this combined index is superior both in terms of validity and reliability to either Freedom House or Polity independently (Teorell et al. 2008).

On the "demand side", as mentioned above, the measure for economic development employed here is intended to serve as a proxy for the concept of future discount rate. Though alternative measures -such as a more refined indicator of standard of living or education levels- might be superior proxies for a country's average subjective future discount rate, they are

[19] The most common form of corruption met directly by "business is financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans" (see Teorell, Holmberg and Rothstein 2008). For a more detailed description of this variable, please refer to either the Quality of Government Institute's database codebook at: http://www.qog.pol.gu.se/ or the PRS Group website: http://www.prsgroup.com/

significantly less available across space and time with respect to the data.[20] Due to a wide scope of availability, the country's level of gross domestic product (GDP) per capita is used in this analysis. This variable is the natural logarithm of the constant value in US dollars for 1995, taken from the *World Development Index* at the World Bank. Combining the 'supply' and 'demand' of QoG to test the primary hypothesis of this paper, we generate an interaction term between democracy and income.

To control for Bäck and Hadenius' (2008) hypothesis on the nonlinearity between democracy and QoG, we also square the level of democracy. To control for Keefer's (2007) hypothesis on the impact of time and experience with democracy, we construct an additive count variable, which takes into consideration not only for how many years country 'X' has experienced democracy, but also the 'depth' of its democratic institutions. At time 't', this variable is the sum of all previous years of the Freedom House/ Polity democracy measure since 1972 (the first point in our dataset). Thus this indicator captures both 'depth' of democracy (uses a 10-point scale as calculated by Freedom House and Polity) and 'time' or 'experience' (each year is equal to year 't' plus the sum total of all democracy scores before it dating back to 1970). For example, by 2004, an authoritarian state such as Libya has an additive 'democratic experience' score of 35.58, while an 'experienced' democracy such as Denmark has a score of 330.

Additionally, due to the time series nature of the data, we include a time count trend that begins with the first year that ICRG began to code their international risk assessments. We do this for two reasons. First, as it is common in TSCS data, the count variable helps to avoid problems associated with spurious correlation when both the dependent variable and the primary independent variables vary independently, but in a constant trend over time (Tavits 2005). This is the case with the dependent variable (ICRG), democracy and GDP data, thus the count variable

[20] Likewise, if there were reliable cross-time comparative indicators, it would also be interesting to test the impact of other alternative variables could have an impact in a country's propensity to invest or future discount rates, such as income inequality.

would be necessary to control for this tendency. Secondly, since the dependent variable is based on subjective perceptions, the time count variable is expected to help us correct for potential year-to-year differences in the administration of the PRS Group's surveys (e.g. one can expect cross-time changes in the composition of the respondents or in the way questions are framed) and trends in the systematic diachronic changes.

We also include a number of control variables in the model.[21] The first control variable captures a country's level of trade openness, measured as imports plus exports divided by GDP. Earlier empirical studies have found that open countries are less corrupt relative to more closed economies (Sandholz and Gray 2003). We thus expect this variable to have a positive relationship with the dependent variable. The second control is a dummy variable indicating whether or not the country is a former British colony. Based on numerous previous empirical studies, we expect both trade openness and being a former British colony to have a positive impact on administrative capacity (La Porta et al 1999; Bäck and Hadenius 2008). Following the advice of Teorell and Hadenius (2007) a dependent variable lagged by one year in all of the models is included to account for potential first order serial correlation. Obviously, questions about causality may arise in a study that examines the effect of democracy and economic growth on quality of government. Although we cannot completely solve this potential problem of two-way causality between QoG and income, we follow previous literature (e.g. Bäck and Hadenius 2008) and lag all independent variables by one year, which also helps to answer any questions about endogeneity and directional causality, modeling the impact of the independent variable occurring before the event of the dependent variable diachronically.

