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This paper analyzes the mechanisms establishing time consistency of constitutions. It explains why shorter and more locked constitutions are more likely to be time consistent (change less). Empirical evidence from all democratic countries in the world indicates that length and locking of constitutions are not independent criteria, and that their combination leads to less time consistency. To address this interrelationship, I develop a measure of time inconsistency (a combination of locking **and** amendment rate) and use this relationship to examine constitutional amendment. Data on democratic countries around the world indicate that long constitutions are more time inconsistent (change more). Replicating Tsebelis and Nardi (2014) and their analysis of OECD member countries, I show that longer constitutions are associated with higher corruption and lower per capita income, a relationship that persists even when introducing economic control variables. However, this association does not remain consistent when the dataset is expanded to incorporate all countries in the world, because education and corruption are the most significant variables explaining GDP per capita.

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Country constitutions systematically involve two categories of items: individual rights, and the rules of the political game. The emphasis is on the word "systematically" because they may also include transitory provisions (like those in Denmark specifying the date the constitution takes effect, or the legal standing of previous laws relative to the constitution, as in Portugal, or the specification of electoral timing and terms for Senators in the next election, as in Mexico) or idiosyncratic elements (like the description of the flag (118 countries, including Portugal, Spain, and Turkey)), the national anthem (101 countries, including Hungary and El Salvador), the national motto (33 countries, including Belgium and Indonesia), or the mention of significant political or philosophical figures (21 countries, including Ecuador and Nepal). These two categories of items require time consistency. That is, individual rights and the rules of the political game must be well known in advance, and respected by all participants in the political game. In addition, they need to remain constant, so that all participants know their rights and obligations. For this reason, constitutions protect their text from change by making modification difficult. Indeed, constitutions include provisions requiring qualified majorities of one body—or concurrent majorities of several bodies, or both—in order to be modified.

This paper studies constitutional revision provisions at the theoretical level, and their effectiveness at the empirical level. It is organized in four parts. In the first part, I present the interaction between the founders of a constitution and the subsequent generations that chose to revise it or not, in game form. In the second part, I examine the constitutional "locking" mechanisms and show their influence on policymaking. Because of locking, changes in constitutional provisions require overwhelming agreement in democratic countries. In the third part, I empirically examine the combination of three elements of constitutions in 92[1] democratic countries: locking, amendment rate, and length of the constitution. I call the combination of locking and amendment rate "time inconsistency," and find that it is positively related to the length of a constitution. In the fourth part, I replicate the analysis in Tsebelis and Nardi (2014), extending it from solely OECD member countries to include all 92 democratic countries using more recent data (through 2013 instead of 2006). I find that longer constitutions are correlated with lower per capita income and higher corruption. Unlike the T-N analysis of OECD countries, where the association remains even if one introduces all the relevant economic control variables, in the wider dataset, the association does not persist after the addition of controls. When one expands the dataset to incorporate all countries from around the world, the inclusion of education and corruption *eliminates* the impact of constitutional length on GDP per capita.

I. THE INTERGENERATIONAL CONSTITUTIONAL GAME

[1] The majority of analyses consider 92 democratic countries. New Zealand, which has a collection of documents rather than one constitution, is incorporated in the analyses, when data are available.

The founders of each constitution want to generate a document that will regulate the interactions of the political game for generations to come. Whether it is the rights of citizens, or the interactions among the political actors, these rules have to be known and respected (and therefore known to be stable) by all political actors. On the other hand, if unforeseeable circumstances arise, these constitutional rules have to permit amendment. This is why there are constitutional provisions about the requirements for a constitutional revision.

The theoretical debate in constitutional design is between two major options with regards to the time horizon of constitutions: either one anchored to and shaped by the citizens it represents, or one that stands the test of time. The former perspective represents that of Thomas Jefferson; the latter represents that of James Madison. The two addressed a fundamental question of the role played not only by a nation's governing document, a constitution, but also the relation of the governors to the governed: who decides the rules of the game, and, are the living to be ruled, as Jefferson argued, by themselves in a revisited document, or by the dead in an enduring document?

Jefferson supported constitutional replacement every generation to allow citizens to revisit institutions and rules, adapting them to changing circumstances. He supported replacing or at least some form of reevaluating constitutional bargains every generation, about every nineteen years—which is, as Elkins et al. (2009) note—the median survival time of constitutions in their sample (Elkins et al. 2009, p. 129). Madison, however, took issue with such a suggestion, arguing against instability and in favor of longevity. A government worthy of respect, in Madison's view, is one that is both faithful to its citizens' wishes but also one that remains steadfast in the face of short-lived fads and whimsical ideas.

Madison equates the longevity of constitutions and laws with stability and superior outcomes. In Federalist 62, he argues "[n]o government, any more than an individual, will long be respected without being truly respectable; nor be truly respectable, without possessing a certain portion of order and stability." (Madison 1788/1982, p 318). It is this order and stability he seeks in adding an additional check, as he sees policy and, one might then interpret, constitutions, as something to stand the test of time. The potential cost of additional checks, be they the Senate or presidential veto, are worth the cost of fewer pieces of legislation.

Laws, in the Madisonian view, are to set the rules of the game (North 1990) and as such should be clear and stable. Otherwise, expectations are to be changeable and only those who have insider access of sorts will be able to avail themselves of them. In such circumstances, the elite few may also engineer changes to their own benefit, a point reflected in Madison's argument against a unicameral system in which 'the ambition or corruption of one' could hinder the security of the people (Madison 1788/1982). In sum, stability is associated with clear rules and expectations and produces an environment where laws are enacted for more significant purposes. This stands in direct contrast to Jefferson's comparatively short-term perspective where the arrangements are seen to be

beneficial to the respective parties and are *expected* to change in response to changing circumstances.

Madison has the same beliefs about laws and constitutions. Yet he provides a profound fairness argument that applies to constitutions (the rules of the game) significantly more than policies (particular outcomes that sometimes ought to be revised). In Federalist 62, he argues that changing rules are in favor of special interests, and against the population who cannot keep up with the rate of change. "Another effect of public instability is the unreasonable advantage it gives to the sagacious, the enterprising, and the moneyed few over the industrious and uninformed mass of the people. Every new regulation concerning commerce or revenue, or in any manner affecting the value of different species of property, presents a new harvest to those who watch the change, and can trace its consequences…" (Madison 1788/1982, p. 317).

INSERT FIGURE 1

Figure 1 provides the game form of the considerations of founders and future generations. The founders have to decide on three different issues: whether to include a subject matter in the constitution, whether to include many provisions on the subject and make it restrictive, and how much to lock it in order to protect against revisions. Each country gives different answers to these questions. This is why subjects that exist in some constitutions are absent in others, and the locking mechanisms are different not only across countries, but even inside the same constitution (usually articles are divided in two groups, the ones that are not amendable and the one that can be amended under specific rules). Of the 92 democratic constitutions included in our sample and coded by the Comparative Constitutions Project CCP, 35 contain provisions detailing unamendable portions.

As Figure 1 demonstrates, the founders can make a series of choices that will minimize the probability of future revisions of the constitution: they may not include some subject matters, which will enable a future generation to decide them at will in an unrestricted manner; they may include general provisions enabling subsequent generations to regulate the details without the need of a constitutional revision; they may lock the articles in the constitution, making revisions difficult to achieve (as mentioned, some articles are not amendable which means that the only way to go around them is a new constitutional convention). For future generations, the question of a constitutional revision may arise, and the occurrence will be more frequent the more subjects and detailed provisions the founders opted to incorporate. The success of such attempts of revisions will be higher the less locked the constitution is (a topic I turn to in the next section).

I have indicated with bold letters all the choices that lead to subgame perfect equilibria in this game form, and the one choice that does not lead to such an equilibrium is the combination of including lots of issues, making them detailed, and not locking them sufficiently, along with the willingness of future generations to modify the constitutional provisions.

The usual term in the economic literature for the description of such equilibria that are not

subgame perfect is "time inconsistent." Typically in this literature, the player with time inconsistent preferences (that prefers to make one decision *ex ante* but changes his/her mind when the time comes) remains the same but his or her preferences change, however this is not a necessary physical restriction. For example, the minister of finance may or may not change between the creation of an independent central bank and elections but governments still anticipate time inconsistent preferences on the part of the government between these two time periods. Thus, governments opt to create independent banks because preferences of the designated actor are likely to be time inconsistent. Similarly in our analysis, the constitutional restrictions apply to all generations, including the one that made the constitution, who can also find itself in front of an unfortunate provision that requires fast modification. The creation of collective inter-temporal actors like "government" or "nation" takes care of this same player restriction.

On the basis of Figure 1 we see that long constitutions (involving many and detailed provisions) may lead to time inconsistent outcomes. That is, despite their locking they may lead future generations to overcome the obstacles and revise. In the next section, we focus on these locking mechanisms.

II. THEORY: "LOCKING" MECHANISMS AND THE PROTECTION OF CONSTITUTIONS

While ordinary legislation usually requires a simple majority to be approved, constitutional amendments are "locked," that is, they require for their approval a wide variety of hurdles such as the following: qualified majorities of a legislature or a constituent assembly (e.g. Portugal and South Africa); presence of a quorum (e.g. Belgium and Colombia); approval by several bodies, for instance, a house and a senate, or an elected president (e.g. India and Mexico); a referendum (e.g. Switzerland); the same institution(s) to adopt the same text multiple times (e.g. Bulgaria and Greece); introducing an election between the two approvals (e.g. Finland and Sweden). They may also introduce several combinations of the above and/or permit alternative routes for approval of amendments. For example, the Italian constitution requires either simple majorities in both chambers of the legislature followed by a referendum **or** two-thirds majorities in both chambers. I will explain the difference in outcomes in the policymaking procedures (requiring simple majority) vs. the constitutional amendments (requiring qualified majorities and/or multiple institutions).

a. Policymaking by simple majority

It is well known that if the decisionmaking rule is a simple majority and agenda setting is endogenous, in one-dimensional space, the outcome will be the median voter, while generally in multidimensional spaces there no equilibrium outcome.

INSERT FIGURE 2

We will focus upon situations where there is an agenda-setting majority. This is the case in a parliamentary system (where the government controls the agenda (Tsebelis 1995; 2002)). As Figure 2 demonstrates, in the presence of seven different parties in one

dimension, if there is a government coalition of the Left (parties 1-4) or of the Right (parties 4-7), then they will propose a policy position in the area they agree (segment 1-4 in the first case, 4-7 in the second) and it will be approved by the government majority. Similar results can be produced even in presidential systems if there is a majority party and the president of the chamber is willing to control the agenda in a minimal way, refusing to bring proposals that do not have a majority support among its own members on the floor. In the US it is called the Hastert rule—named for the Republican Speaker of the House of Representatives who explicitly stated the principle, but it has been applied by Speakers before him and certainly after.