Section 5 offers a model specification similar to the Bäck and Hadenius article, in that we run a time series, cross sectional model with panel controlled standard errors (PCSE's) following the advice of Beck and Katz (1995). However, some problems may arise when repeated

[21] Again, we specify our time series model in this aspect in a similar fashion to Bäck and Hadenius (2008).

observations per unit (country in this case) because the observations may not be independent. Thus additional models are run for robustness checks, including a fixed effects model (with PCSE's) with country dummies included so as to gauge the effect of the independent variables only within countries over time. In fixed effects models, all time invariant explanatory variables, such as the British colony dummy, are excluded. Such models help to account for panel intercepts that differ from country to country. Additionally, we run a random effects model with robust standard errors, which the random error v_i is heterogeneity-specific to each country, to account for not only potential deviation in the intercept across country observations, but individual differences are considered random rather than fixed and estimable. Thus the intercept is a random outcome variable (or random effect), which is a function of a mean value plus a random error.

To add robustness to the findings in section 5, a cross-sectional analysis is done in section 6. Due to a wider scope of cross sectional availabilities in the data, we account for a number of alternative hypotheses in addition to trade openness and former UK colonies. First, we test for press freedom, which we expect will be associated with better QoG (Brunetti and Weber 2003; Adsera, Boix and Payne 2003). Press freedom from Freedom House, has ratings for up to 192 countries world wide and scales states from 0 (most free) to 100 (least free), which we invert. Further, Treisman's measure of the number of newspapers per 1000 inhabitants (Treisman 2000) is also used. Secondly, we include level of education, which we take from Barro and Lee (2000). The measure captures the average number of schooling years for those in the population segment of 15 years and older, which is available for 103 countries. Third, we use ethnic fractionalization which is expected to have a negative impact on QoG (La Porta et al 1999; Alesina et al 2003; Charron 2007). We include Alesina el al's (2003) measure of ethnic fractionalization, which uses the Herfindel index to calculate the odds of selecting two random people from different ethno-

linguistic backgrounds within a population[22]. Fourth, we control for the number of veto players (Tsebelis 1995) in the model, which we take from the *Database of Political Institutions* (Keefer et al 2006). Based on Andrews and Montinola (2004), we expect that this relationship will be positive. Finally, we control again for Keefer's 'democratic experience' hypothesis using Treisman's (2000) variable of the number of years a country has remained classified as a democracy since 1930 (ranking as 6 or higher on Beck et al.'s 'Executive Index of Electoral Competition', Beck et al 2003). All cross sectional variables are taken from the *Quality of Government Institute's* cross sectional database (Teorell et al 2008).

5. Time Series Analysis

Table 1 displays 7 empirical models designed to test our hypothesis relative to the hypotheses of Bäck and Hadenius (2008) and Keefer (2007). We begin by replicating the Bäck and Hadenius primary results, demonstrating their finding – that the 'J'-shaped relationship between democratization and administrative performance is indeed significant.[23] These results support the assertion that strong authoritarian states are expected to perform better on average than those in the middle of the democratic scale, while strong democracies are associated with the highest scores of QoG. In model 2, we run a baseline test of our primary hypothesis, which states that the interaction between economic growth and democratic development has greater explanatory power in explaining the pattern in the data of administrative performance than does the squared democracy variable. In this basic baseline model (including the lagged dependent variable) we find initial support for our hypothesis. At low levels of economic development, the effect of democracy is indeed negative on administrative capacity, and the interaction term is positive and significant at the 99% level of confidence. Thus, the prediction that the impact of democracy is contingent on economic growth is corroborated in that, when adding the total effects of the three

[22] The standard Herfindahl index is: $$H = \sum_{i=1}^{n} s_i^2$$

[23] We wish to thank Hannah Bäck for allowing us to use her data for this replication

variables, the impact of democracy is actually *positive* for states with higher levels of economic growth.