As Figure 2 indicates, changing the required majorities for policy decisions will result in the change of policy outcomes in both presidential and Parliamentary systems because of the shift of the actor who controls the agenda. Let us now move to qualified majority requirements.

b. Constitutional Amendments by qualified majority

Changing the restrictions for the seven voting members (or parties) in a single dimension from a simple majority (of 4 members) to a qualified majority of 5 or 6 members will radically change the situation. We see this illustrated in Figure 3.

INSERT FIGURE 3

Under 5/7 majority there is no possibility of adopting a proposal to the left of member 3 or to the right of member 5 as long as members can introduce their own amendments. If the status quo is in the area 3-5 it cannot be upset by an alternative proposal (there is no possible 5/7 majority against it). If the status quo is outside this area, several points inside this interval can defeat it.

Under a 6/7 majority, this area expands to the 2-6 interval. The formal name of this area, where points cannot be defeated by applying the required (qualified majority) decisionmaking rule, is the core. In the remainder of this paper, we will refer to the core as the "constitutional core." Indeed, every constitutional provision requires (in order to be adopted) the approval by the specified rules, and as a result, the whole constitution is going to be in the constitutional core determined by these rules. I will show that the logic of the argument holds also for multiple dimensions as well in circumstances with multiple decisionmaking institutions.

INSERT FIGURE 4

Figure 4 assumes a two-dimensional space and the constitutional amendment rules require a qualified majority of the members of a parliament (either 5/7 or 6/7). Now the constitutional core expands in two dimensions. For a 5/7 majority, policies must be approved by at least five of seven members. We represent this by determining the area of policies preferred by combinations of five actors, such as lines C1C5 or C1C4, each of which creates policies preferred by actors (1,2,3,4,5) and actors (1,7,6,5,4), respectively. These

lines define an area in the center of the heptagon that is the constitutional core, because the required majority of 5/7 cannot change points in this area. If one expands the required majority to amend from 5/6 to 6/7, the constitutional core expands. It is constructed by drawing lines that leave only one member on the one side and aggregate the other six on the other (or on the line). There are now more policies within the core that cannot be changed if agreement requires 6/7 majority.

INSERT FIGURE 5

Figure 5 extends the scenario from Figure 4 to include an additional veto player: an elected president. The core now expands significantly (presuming that the preferences of the president are outside the core of the legislature). To calculate the core, we connect the preferences of the president with the constitutional core of the legislature (of Figure 4).

Figures 4 and 5 generalize the argument beyond a single dimension. This would be the appropriate representation if different issues were decided at the same time (like in the case of a referendum that considers multiple issues). While referenda may permit this sort of multidimensional amendment, at the legislative level, constitutional revisions are likely to be evaluated one issue at a time. As such, for the remainder of this section we will examine the requirement for modification in a single dimension, assuming decisionmaking in a single body under qualified majority (and keeping in mind that the core expands with multiple bodies, and the argument generalizes in multiple dimensions). Here I replicate the argument in Tsebelis and Nardi (2014).

INSERT FIGURE 6

In Figure 3, I argued that the constitution will be located inside the core of the political system. Indeed, any proposal outside the core would be defeated by a point inside the core. As for constitutional revisions, the only way they become an option in a democratic polity is if a point that had been inside this core is now located outside. In other words, a constitutional revision can involve only points (and provisions) that used to be centrally located inside the body politic of a democratic country but are not anymore. This argument limits the analysis to democratic countries only, because any constitutional changes in an authoritarian regime are not predicated on a change in preferences of the population at large.

This change can occur only with significant modification of the positions of the individual players (or an exogenous shock that makes the previous positions no longer tenable). Figure 6 presents such a modification. In this figure, five of the seven members of Figure 3 have changed and moved to the right (some significantly so). In particular, Players 1 and 2 remained in place, while Player 3 moved slightly to the right (from 3 to 3'), Player 4 moved by a substantial amount (to position 4', leapfrogging Player 5's previous location), and Players 5, 6, and 7 in their new positions (5', 6' and 7') moved beyond the previous political space (that is, beyond the former point 7). This is a political shift so radical that it is difficult to imagine in any real polity except during a revolution.

Despite this shift, there is considerable overlap between the old 5/7 core and the new 5/7 core. If constitutional amendment requires a 5/7 majority, the only provisions that could be revised are those falling in the (3,3') area. Yet if the required majority for constitutional revision is 6/7, then there is no possibility of such a modification, despite the significant shift in preferences. Thus, even in the face of extreme changes in the political space, no change is possible under a 6/7 majority. From the above discussion, it follows that a constitutional change requires a point of the previous constitutional core (an article or section of the existing constitution) to be located outside the polity's current core. This was possible under 5/7 majority, but not under 6/7.

All this analysis indicates that a constitutional revision is a difficult enterprise, requiring overwhelming majorities. The variable I have created to represent constitutional revisions is how many times the above procedures were successfully employed over the life of the current constitution of the country. How amendments are characterized and evaluated has varied in the literature: other analyses try to identify how important changes were by the average number of amendments over time (regardless of how many amendments occurred per year) (Lorenz 2005), by weighting the first amendment to a constitution more heavily (Ginsburg and Melton (forthcoming)), annual amendment-or-not data (Negretto 2012), measuring certain types of amendments only (Gutmann et al 2011), or the success rate of amendment attempts (as Lutz 1994 uses for his index of amendment difficulty). There are, as Erik Rasch (2008) emphasizes, many different ways one might operationalize the significance of amendment, by articles, words, or numbers of articles changed. This is difficult to succinctly capture and a more simple approach may be best. For example, Ginsburg and Melton (forthcoming) illustrate how difficult it is to evaluate the substantive effect of amendments on a document when looking at the similarity of the document to itself before and after amendments: changing few words may have a large impact on how the country functions, as in the case of Spain's amendment to article 135. This sentiment is echoed in the work by Elkins et al., who show that while there is a wide variance for constitutional similarity before/after replacement, there is still considerable variation after amendments among some documents (Elkins et al 2009, p. 56). An amendment reflects dissatisfaction with the bargain struck and an overwhelming agreement for its change. It is this that we focus upon in the document at hand. Unlike other approaches, this variable restricts the domain of applicability of the analysis in democracies only, but takes the significance of the enterprise for granted because in a democracy, voters and parties would not undertake such an enterprise if they did not believe that the constitutional restrictions were important.

The implication of this analysis is that time inconsistency as described in Section II, that is the undertaking of a successful constitutional revision, should be a rare occasion, requiring the agreement of an overwhelming majority of the population leading to a modification of the positions of their representatives. Yet, the empirical reality is significantly different.

III. EMPIRICAL ANALYSIS: "TIME INCONSISTENCY" OF LONG CONSTITUTIONS

INSERT FIGURE 7

In Figure 7, I present time inconsistency as a function of the logarithm of length (in words) of democratic constitutions. I have calculated time inconsistency by adding the frequency of amendments with constitutional rigidity. The two variables should balance each other, that is, more locked constitutions should lead to fewer amendments over time. In order to account for differences in the units of measurement of these variables, I normalized each of them before summing them. I calculated amendment frequency as the number of years a constitution was changed over its democratic lifetime[2] (if several articles were amended together it counts as one event). I use democratic amendments to count how often the mechanism of constitutional change was activated in a successful way (unsuccessful attempts at modification are not counted). My data are calculated as of 2013, except for constitutional rigidity, which comes from the previous release of the CCP dataset in 2006. For analyses using the CCP rigidity variable, the sample of constitutions is limited to the subset of current constitutions enacted prior to 2006. For all other calculations, the dataset includes all constitutions in effect in democracies in 2013.

The reader can verify that the relationship between length of constitution and time inconsistency is positive and significant for all democracies. However, length has a more pronounced effect on time inconsistency among OECD countries. Tsebelis and Nardi (2014) anticipated clearer relationships among OECD countries (this motivated the selection of OECD countries). Here I work to identify the reason for this discrepancy. Figures 8 and 9 provide the answer.

INSERT FIGURES 8 AND 9

Figure 8 presents the relationship between length and frequency of amendments in OECD countries and in all democracies as of 2013 (92 countries). Again the slope is more pronounced for OECD countries, but it is overall very positive and significant. This figure does not depend on any measurements, since the data do not depend on variables generated by researchers and are stable (the 2013 data are almost identical with the 2006 data in Tsebelis and Nardi (2014)). Figure 9 presents the relationship between constitutional rigidity (as measured in the CCP dataset, calculated in 2006) and logarithm length. Here the relationship between the two variables is positive for OECD countries, and there is no correlation for all democracies. And it is this combination of high slope for amendment rate (as a function of length) and no slope for rigidity (as a function of length) that generates the positive relationship of time inconsistency with length.

However, rigidity as measured by the CCP project involves not only institutional variables (like whether one or two chambers are required for an amendment, or a referendum is necessary, or the approval of states in a federal country) but also variables like ethnic

[2] Polity2 scores were used to determine whether a country was democratic or not. Countries with scores of 6 or higher on the Polity2 variable were considered democracies. Countries included are limited to countries that were democracies in 2013. Amendments during years of democracy (Polity2 at 6 or higher) were divided by the total number of democratic years (Polity2 at 6 or higher). Note that this is a departure from Tsebelis and Nardi (2014) (who use 5 instead of 6 as cutoff point and consider only uninterrupted periods) but that the results here are consistent with their earlier findings for OECD member countries.

fragmentation of a country (percentages of different ethnic groups) and other non-institutional variables, indicating the need to cross validate the argument with purely institutional variables.

There are two means of measuring rigidity: as a numerical value (the proportion of votes needed to initiate a constitutional amendment) and as the number of political institutions whose assent is necessary for constitutional change. I used the CCP coding system whenever possible, but inconsistencies exist in these data with respect to whether all potential steps to amendment are included or only the least stringent ones. Whenever possible, we used only the least stringent methods for the values below to reflect more routine amendments.

For the numerical value, I take the percentage requirement for constitutional revisions in the relevant legislative institution. For most countries, this value is the same regardless of whether there is one house or two (for example, Croatia requires 2/3 of members to support a proposed change in each house). There are two notable exceptions: Burundi and Poland have different thresholds for the two houses. In these cases, the more stringent requirement is used. For example, in Burundi, 4/5 of members in the lower house must approve while 2/3 of members in the upper house must give their assent. Here, we use the 4/5 threshold for both houses for simplicity. Thresholds range from a simple majority (represented as 50) to 80 percent as described in Burundi (although Burundi is unique in this high requirement for general amendment. The second highest requirement is 75).

A second means of capturing the rigidity of a constitution is to determine how many bodies are required to approve a constitutional change. For example, it may be that both legislative chambers and the head of state are required to approve amendments. In this case, the number of approving bodies would equal three. The addition of a public referendum adds an additional body. In these calculations, we again focused on amendments to constitutions that did not refer to domains with higher amendment thresholds. Some countries, such as Finland, require only one body's assent for changes (the unicameral Eduskunta) while other countries require many, such as Switzerland, which requires approval in both houses, the cantons, and the people. The values for this variable range from 1 to 4.