*****Table 1 About Here*****

In model 3 we replace the squared democracy term with the indicator for our primary hypothesis, the interaction term between democracy and economic growth. Similar to the baseline model, we find that even when trade openness and British colonial heritage are controlled for, the interaction term is robust and remains strongly positive and significant at the 99% level of confidence. The coefficient for economic growth drops below the 90% level of confidence, which with the inclusion of the interaction term, indicates that there is no significant effect of economic growth on QoG in strong autocracies. Democracy remains strongly negative, meaning that, at low levels of economic development, democratization has a negative impact on government quality.

Model 4 includes control variables with the proxy for Keefer's hypothesis - the 'democratic experience' variable along with the time count variable. We observe similar results to the initial baseline model. On its own - that is, not taking into account the level of democracy - GDP does not exert a significant effect on QoG. Second, democracy has a significantly negative impact on administrative performance when economic development is low, yet the interaction term remains significant and positive. When calculating the impact of democratization at higher levels of economic development, its impact is indeed positive (see Table 1). The control variables in the model from the Bäck and Hadenius article remain robust, with British colonies and trade openness being positive determinants of a quality bureaucracy. Surprisingly, the 'democratic experience' variable, while in the expected direction, fails to reach the 90% level of significance – even without the inclusion of the squared democracy variable. This shows the strength of the interactive effect between income and democracy relative to the alternative explanation of administrative performance as a result of the accumulated experience with democracy. Finally, the 'year count' variable indicates that there is a diachronic, negative trend in the dependent

variable, and this relationship is strong. Whether or not this is 'actually' happening – that bureaucratic services have been deteriorating in quality since the 1980's is of course debatable, but in terms of the PRS Group's chronicle of this concept, there is certainly a downward trend that this variable has captured.

The fifth model in Table 1 tests all of the hypotheses together in order to gauge their relative strength to one another. Here we observe that the results in models 2 and 3 hold even when accounting for the squared democracy variable, which drops below the 90% level of significance when the interaction, time count and democratic experience are included[24]. In models 6 and 7, we test for robustness of the results in model 4, including all explanatory variables. Model 6 presents the fixed effects results with country dummies, which capture only variation over time within countries. While the negative significance of democratization at low levels of economic development is no longer significant, the interaction effect remains positive and significant at the 99% level of confidence. The random effects model (model 7), known for producing larger standard errors, thus expected to produce weaker results, demonstrates quite similar estimates compared with model 5, which provides further support for our findings.

*****Figure 2 about Here****

Following the advice of Brambor, Clark and Golder (2006), Figure 2 shows the impact of democracy at various levels of economic development according to the estimates in model 3 in table 1.[25] Due to the difficulties in interpreting interaction terms, this visual provides additional clarity. The bold line represents the marginal effect of democracy on QoG and demonstrates how this effect in fact changes at various levels of economic development. The two dashed-lines around the marginal effect of democracy indicate a 95% confidence interval according to the

[24] Because the 'democracy squared' and 'democratic experience' variables are correlated at .68, we were concerned about possible issues with multicollinearity. We ran a similar model to model 5 in Table 1 without the 'depth of democracy' variable. While the coefficient increases slightly to .0024, the standard error remains the same, rendering the 'squared democracy' variable statistically indistinguishable from '0'.
[25] The impact of democracy without the inclusion of the squared term is chosen for interpretation for the sake of clarity due to the statistical insignificance of the squared term in models 5-7 and the 'democratic experience' variable in models 4-7.