The three figures below calculate time inconsistency as a function of purely institutional ways of measuring constitutional rigidity: *10a*. Rigidity is measured by the size of the required majority for a successful amendment in the legislature (or constituent assembly): 50, 60, 66, 75 per cent. *10b*. Rigidity is measured as a categorical variable (1 for 50%, 2 for 60%, etc.). *10c.* Rigidity is calculated as the number of approving bodies.[3]

[3] The number of approving bodies comes from the CCP dataset and code that was helpfully supplied by CCP author James Melton. The CCP data have some variation in how the involvement of different bodies has been coded (for example, whether all possible amendment routes be coded or simply the most routine or simple route). As such, the number these data yield for the number of approving bodies is approximate and likely an upper bound. I am working to verify this number for the entire dataset but have no reason to believe that the overstatement, if it exists, is systematic.

INSERT FIGURES 10a,b,c

As all three figures indicate, the relationship between time inconsistency and length is positive and significant across all measures among democratic countries. In other words, while constitutional rigidity increases with length in OECD countries, it remains practically constant across democratic countries. But the frequency of amendments increases with length across all democracies (whether OECD members or not). As a result, there is a positive relationship between length and time inconsistency: overall, longer constitutions have a higher combination of rigidity and frequency of amendment. It is this discrepancy we now consider.

IV. OTHER CORRELATIONS OF LENGTH (GDP/CAP, CORRUPTION)

As Part II of this paper indicates, constitutional revisions have high requirements, that is, they need wide popular consent in democratic countries and may entail approval by a number of different bodies. Yet, as Part III indicates, long constitutions are more frequently changed, and demonstrate higher time inconsistency. In order to explain this time inconsistency, we need to first understand the characteristics of long constitutions, and then identify other factors that are associated with them.

a. What is length?

Constitutions can include three different kinds of provisions. First, constitutional provisions can regulate technical or innocuous matters that do not influence political behavior (such as descriptions of the national flag or the opening lyrics to the national anthem). Secondly, constitutions can contain aspirational goals, such as the right to work (included in many post-World War II constitutions), which do not impose any specific obligations on the government, and consequently are not judicially enforceable (not surprisingly, none of these countries has completely eradicated unemployment). Thirdly, constitutions contain restrictive or prescriptive statements, such as sections detailing government structure and citizens' rights. While these three categories might be straightforward at the theoretical level, empirically, there is no reliable way of distinguishing between constitutions that contain many substantive restrictions and those that are simply garrulous.[4] Yet, the frequency of amendments, along with the difficulty of achieving such modifications (section II), indicates that long constitutions are restrictive, because a country would not undertake the significant or formidable efforts required for amendments if these amendments were not deemed necessary. In other words, constitutional amendments are more likely to be made on restrictive provisions, not on innocuous ones.

One more question regarding length pertains to how words are distributed over topics: are there many topics with little discussion, very detailed discussion of a few topics, or somewhere in between? The CCP dataset makes the distinction between the "scope" of a

[4] Voigt 2009.

constitution, that is the number of selected subjects included in it, and its "detail," the number of words used to cover subjects on average. Obviously, the length of every constitution would be the product of these two variables. Given this logical relationship, a regression predicting the length of a constitution as a function of scope, detail, and their interaction would provide a coefficient of one for the product term, and an R2 of one. In other words, both variables cannot be used in the same equation. Yet, it is known in the literature that more recent constitutions have higher scope (address more subjects), so, we can use the age of the constitution as a proxy for scope, provided this variable is uncorrelated with detail. This is the case in all the countries of the world (regardless of whether they are democracies or not) as Figure 11 indicates.

INSERT FIGURE 11

We can now try to identify the characteristics associated with length using the age of the constitution as a proxy for its scope. Table 1 examines the variables associated in the literature with length of constitutions, focusing first upon OECD member countries (to replicate Tsebelis and Nardi 2014) and then all democracies, including OECD. The variables I examine are age, detail, federalism, and legal origins. The table replicates the findings for OECD countries: constitutional length is strongly associated with detail—that is with the restrictions included in a constitution. It is also associated with the age of the constitution (more recent constitutions are longer), and independent of the legal origins. The difference between OECD and all democracies is that federalism in democracies is associated with length (while it was independent in OECD countries). The conclusion is that across all democratic countries of the world, constitutional length is associated with more restrictions (Table 1), and with more constitutional revisions (Figure 8).

INSERT TABLE 1

b. <u>What is associated with constitutional length?</u>

For long constitutions to be more time inconsistent—that is, to exhibit a higher number of amendments despite locking—it must be that they lead to serious impediments to the political game in the corresponding countries. Tsebelis and Nardi (2014) identified two important correlates of constitutional length in OECD countries: one was per capita GDP, and the other was corruption. Figures 12 and 13 show how all countries of the world replicate their findings. Long constitutions are associated with low per capita GDP (Figure 12) and high corruption (Figure 13). Again, I have included the subset of OECD countries for ease of comparison.

INSERT FIGURES 12 AND 13

Their argument was that long constitutions are restrictive, and as such, they prevent the adoptions of policies desirable to the populations they regulate. This is the reason for frequent constitutional amendments. One aggregate variable that would cause generalized

dissatisfaction and would cause constitutional revisions would be low per capita GDP. With respect to corruption, T-N (2014) argue that causal links could be pointing in both directions: it could be that founders are captured by special interests who are asking for additional detailed provisions to be locked so they their privileges would be guaranteed, or, alternatively, that virtuous founders try to include provisions in order to prevent or reduce the influence of organized interests. They also anticipate that these relations would be clearer in OECD countries, because these countries respect their constitutions, and consequently, safer inferences can be made from the study of OECD countries. Again, figures 12 and 13 corroborate T-N's arguments.

Here I will test the applicability of their findings in all the countries. Since we are not examining constitutional amendments, the samples does not need to be restricted to democracies.

INSERT TABLE 2 AND TABLE 3

Table 2 illustrates the basic relationship between log constitutional length and log GDP and then introduces economic control variables such as Natural Resources, Trade, and Investment or Savings.[5] Across the different specifications, the relationship between length and GDP is consistently negative and significant for OECD member countries. The same is true for our sample of democracies (which includes OECD member countries) but not true when we expand our sample to include all countries with coded constitutions. Table 3 includes education as an independent variable and presents similar results. The availability of education measures limits the size of the sample in Table 3: only 91 of 172 countries have data available on this measure. In sum, among OECD member countries, even incorporating additional controls does not diminish the negative and significant relationship between constitutional length and GDP. For "all" (i.e. 172) countries with data on education, statistical significance vanishes.

INSERT TABLE 4

Table 4 controls for corruption;[6] given the high levels of corruption among non-OECD countries (Figure 13) and the high variance among them, this variable "explains" almost all variation in GDP per capita. In other words, once corruption is accounted for, the relationship between length and GDP is no longer significant.

V. CONCLUSIONS

This paper demonstrates that long constitutions are not just garrulous (Voigt 2009). Given the difficulty of performing constitutional revisions (Section II), such revisions are not likely to be undertaken without reason, or to affect verbal expressions with no

[5] These values all come from the World Bank and are averaged over the period 2003-2009. Log GDP is averaged 2009-2013.

[6] This measure is taken from Transparency and International and is reversed so that higher values indicate more corruption. Like the other indicators, it is averaged over 2003-2009.

consequences included in a constitution. They are likely to affect enforceable provisions that are hindering government majorities from acting the way they judge appropriate. In this sense, they are constraining majorities from deciding according to their wishes; they are confronting the democratic expression of the representatives of the people.

However, the fact that a constitution is revised may be because it was so designed, that is, it has not been locked enough. This paper demonstrates that this is not the case. Instead, this paper shows that the length of constitutions across all democratic countries of the world is correlated with time inconsistency, that is, the **combination** of locking and amendment frequency. Why introduce the notion of time inconsistency? Would it not be simpler to 1. analyze amendments as a function of length and say long constitutions are more frequently amended as Figure 8 indicates, and as the literature has amply demonstrated? (Elkins, et al. 2009, Lutz 1994, Lutz 2006, Negretto 2012, among others) and 2. analyze constitutional rigidity as a function of length and conclude it is independent of length (see Figure 9)? Why combine the two in the notion of time inconsistency?

In the study of constitutions, the focus should not be on the frequency of amendments as a function of length, but rather, the frequency of amendments as a function of rigidity. This relationship, of course, should be a strongly negative one since constitutions are rigid in order not to be amended. If rigidity and amendments are positive, it means that constitutions are amended **despite** protection, that is, they are time inconsistent. Knowing any variable that is correlated with time inconsistency is important in understanding the implementation of constitutional rules.

Economic theory has pointed out since the Nobel winning article of Kydland and Prescott (1977) that time inconsistency ought to be avoided in economic policymaking. This is the standard reason that countries delegate monetary policy to Central Banks: in order to take it away from the hands of a government who will change preferences as a function of electoral cycles. And the argument has propagated in the creation of many other independent authorities (environment, mass media, medical regulations, etc.).

If institutions are created in order to avoid time inconsistency in **policies**, they certainly should be present with respect to the rules of the game, that is, the constitution. In other words, constitutions that change often are subject to discretion rather than rules. The fact that it happens more frequently for longer constitutions is an indication that the game of constitutional revisions leads to equilibria that are not perfect (in the game theoretic sense of the term; Section I) more frequently in longer constitutions. This paper has shown that this is not a deliberate choice (then long constitutions would have been less rigid). But this correlation of length and time inconsistency is a feature of which constitution makers should be aware.

Tsebelis and Nardi (2014) hypothesized that the length of constitutions would be correlated with aggregate problems, and correlated length with economic performance (GDP/capita) and corruption. They focused on OECD countries, because they assumed that the data would be less noisy. They demonstrated that corruption was positively correlated with constitutional length, and that length had a negative effect on GDP/capita, even when

controlling not only for all the relevant economic variables, but also for corruption. In this article, I explain that size is correlated to time inconsistency. I also find that in expanding the dataset to all the countries of the world, and updating the data to 2013 (instead of 2006), the expectations of T-N are corroborated: OECD data have less noise inside them. Indeed, while the initial correlation between length and per capita GDP (negative) remain, the introduction of controlling variables (particularly education and corruption) eliminates the statistical significance of the relationship.

FIGURE 1

WRITING AND REVISING THE CONSTITUTION GAME

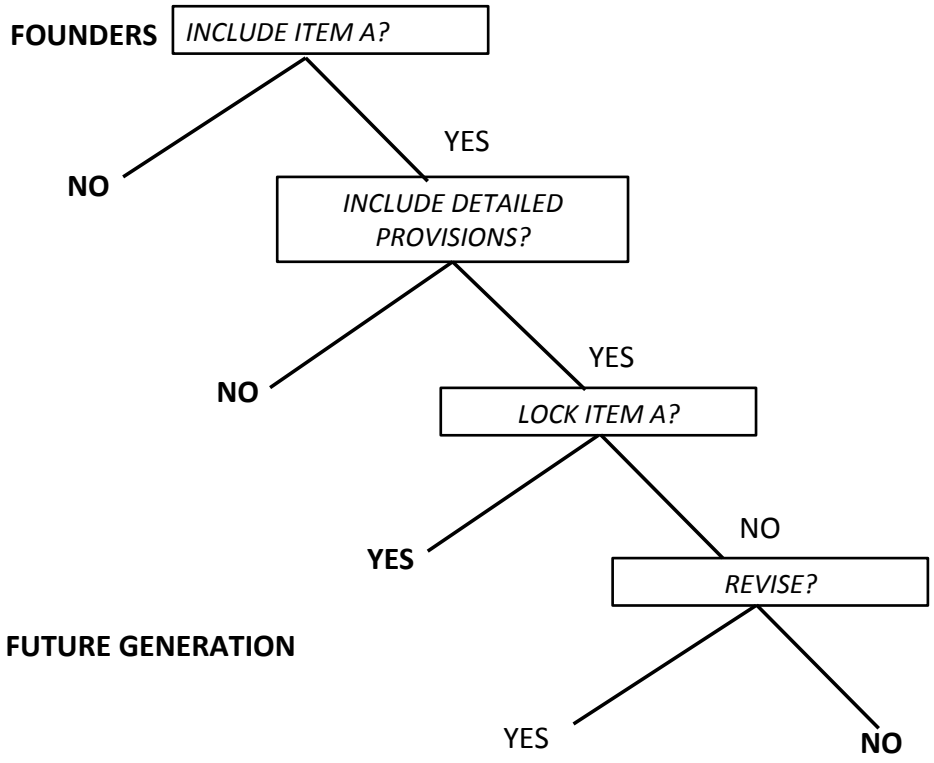
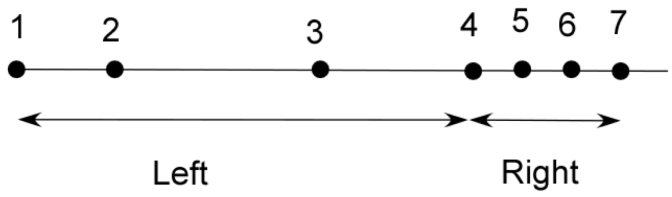


FIGURE 2

VOTING WITH AGENDA SET BY GOVERNMENT



Outcome (inside Left or Right core)

FIGURE 3

CONSTITUTIONAL CORE WITH 5/7 OR 6/7 QUALIFIED MAJORITY

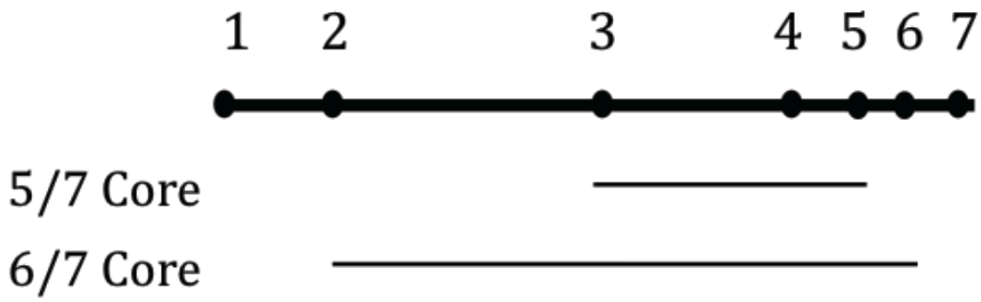


FIGURE 4

CONSTITUTIONAL CORE IN TWO DIMENSIONS (SINGLE CHAMBER BY 5/7 OR 6/7 QM)