regression Table 1. When both the upper and lower bounds are either above and below the zero line, democracy has a significantly positive or negative impact on QoG respectively. Thus we may observe the conditions that democracy has a statistically significant impact (negative or positive) on the dependent variable. One caveat in interpreting these numbers is needed. When the lagged dependent variable is included in any time series model, the remaining explanatory variables account for any changes in the dependent variable away from its first-order lagged trend. This explains why the coefficients in the model (aside from the lagged dependent variable) might seem relatively small. According to the summary statistics (see appendix), the mean of the log of GDP per capita is 7.5 with a standard deviation of 1.6. Therefore from roughly the mean per capita country income in the sample to 4.5 (about 1.85 standard deviations below the mean) the effect of democracy on QoG is *negative* yet statistically insignificant. However, for the poorest states - slightly above two standard deviations below the mean and below - the effect of democracy is predicted to actually *reduce* QoG, as predicted in Figure 1. Conversely, the impact of democracy on QoG is *positive* and statistically significant for countries with a level of economic development slightly above the mean value in the sample (about 7.6 and above). A one standard deviation increase in democracy for a country with a GDP per capita one standard deviation above the mean results in an increase in QoG by .03. This impact is predicted to increase as economic development increase, also predicted in Figure 1.

6. Cross Sectional Extension and Robustness Checks

The overwhelming majority of empirical studies on the determinants of quality of government have used cross sectional data exclusively (La Porta et al 1999; Treisman 2000; Fisman and Gatti 2002; Jackman and Montinola 2002). This section replicates our model and tests for numerous other alternative explanations using cross sectional data from 2002 to check for the robustness of the results from the time series models. However, one caveat must be taken into consideration in relation to the following results: to make easier the comparison with previous cross-sectional analysis, the dependent variable (QoG) contains here one element in

addition to bureaucratic quality and corruption perception from the previous section. The dependent variable here, taken from the PRS Group's *International Country Risk Guide*, also contains 'rule of law and order'. 'Law' is an assessment of the strength and impartiality of the legal system, while 'order' is an assessment of popular observance of the law. The total measure combines the three indicators – 'bureaucracy', 'corruption' and 'rule of law and order' averaged together and scaled from '0'-'1', with higher scores indicating better QoG.[26]

*****Table 2 about Here*****

Table 2 displays the results of the cross sectional analyses. We begin with the same specification as model 3 in table 1, using trade openness and former UK colony as control variables. We find that the results support the time series model for the primary variables in that the democracy variable is negative and highly significant and the interaction term is positive and also highly significant. At low levels of economic development, democratization lowers government quality, while at moderate to high levels of wealth, democracy has a positive effect. The only notable difference is that economic development has now a positive and significant impact on the dependent variable even for authoritarian states in some of the cross-sectional models. Although this result is not robust when controlling for newspapers circulation (model 4) and education levels (model 5).

Briefly, in models 2-8, which test alternative hypotheses, we find that none of the rivals better explains QoG than the interaction between democracy and development. The squared democracy variable is far from significant in model 2. In models 3 and 4, both press variables are strongly significant and positive determinants of quality of government in the model. Though both coefficients are in the expected direction, the level of education (number of years of

[26] The results do not substantially change if we use the same dependent variable as Bäck and Hadenius (2008) as well as in our time series analysis instead of the total measure of the three indicators of ICRG. Nevertheless, we choose to present the results with the three components of the ICRG index because it has been more extensively used for cross-sectional analyses than the two components studied by Bäck and Hadenius. If in the time series section we aim at replicating Bäck and Hadenius' (2008) encompassing analysis, here the goal is to replicate the most relevant cross-sectional studies on QoG, which tend to include proxies for "ruler of law" as well.

schooling) appears to have no significant effect on the dependent variable in model 5, nor does ethnic fractionalization in model 6. In model 7 we control for the number of veto players, but it does not seem to exert a significant effect. In model 8 we test Keefer's or the 'democracy experience' hypothesis, which receives some empirical support, but it is only significant at the 90% level of confidence. The bottom line of the cross-sectional analysis is that the interaction between democracy and income remains strongly significant despite the inclusion of a number of alternative hypotheses, adding robust support to the cross-time results.