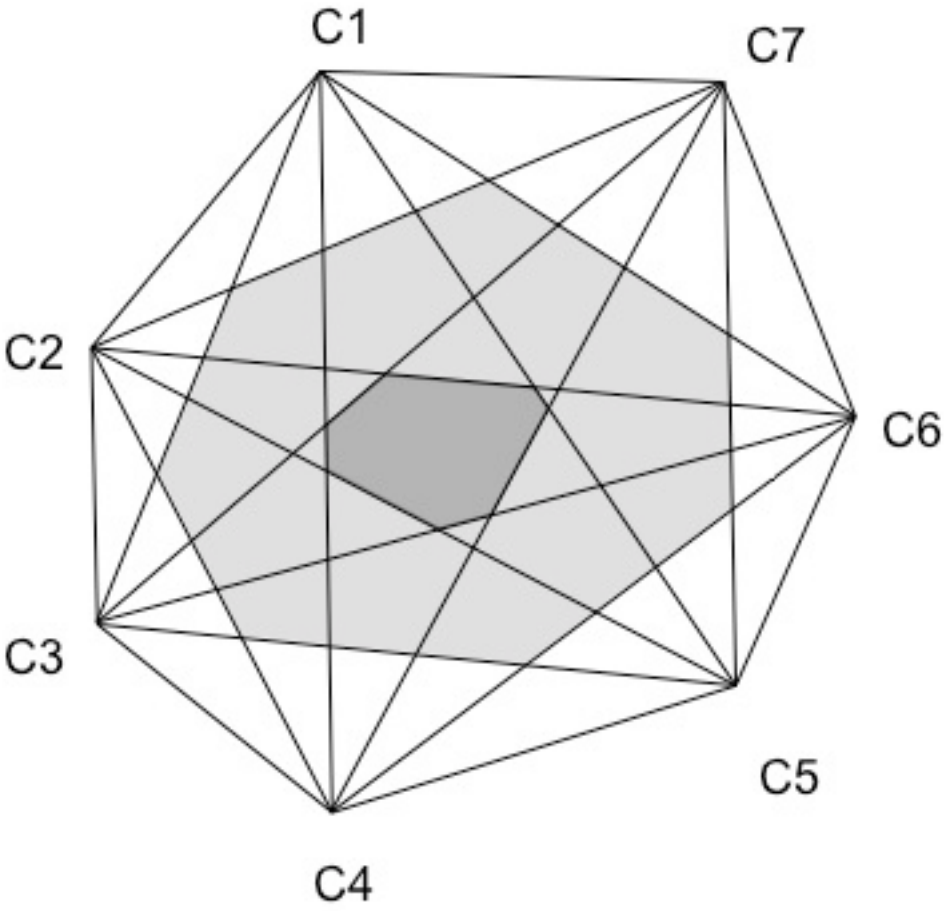


FIGURE 5
CORE WITH QM (5/7 OR 6/7) IN ONE CHAMBER AND PRESIDENTIAL APPROVAL

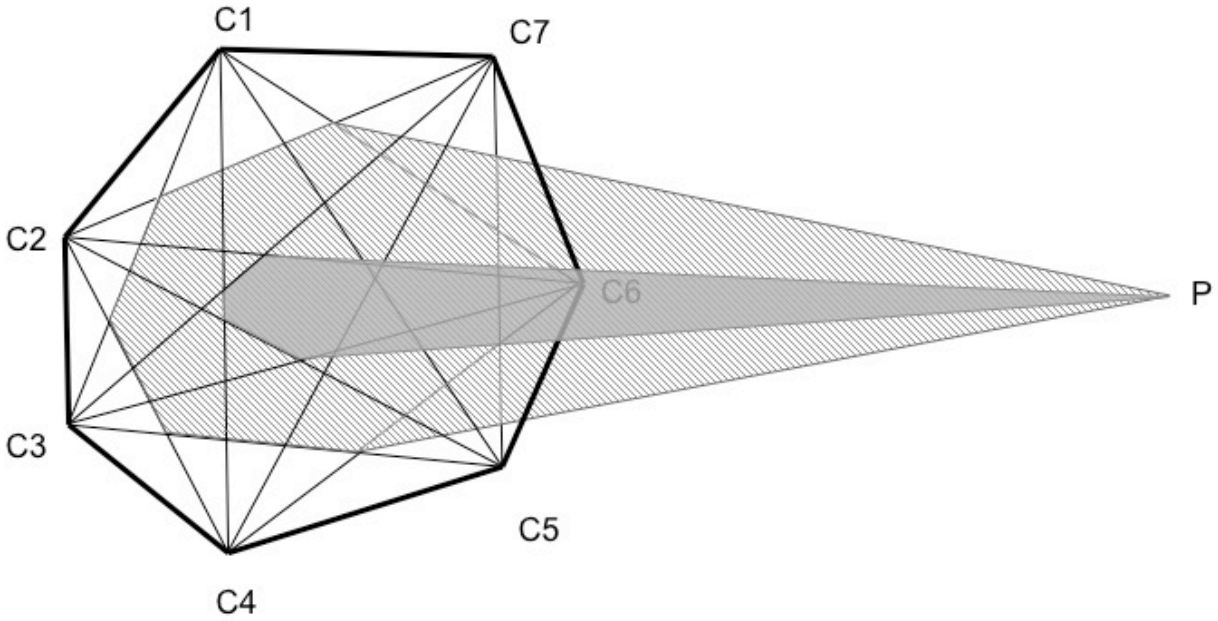


FIGURE 6

Change of core in one dimension under 5/7 and 6/7 majority

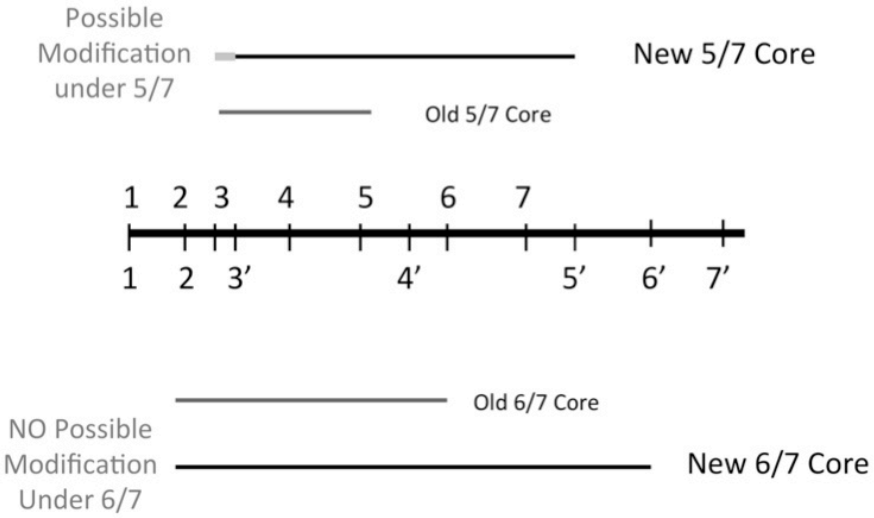


FIGURE 7

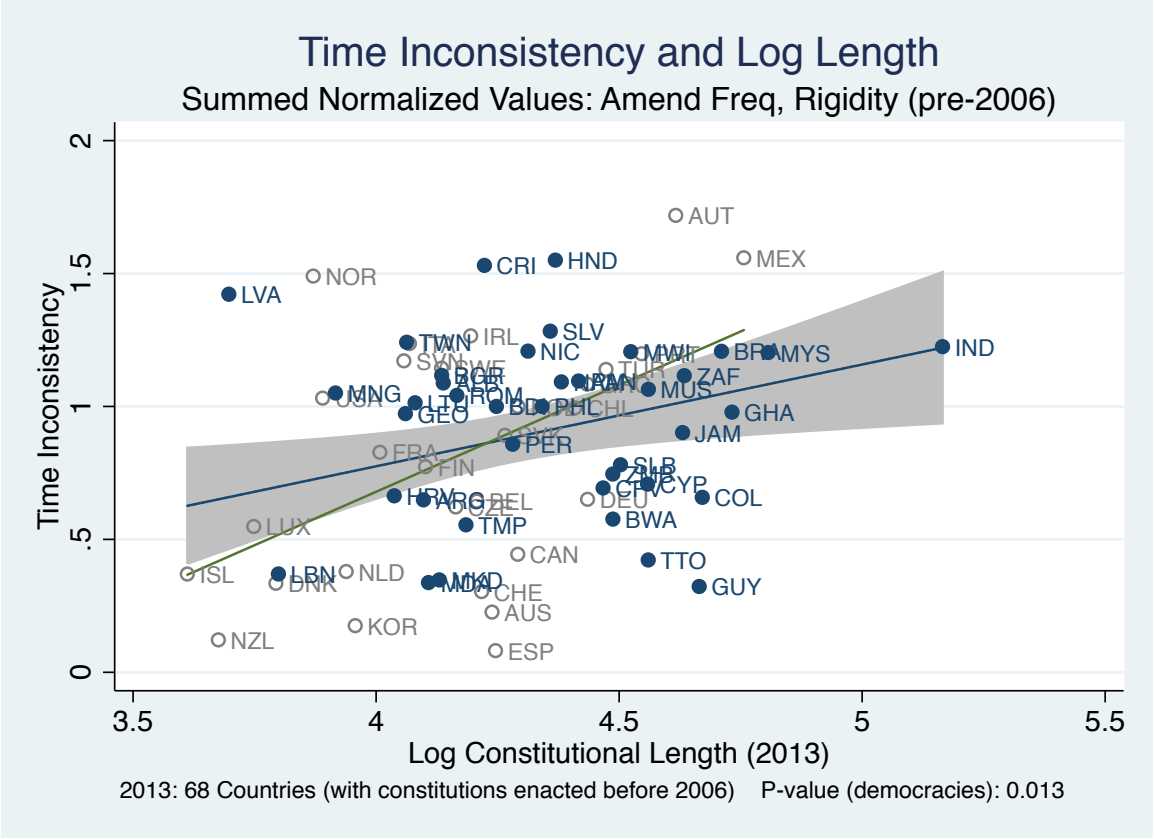

Time Inconsistency and Log Length
Summed Normalized Values: Amend Freq, Rigidity (pre-2006)
Time Inconsistency
0
.5
1
1.5
2
3.5
4
4.5
5
5.5
Log Constitutional Length (2013)
AUT
MEX
CRI
HND
NOR
LVA
SLV
IRL
NIC
IND
MYS
ZAF
MUS
GHA
JAM
PER
COL
CYP
BWA
TMP
CAN
TTO
GUY
LUX
ISL
NLD
CHE
AUS
KOR
NZL
ESP
FRA
FIN
DEU
2013: 68 Countries (with constitutions enacted before 2006)
P-value (democracies): 0.013

FIGURE 8

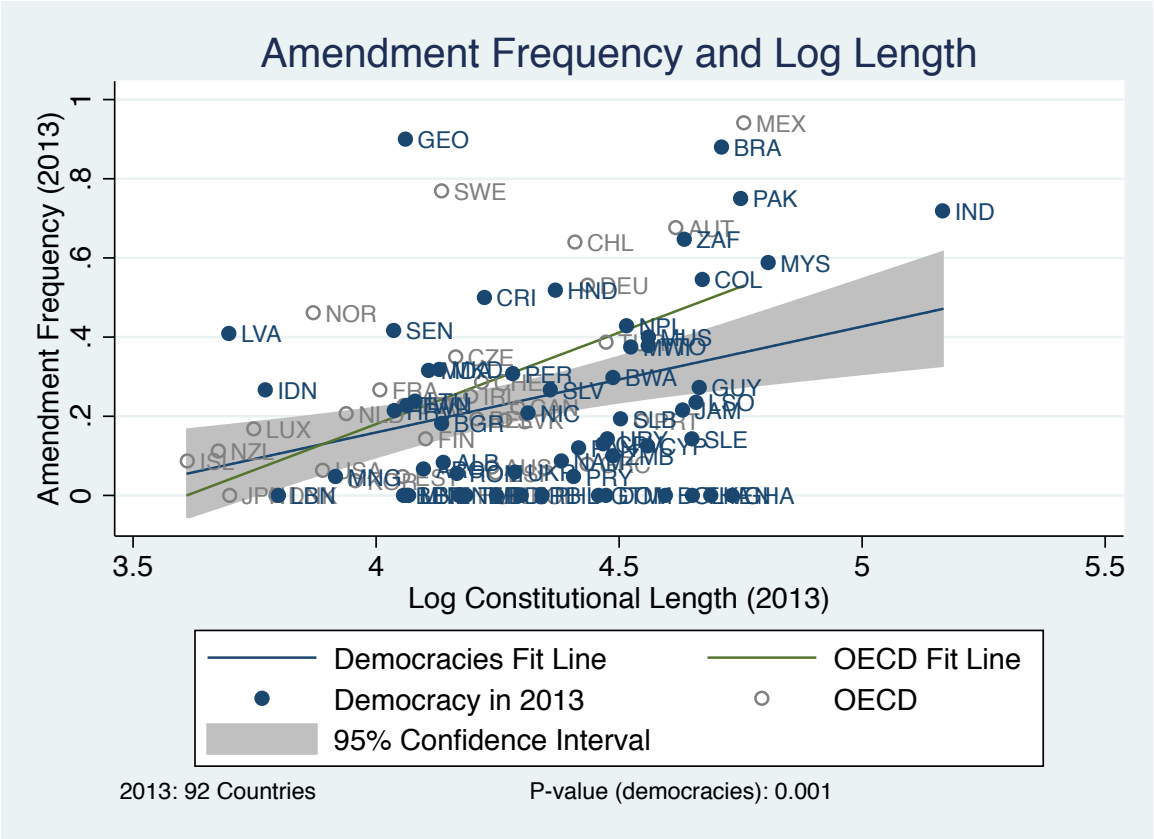
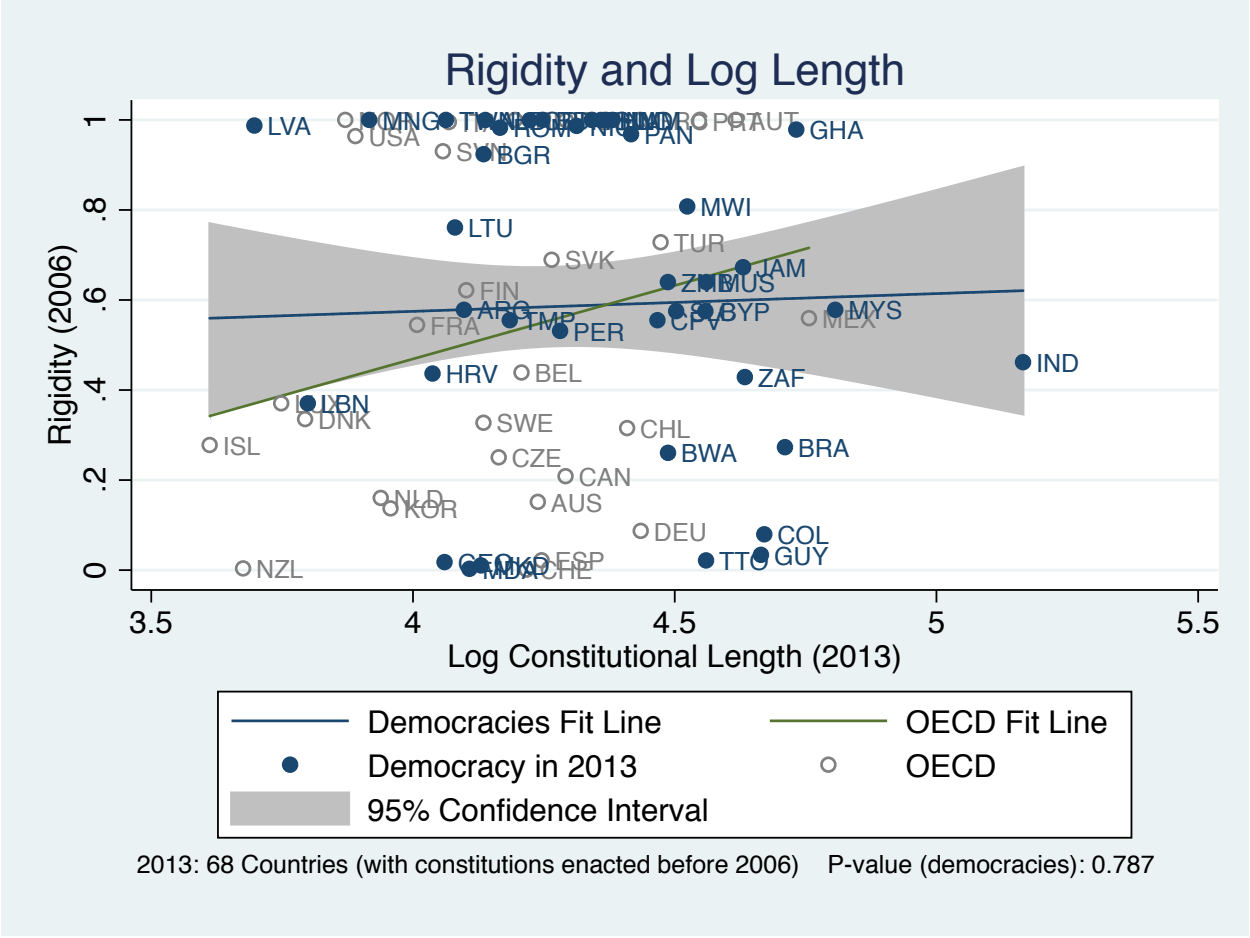

Amendment Frequency and Log Length
Amendment Frequency (2013)
0
.2
.4
.6
.8
1
3.5
4
4.5
5
5.5
Log Constitutional Length (2013)
GEO
MEX
BRA
SWE
PAK
IND
CHL
ZAF
MYS
COL
CRI
HND
DEU
NOR
LVA
SEN
NPL
CZE
PER
BWA
IDN
FRA
SLV
GUY
LSO
JAM
LUX
NIC
SLE
NZL
FIN
ISL
ALB
PRY
Democracies Fit Line
OECD Fit Line
Democracy in 2013
OECD
95% Confidence Interval
2013: 92 Countries
P-value (democracies): 0.001

FIGURE 9



2013: 68 Countries (with constitutions enacted before 2006) P-value (democracies): 0.787

FIGURE 10a

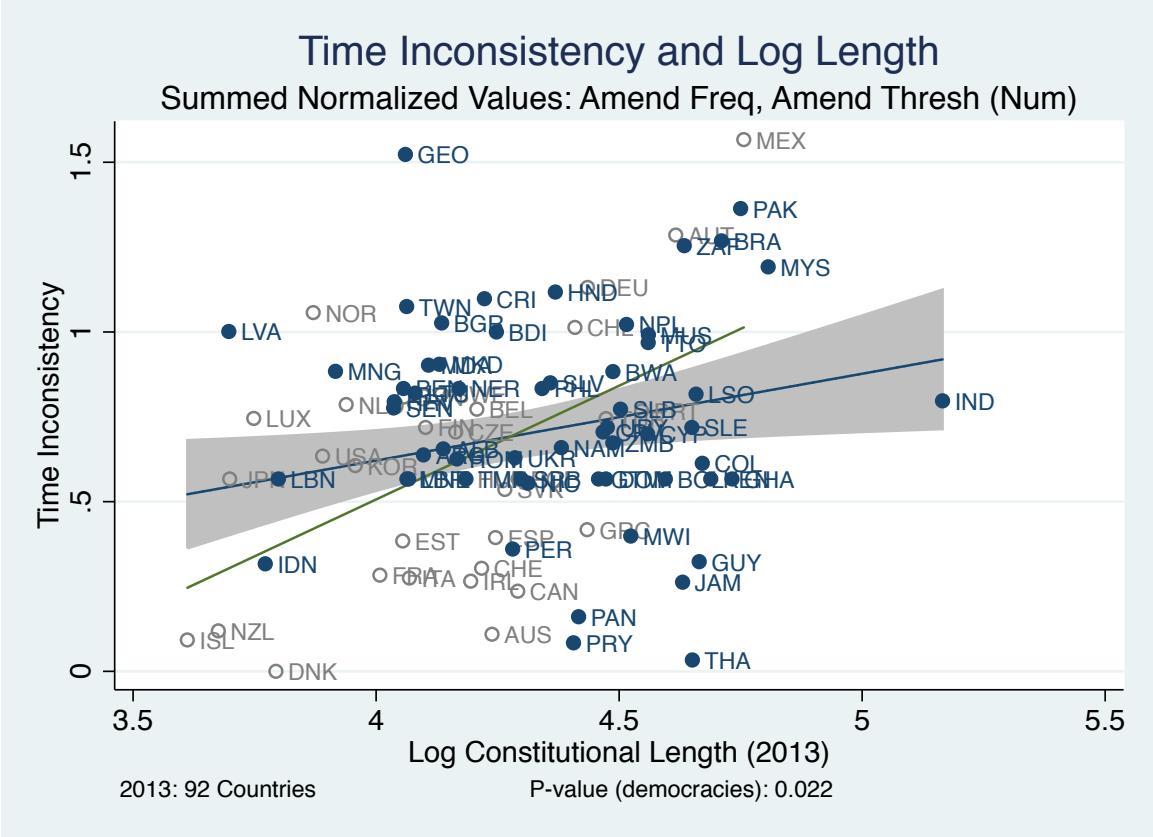

Time Inconsistency and Log Length
Summed Normalized Values: Amend Freq, Amend Thresh (Num)
Time Inconsistency
Log Constitutional Length (2013)
2013: 92 Countries
P-value (democracies): 0.022
0
.5
1
1.5
3.5
4
4.5
5
5.5
GEO
MEX
PAK
BRA
MYS
NOR
TWN
CRI
HND
DEU
LVA
BGR
BDI
CHE
NPL
TTO
MNG
BWA
LSO
IND
LUX
SEN
BEL
SLE
NAM
ZMB
UKR
COL
LBN
EST
PER
MWI
IDN
GUY
JAM
CHE
CAN
PAN
NZL
AUS
PRY
THA
DNK

FIGURE 10b

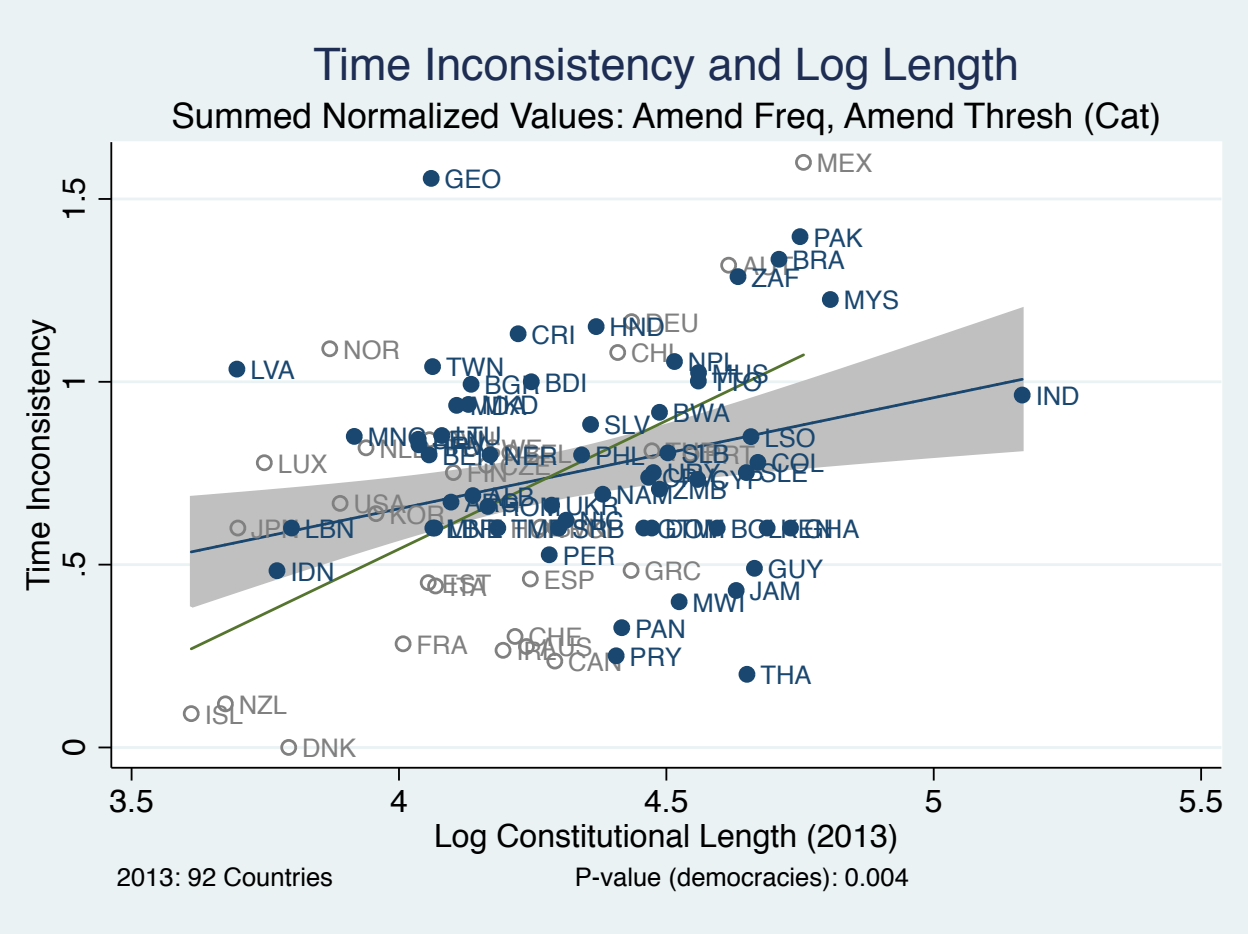

Time Inconsistency and Log Length
Summed Normalized Values: Amend Freq, Amend Thresh (Cat)
Time Inconsistency
Log Constitutional Length (2013)
2013: 92 Countries
P-value (democracies): 0.004
0
.5
1
1.5
3.5
4
4.5
5
5.5
GEO
MEX
PAK
BRA
ZAF
MYS
CRI
HND
DEU
CHL
NOR
LVA
TWN
BGR
BDI
NPL
MUS
TTO
IND
SLV
BWA
LSO
LUX
PHL
SLB
COL
SLE
NAM
ZMB
USA
KOR
LBN
JPN
IDN
PER
GRC
GUY
ESP
JAM
MWI
PAN
FRA
CHE
PRY
CAN
THA
NZL
ISL
DNK