7. Conclusion and Further Discussion

This paper has addressed one of the *big questions* in comparative politics: "What types of governments are most likely to have economic policies and institutions that generate good economic performance?" (Clague et al. 1996: 243). To answer it, we synthesize a number of relevant literatures and derive a relatively simple theory based on both institutional and cultural explanations. Similar to earlier studies that address the impact of democracy on QoG, we find this relationship to be nonlinear. Prior explanations and empirical models aiming to account for this non-linear relationship included a 'squared-democracy' variable or a 'time or experience with democracy' one. None of these variables stand as significant in our empirical model once we also test our hypothesis that the impact of democracy is conditioned by the level of economic development. In democracies, when economic development is low, citizens' demand for long-term investments in bureaucratic capacity is also low. They expect leaders to provide basic services more in line with the patron-client model. Thus, a low level of QoG is predicted in such cases, even relative to authoritarian states, which are to some degree more shielded from the demands of the citizens and can 'afford' to make small investments for future improvements in QoG –if that enhances their capacity to survive in power or extract resources. Conversely, for democracies with higher levels of wealth, we argue that the 'future discount' rate of citizens (the demand side) is low enough for them to pressure leaders to undertake mid-to-long term investments in government quality.

Our empirical results and conclusion parallel those of Lipset (1960): a democracy, to perform properly, to develop QoG, needs as a "prerequisite" some level of economic development. On the one hand, like most scholars in the field, this paper cannot offer normative implications regarding the nature of the political regime because "there are examples of good - and of bad - economic performance under both autocratic and democratic governments" (Clague et al. 1996: 243). On the other hand, unlike the prevailing view in the literature that democracy is a "complex phenomenon with unpredictable effects" (Moran 2001: 390; Sung 2004: 179), we argue that the effects of democracy can be predictable if we take into account the economic context in which it emerges.

This paper sheds light on what has been defined as the "contradictory" relationship between democracy and corruption (Harris-White and White 1996:3; Sung 2004:179) by looking at both the supply and the demand side of QoG. Institutionalist authors criticize the "methodological inconsistency" of the explanations that assume individuals are self-interested, but dictators are benevolent (Clague at al. 1996: 244). We consider that there is also a methodological inconsistency in the institutionalist explanations focused exclusively on rulers. If rulers are considered as self-interested individuals who frequently have short time horizons, why should we not assume that their fellow citizens may also have similar preferences?

This analysis also elucidates some of the controversies surrounding the relationship between the level of economic development and the QoG. Do quality government institutions foster economic growth or are quality government institutions simply the result of economic development? Though one must always be cautious in making claims about the direction of causality, we argue that our design best captures potential problems of endogeneity by accounting for changes in time using one-year lags of all explanatory variables (including the lagged dependent variable). Accounting for cross sectional effects as well, we argue that our design is not only a contribution to the literature in the sense of specification (the operationalization of the

theorized interaction term) but also by best accounting for the causal direction of the relationship specified.

Literature explaining quality of government has found a positive effect of the level of economic development on QoG although several studies have pointed out very diverse theoretical mechanisms. To start with, income increases may foster QoG because richer countries can be expected to afford better institutions and many variables correlated with income, such as schooling levels or urbanization, may decrease the social tolerance of corruption (Pellegrini and Gerlagh 2007: 5). For Inglehart (2008) economic development gives individuals resources to shift from survival to self-expression values. For Montinola and Jackman (2002), on the contrary, economic development is a proxy for the level of public sector wages. Since one may expect poorly-paid government officials to be more prone to complement their salaries with bribes, the higher the public sector wages, the lower corruption one should see. The positive impact of income would thus be simply capturing the effects of public wages. All these mechanisms imply an independent effect of the level of economic development on QoG. Nevertheless, the analysis of this paper shows that the level of economic development does not exert a significant effect *on its own*, but only in democracies.

In sum, this paper provides and tests some basic micro-foundations to explain a certain paradox for several international observers: that dictatorships could be "good" at early stages of development, but are "bad" afterwards. One frequently finds in the press statements like this: "Like South Korea, Taiwan, and now China, Vietnam has shown it is possible to escape poverty under authoritarianism. But it is surely no coincidence that most of the world's richest countries by income per head are liberal democracies" (*The Economist*, April 26th 2008). This paper has offered some tentative mechanisms for these "no coincidences": while you are poor, a dictator may provide better QoG; on the contrary, when you achieve certain level of development, good bureaucracy and administrative services and lower corruption are better provided by democratic rulers.