FIGURE 10c

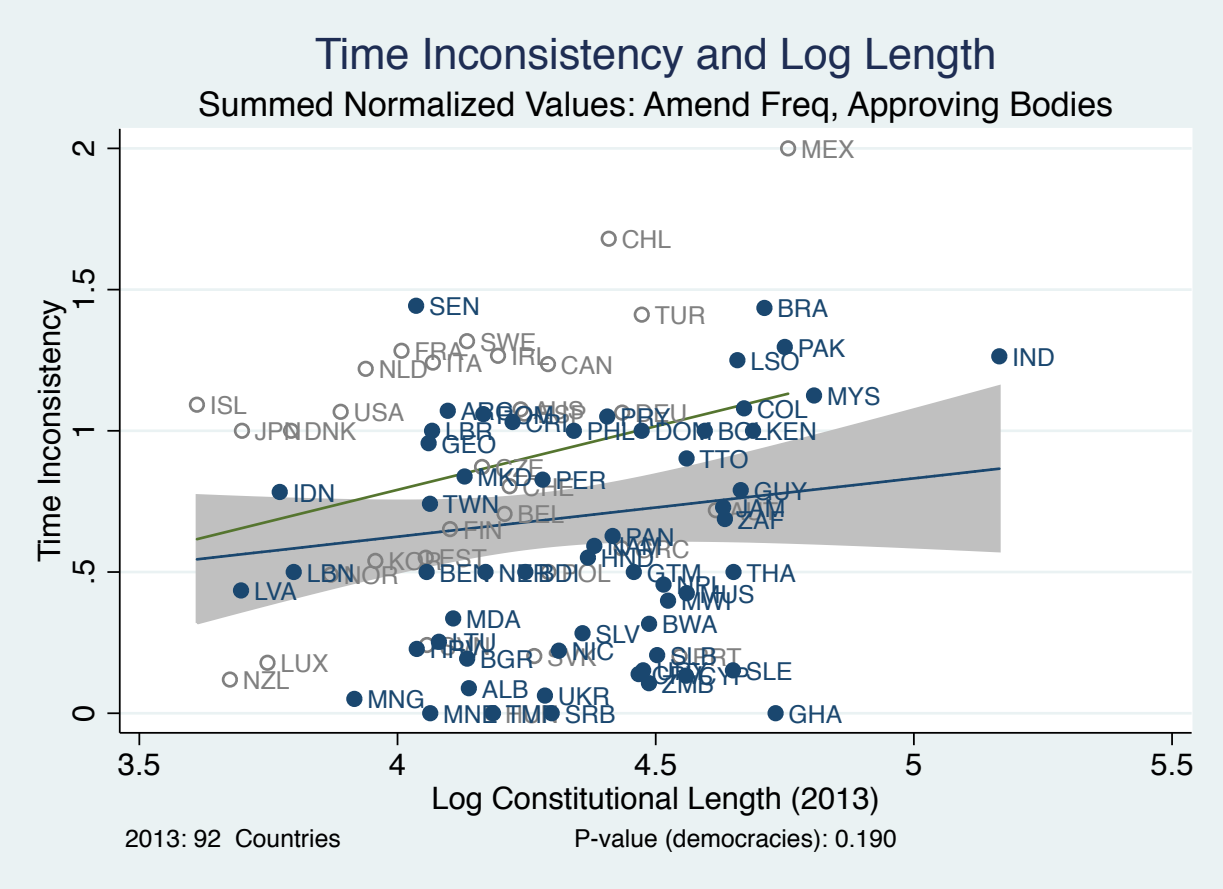

Time Inconsistency and Log Length
Summed Normalized Values: Amend Freq, Approving Bodies
Time Inconsistency
0
.5
1
1.5
2
3.5
4
4.5
5
5.5
Log Constitutional Length (2013)
MEX
CHL
SEN
TUR
BRA
SWE
FRA
PAK
NLD
ITA
IRL
CAN
LSO
IND
ISL
MYS
USA
COL
JPN
DNK
LBR
PHL
DOM
KEN
GEO
TTO
MKD
PER
IDN
GUY
TWN
ZAF
FIN
PAN
LBN
BEL
GTM
THA
LVA
MWI
MDA
BWA
SLV
LUX
BGR
SLE
NZL
ZMB
MNG
ALB
UKR
SRB
GHA
2013: 92 Countries
P-value (democracies): 0.190

FIGURE 11

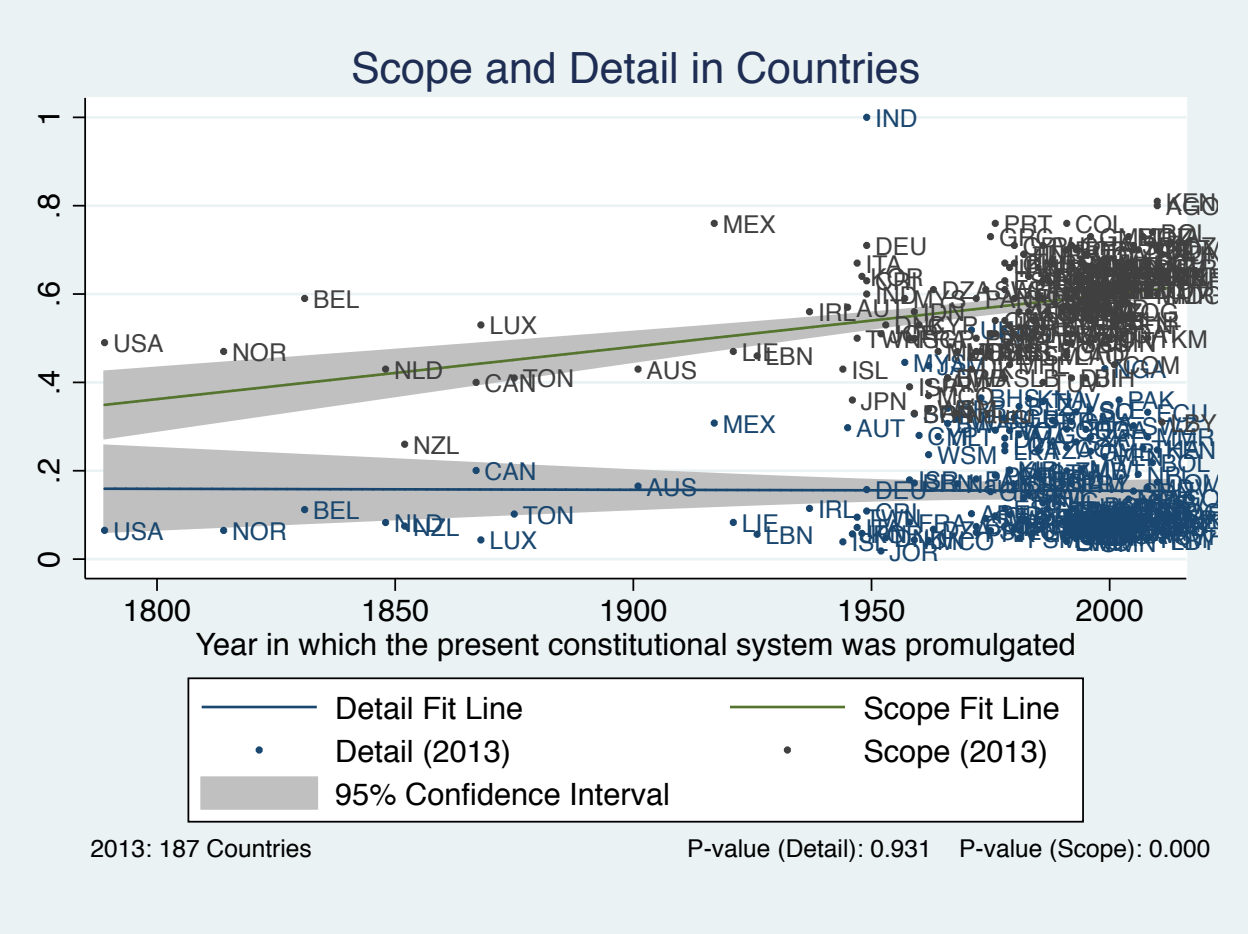

Scope and Detail in Countries
0
.2
.4
.6
.8
1
1800
1850
1900
1950
2000
Year in which the present constitutional system was promulgated
IND
MEX
DEU
BEL
LUX
USA
NOR
NLD
CAN
TON
AUS
LIE
LBN
IRL
ISL
JPN
AUT
NZL
JOR
Detail Fit Line
Scope Fit Line
Detail (2013)
Scope (2013)
95% Confidence Interval
2013: 187 Countries
P-value (Detail): 0.931
P-value (Scope): 0.000

FIGURE 12

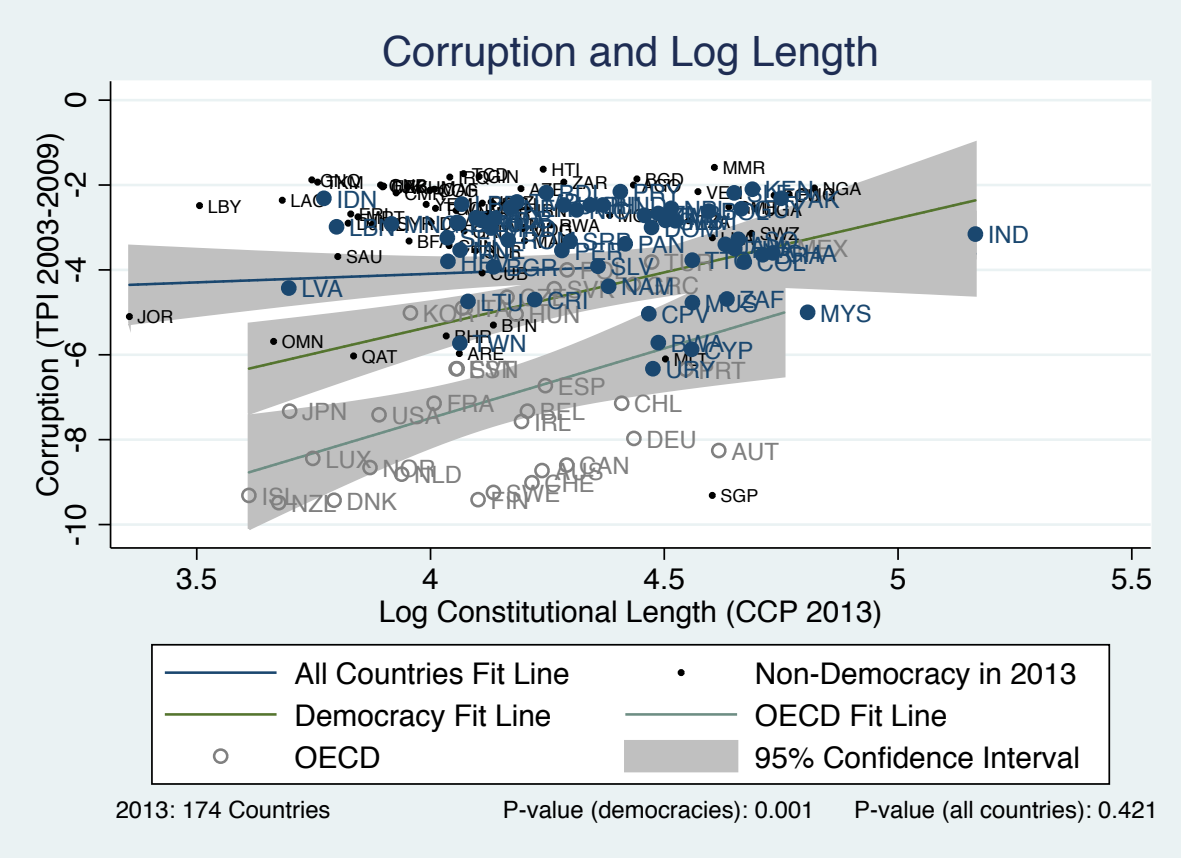

Corruption and Log Length
Corruption (TPI 2003-2009)
0
-2
-4
-6
-8
-10
3.5
4
4.5
5
5.5
Log Constitutional Length (CCP 2013)
All Countries Fit Line
Democracy Fit Line
OECD
Non-Democracy in 2013
OECD Fit Line
95% Confidence Interval
2013: 174 Countries
P-value (democracies): 0.001
P-value (all countries): 0.421

FIGURE 13

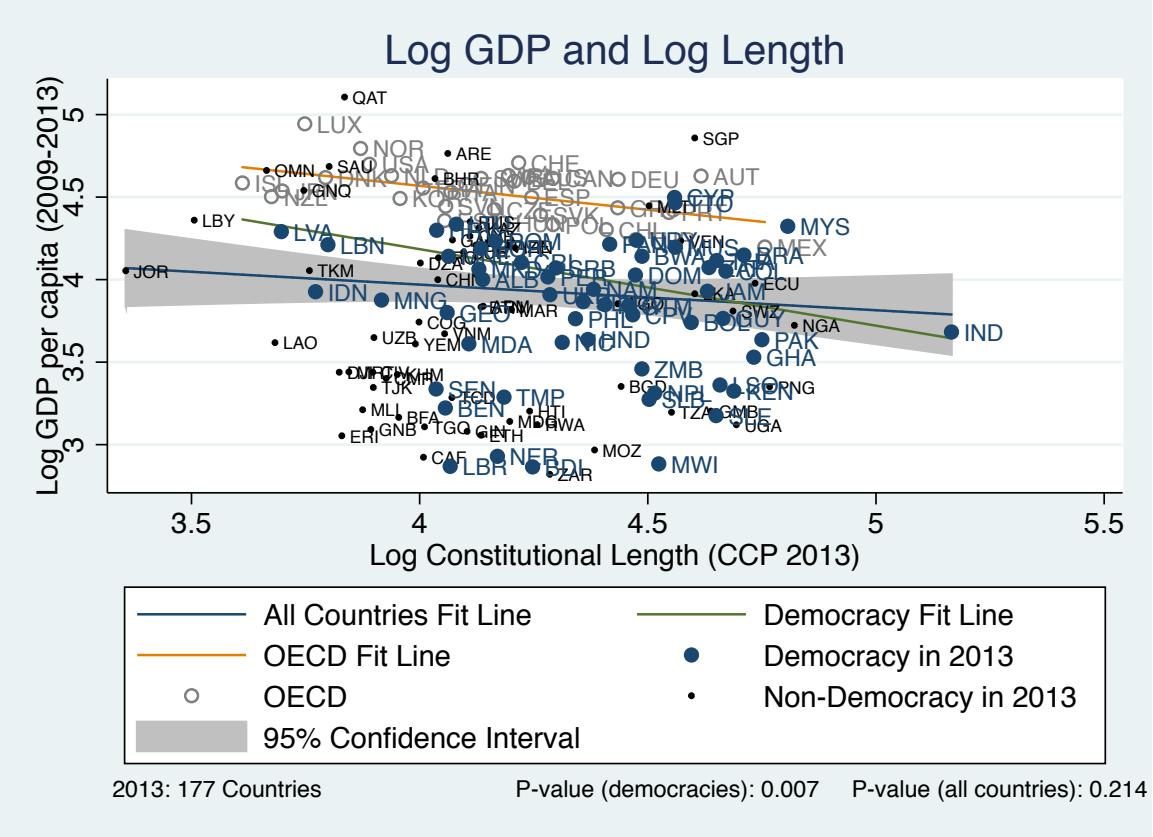

Log GDP and Log Length
Log GDP per capita (2009-2013)
3
3.5
4
4.5
5
Log Constitutional Length (CCP 2013)
3.5
4
4.5
5
5.5
All Countries Fit Line
OECD Fit Line
OECD
95% Confidence Interval
Democracy Fit Line
Democracy in 2013
Non-Democracy in 2013
2013: 177 Countries
P-value (democracies): 0.007
P-value (all countries): 0.214

TABLE 1

DV: Log Length	**OECD**	**DEMOC**	**OECD**	**DEMOC**
Detail (calc)	3.467***	1.774***	3.424***	1.766***
	(0.49)	(0.43)	(0.53)	(0.44)
Federalism	-0.043	-0.041	-0.045	-0.041
	(0.06)	(0.04)	(0.06)	(0.04)
Age of Democracy	-0.003*	-0.003***	-0.003	-0.003**
	(0.00)	(0.00)	(0.00)	(0.00)
Legal Origins	0.091	0.035	0.100	0.037
	(0.08)	(0.06)	(0.11)	(0.06)
# Amend			0.000	0.000
			(0.00)	(0.00)
Constant	3.894***	4.089***	3.900***	4.089***
	(0.10)	(0.09)	(0.11)	(0.09)
R^2	0.8583	0.7521	0.8585	0.7521
N	32	88	32	88
* p<0.05, ** p<0.01, *** p<0.001				

TABLE 2

DV: logGDP	OECD	DEMOC	ALL	OECD	DEMOC	ALL	OECD	DEMOC	ALL
Length (log)	-0.29**	-0.46**	-0.16	-0.28**	-0.35*	-0.13	-0.19*	-0.33**	-0.16
	(0.10)	(0.15)	(0.11)	(0.09)	(0.16)	(0.11)	(0.09)	(0.11)	(0.09)
Natural Resources				0.00	-0.02	-0.00	-0.01	-0.02**	-0.01***
				(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)
Trade				0.00	0.00	0.00***	-0.00	0.00	0.00**
				(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Investment				-0.01*	-0.00	0.01			
				(0.01)	(0.01)	(0.00)			
Savings							0.01*	0.02***	0.02***
							(0.01)	(0.00)	(0.00)
Constant	5.73***	6.04***	4.59***	5.94***	5.50***	4.00***	5.02***	5.14***	4.22***
	(0.43)	(0.65)	(0.50)	(0.38)	(0.79)	(0.54)	(0.40)	(0.49)	(0.39)
R^2	0.2605	0.0805	0.0088	0.4087	0.1758	0.1175	0.4669	0.5829	0.4860
N	32	90	177	32	90	170	32	90	170

* p<0.05, ** p<0.01, *** p<0.001

TABLE 3

DV: logGDP	**OECD**	**DEMOC**	**ALL**	**OECD**	**DEMOC**	**ALL**	**OECD**	**DEMOC**	**ALL**
Length (log)	-0.29**	-0.46**	-0.16	-0.27*	-0.22*	-0.10	-0.17	-0.19	-0.17
	(0.10)	(0.15)	(0.11)	(0.10)	(0.10)	(0.11)	(0.09)	(0.11)	(0.09)
Education				0.00	0.01***	0.01***	-0.00	0.01**	0.01***
				(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Natural Resources				0.00	-0.00	0.00	-0.01	-0.01*	-0.01***
				(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Trade				0.00	0.00	0.00	-0.00	-0.00	-0.00
				(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Investment				-0.01*	-0.01	-0.01			
				(0.01)	(0.01)	(0.01)			
Savings							0.02*	0.02***	0.02***
							(0.01)	(0.00)	(0.00)
Constant	5.73***	6.04***	4.59***	5.82***	5.04***	4.35***	4.94***	4.47***	4.30***
	(0.43)	(0.65)	(0.50)	(0.47)	(0.52)	(0.61)	(0.40)	(0.52)	(0.42)
R^2	0.2605	0.0805	0.0088	0.4215	0.3121	0.2481	0.5122	0.6215	0.5639
N	32	90	177	30	68	94	30	68	94

* p<0.05, ** p<0.01, *** p<0.001

Ind Var: Avg 2003-2009, DV: Log GDP PPP (2009-2013)

TABLE 4

DV: l.logGDP	OECD	DEMOC	ALL	OECD	DEMOC	ALL	OECD	DEMOC	ALL
Length (log)	-0.291**	-0.463**	-0.155	-0.025	-0.062	-0.058	-0.061	-0.023	0.033
	(0.10)	(0.15)	(0.11)	(0.07)	(0.08)	(0.07)	(0.10)	(0.08)	(0.08)
Education				-0.001	0.003**	0.004**	-0.000	0.003*	0.003**
				(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Natural Res				-0.008	-0.005	0.000	-0.002	0.000	0.008***
				(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Trade				-0.000	-0.000	-0.000	0.001	0.000	0.001
				(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Savings				0.011**	0.009***	0.009***			
				(0.00)	(0.00)	(0.00)			
Corruption (TPI)				-0.049***	-0.083***	-0.092***	-0.057***	-0.113***	-0.115***
				(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gov. Cons.							-0.002	-0.002	0.007
							(0.01)	(0.01)	(0.00)
Constant	5.731***	6.038***	4.591***	4.071***	3.740***	3.605***	4.330***	3.578***	3.099***
	(0.43)	(0.65)	(0.50)	(0.34)	(0.36)	(0.33)	(0.50)	(0.38)	(0.41)
R2	0.2605	0.0805	0.0088	0.7467	0.7932	0.7489	0.6647	0.7407	0.6982
N	32	90	177	30	68	93	30	68	93

* p<0.05, ** p<0.01, *** p<0.001

Ind Var: Avg 2003-2009, DV: Log GDP PPP (2009-2013)

Bibliography

Elkins, Zachary, Tom Ginsburg, and James Melton. 2009. *The Endurance of National Constitutions*. Cambridge: Cambridge University Press.

Ginsburg, Tom and James Melton. 2014. Cultures of Amendment and the Challenges of Measuring Amendment Difficulty. Draft manuscript from the authors (March 2014).

Gutmann, Jerg and Hayo, Bernd and Voigt, Stefan. 2011. Determinants of Constitutionally Safeguarded Judicial Review – Insights Based on a New Indicator (October 21, 2011). Available at SSRN:http://ssrn.com/abstract=1947244 or http://dx.doi.org/10.2139/ssrn.1947244

Kydland, F. E., & Prescott, E. C. 1977. Rules rather than discretion: The inconsistency of optimal plans. The Journal of Political Economy, 473-491.

Madison, James. 1788/1982a. "The Federalist No. 62: MADISON." In The Federalist Papers, ed Gary Wills. New York: Bantam.

Lorenz, Astrid. 2005. How to measure constitutional rigidity. *Journal of Theoretical Politics*. 17 (3): 339-361. DOI: 10.1177/0951629805052883

Lutz, Donald S. 1994. Toward a Theory of Constitutional Amendment, American Political Science Review, 8.2, 355-370.

Lutz, Donald S. 2006. *Principles of Constitutional Design*. Cambridge: Cambridge University Press.

Negretto, G. L. (2012), Replacing and Amending Constitutions: The Logic of Constitutional Change in Latin America. Law & Society Review, 46: 749–779. doi: 10.1111/j.1540-5893.2012.00516.x

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance. The Economic Journal* (Vol. 101, p. 147). Cambridge: Cambridge University Press. doi:10.2307/2234910

Rasch, Bjørn. E. (2008) "Foundations of Constitutional Stability: Veto Points, Qualified Majorities, and Agenda-Setting Rules in Amendment Procedures," ECPR Joint Sessions of Workshops, Rennes, France, 11–16 April 2008.

Rasch, Bjørn. E., & Roger D. Congleton (2006) "Amendment Procedures and Constitutional Stability," in Congleton, Roger D. , & Birgitta Swedenborg , eds., *Democratic Constitutional Design and Public Policy. Analysis and Evidence*. Cambridge, MA: MIT Press.319–342.

Tsebelis, G. (1995) 'Decision Making in Political Systems: Veto Players in Presidentialism, Parliamentarism, Multicameralism and Multipartism', *British Journal of Political Science* 25: 289–325.

Tsebelis, G. (2002) *Veto Players: How Political Institutions Work*. Princeton, NJ: Princeton University Press/Russell Sage Foundation.

Tsebelis, George and Dominic J. Nardi, A Long Constitution is a (Positively) Bad Constitution: Evidence from OECD Countries, *BJPolS,* Published by Cambridge University Press, 17 November 2014, DOI: http://dx.doi.org/10.1017/S0007123414000441

Voigt, Stefan. 2009. Explaining constitutional garrulity. *International Review of Law and Economics*, *29*(4), 290-303.

World Bank. 2014. *World Development Indicators*. Washington, DC: World Bank. Available from http: //data.worldbank.org/data-catalog/world-development- indicators, accessed August 2014.