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Figure 1. Predicted levels of Quality of Government

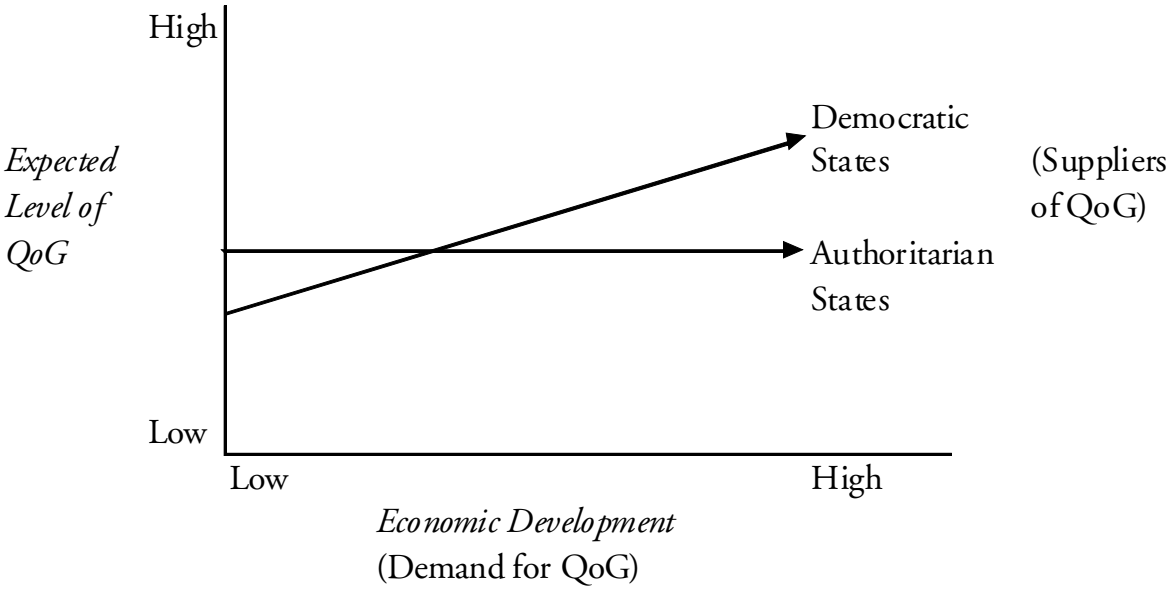
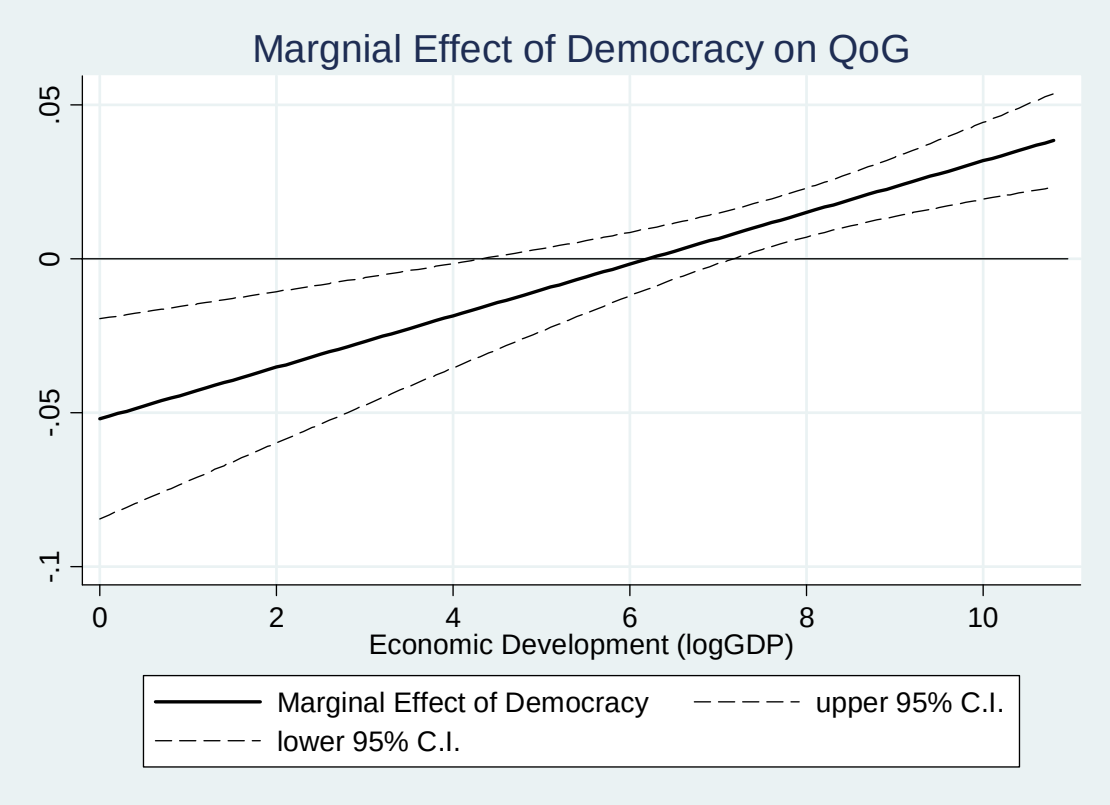


Figure 2



Note: Figure 2 done in STATA with the help of the commands from Brambor, Clark & Golder (2006) found at: http://homepages.nyu.edu/~mrg217/interaction.html

Table 1 – The Conditional Impact of Democracy on QoG

	Pooled T.S.C.S					Robustness Checks	
Variable	Replicated Model[1] (1)	Baseline Model (2)	Baseline w/ Controls (3)	Add Dem. Exp. & time count (4)	Full Model w/ Sq. Dem. (5)	Fixed Effects[a] (6)	Random Effects (7)
Democracy	-.055**	-.034**	-.052***	-.030*	-.043**	-.024	-.042**
	(.020)	(.014)	(.017)	(.016)	(.019)	(.030)	(.018)
Democracy²	.007***	-	-	-	.0023	0.065	0.009
	(.002)				(.0018)	(.090)	(.013)
GDP per cap.	.039**	.015	.004	.005	.008	.0018	.0024
	(.019)	(.018)	(.016)	(.015)	(.017)	(.0029)	(.0018)
Dem X GDP	-	.006***	.008***	.006***	.005**	.0055***	.005***
		(.0017)	(.002)	(.002)	(.002)	(.0021)	(.0017)
Trade	-.020	-	-.002	.052**	.049**	.171**	.051*
	(.032)		(.028)	(.025)	(.024)	(.078)	(.028)
UK Colony	.072***	-	.075***	.057**	.062***	-	.062***
	(.023)		(.023)	(.023)	(.023)	(.149)	(.024)
Year Count		-	-	-.022***	-.021***	-.033***	-.021***
				(.005)	(.004)	(.005)	(.002)
Democratic Experience		-	-	.0002	.0002	.0014*	.0002
				(.0002)	(.0002)	(.0008)	(.0002)
Lag Dep. Var.	.927***	.933***	.925***	0.924***	.923***	.882***	.922***
	(.019)	(.019)	(.008)	(.019)	(.019)	(.011)	(.008)
Constant	.089	1.51***	.235**	.661***	.702***	.422	.703***
	(.096)	(.281)	(.110)	(.155)	(.162)	(.678)	(.107)
Obs.	1998	2077	1998	1990	1990		1990
Countries	127	130	127	127	127	127	127
R²	.96	.94	.96	.96	.96	.96	.96

Notes: Dependent variable is 'Quality of Government' scaled so that higher scores indicate better government performance (0-10).
[1]Model replicated from Bäck and Hadenius (2008)

All estimates are unstandardized regression coefficients with panel corrected standard errors in parentheses (xtpcse)

[a]Fixed effects model run with country dummies (xtpcse in STATA). Random effects with robust standard errors
p*<.10, p**<.05, p***<.01

Table 2 - Cross Sectional Regression Results – Alternative Explanations and Robustness Checks

Variable	*Baseline Model* (1)	*Squared Democracy* (2)	*Press Freedom* (3)	*News Circulation* (4)	*Education Years* (5)	*Ethnic Frac.* (6)	*Veto Players* (7)	*Democracy Experience* (8)
Democracy	-.106***	-.108***	-.113***	-.103**	-.114***	-.106***	-.108***	-.088**
	(.027)	(.029)	(.025)	(.036)	(.034)	(.027)	(.028)	(.030)
GDP per cap.	.035*	.037**	.036**	.004	.006	.041**	.038**	.040**
	(.019)	(.018)	(.017)	(.024)	(.032)	(.018)	(.018)	(.019)
Dem X GDP	.014***	.012***	.011***	.013***	.015***	.014***	.013***	.011***
	(.003)	(.003)	(.003)	(.004)	(.004)	(.003)	(.003)	(.029)
Trade	.0004	.0003	.0005	.0002	.0002	.0003	.0003	.0001
	(.0003)	(.0003)	(.0004)	(.0003)	(.0003)	(.0003)	(.0003)	(.0003)
UK Colony	.051*	.051*	.039	.042	.078**	.051*	.044	.040
	(.026)	(.027)	(.026)	(.027)	(.031)	(.026)	(.026)	(.027)
Democracy²		.001						
		(.002)						
Press Freedom			.005***					
			(.0009)					
Newspaper Circulation				.0004***				
				(.0001)				
Education Years					.286			
					(.244)			
Ethnic Fractionalization						-.030		
						(.041)		
Veto Players							.012	
							(.011)	
Democratic Experience								.0015*
								(.0008)
Constant	.094	.097	.509**	.341	.286	.032	.069	.067
	(.154)	(.163)	(.179)	(.212)	(.244)	(.159)	(.161)	(.164)
Countries	136	136	136	116	93	135	130	135
R^2	.69	.69	.74	.70	.77	.70	.69	.71

Notes: Dependent variable is 'Quality of Government' scaled so that higher scores indicate better government performance (0-10). p*<.10, p**<.05, p***<.01

Appendix – Descriptive Statistics

Time Series Data

Variable	Obs.	Mean	St. Dev.	Min	Max
PRS - QoG	2437	5.36	2.46	0	10
GDP(log)	5053	7.52	1.55	3.89	10.99
Democracy	5403	5.18	3.51	0	10
*GDP*Dem*	5403	45.82	32.98	0	109.99
Democracy²	5403	39.22	38.20	0	10
Dem. Experience	6751	63.71	74.84	0	330
British Colony	6176	.336	.475	0	1
Trade Openness	4467	.725	.409	.015	2.85

Cross-Sectional Data

Variable	Obs.	Mean	St. Dev.	Min	Max
PRS - QoG	139	.522	.207	.111	1
GDP(log)	192	8.52	1.18	5.82	10.79
Democracy	192	6.65	3.17	0	10
*GDP*Dem*	192	57.32	31.62	0	107.91
Democracy²	192	52.69	37.02	0	100
Dem. Experience	173	18.06	21.49	0	70
British Colony	192	.297	.458	0	1
Trade Openness	133	85.44	45.54	18.22	279.55
News Circulation	135	99.65	124.50	0	588
Education Years	104	6.13	2.84	.84	12.05
Fractionalization	187	.437	.256	0	.931
Veto Players	165	2.81	1.42	1	7
Press Freedom	192	44.78	25.32	8	96