Constitutional Rules as Determinants of Social Infrastructure

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Abstract: A sizable literature has established the positive economic impact of social infrastructure, but the determinants of social infrastructure itself have yet to be fully explored. Competing theories suggest different political institutions as driving forces of social infrastructure and empirical studies have not produced robust effects. We introduce a new dataset that codes a comprehensive set of political institutions directly from countries' constitutions to test their effects on social infrastructure. To address model uncertainty, we employ a statistical methodology formally designed to comprehensively juxtapose competing theories. We find that constitutional rules pertaining to executive constraints are crucial for the development of high-quality social infrastructure, specifically the structure of electoral systems. We also uncover, however, that the determinants of social infrastructure are more fundamental than those previously suggested: most importantly, the freedom to form parties and limits on campaign contributions are identified as important determinants. Our approach also reveals an entirely new set of determinants that to date has not been associated with social infrastructure: constitutionally guaranteed individual rights (intellectual freedom, equal rights, and the separation of church and state).

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1. Introduction

The recent literature on development determinants assigns a key role to constitutional rules that shape economic institutions or *social infrastructure* (Hall and Jones, 1999).[1] Acemoglu et al. (2001) suggest that constitutionally-specified constraints on the executive affect the risk of expropriation[2] of project investment, so that "differences in institutions originating from different types of states" affect development outcomes. In subsequent work, Acemoglu et al. (2005) formally propose a hierarchy of institutions where political institutions (constitutions) set the stage for economic institutions (e.g., expropriation risk) to determine development. Persson and Tabellini (2003) explicitly link constitutional features to development outcomes through electoral rules (proportional vs. majoritarian representation) and forms of government (presidential vs. parliamentary democracies). The authors hypothesize that electoral rules and forms of government determine political accountability, which fosters development through decreased diversion policies and increased public goods provision.

The empirical literature that examines the linkages between constitutional features and economic institutions has produced inconclusive results that are sensitive to the set of theories examined and to the types of constitutional proxies employed. Further confounding the issue is the fact that constitutional proxies to date had to be indirectly and subjectively constructed, making it difficult to identify the exact constitutional rule that exerts an effect on economic institutions. Last but not least, empirical studies usually focus on particular theories and seldom report results for all variables associated with competing theories. In this paper, we provide an exhaustive analysis of the effects of a wide range of constitutional determinants on social infrastructure. We account for the uncertainty surrounding the validity of each constitutional theory by using Bayesian Model Averaging (BMA), which has previously been extensively employed in the development context (see, e.g., Fernandez et al., 2001; Tan, 2010; Henderson et

[1] Hall and Jones (1999, p. 84) define *social infrastructure* as "institutions and government policies that determine the economic environment within which individuals accumulate skills, and firms accumulate capital and produce output." In the political science literature, Putnam et al. (1994) first introduced asymmetries in social infrastructures as a determinant of divergent development patterns. In the remainder of this paper, we will use the terms 'social infrastructure' and 'economic institutions' interchangeably.

[2] Their "expropriation risk" variable is a subjectively constructed index produced by Political Risk Services Group, Inc. staff under the label "contract viability." It is defined as "the risk of unilateral contract modification or cancellation and, at worst, outright expropriation of foreign owned assets."

al., 2012; Durlauf et al., 2012; Moral-Benito, E. (2012) and Lenkoski et al., 2014).[3] Not only is the methodology novel to address the model uncertainty inherent in the literature on social infrastructure determinants, but we also introduce a new dataset that provides unambiguous, direct indicators of constitutional provisions which can then be linked to social infrastructure.

The detailed information on all dimensions of actual constitutions allows us to establish the exact impact of each constitutional rule on social infrastructure. Our dataset on constitutions covers not only detailed provisions regarding legislative rules or executive constraints, but also exhaustive information relating to individual and economic rights. These rights have received little attention to date as determinants of social infrastructure, but they may well be crucial as they shape voter participation and preferences over the quality of economic institutions. Moreover, as suggested by Besley et al. (2010), our detailed constitution data includes fundamental electoral rights that can influence economic outcomes through political competition.

The inclusion of actual constitutional rules improves substantially the fit of traditional social infrastructure regressions. Once we employ actual constitution data to predict social infrastructure outcomes, Hall and Jones' (1999) original proxies no longer exert an effect.[4] The explanatory power of the original Hall and Jones determinants is instead absorbed by primary characteristics of constitutions. Similarly, Persson and Tabellini's (2003) constitutional proxies for electoral rules are not effective in determining social infrastructure anymore; only the age of a democracy retains its predictive power.[5] The aggregate constitutional proxies for electoral systems or executive constraints employed by previous studies are instead dominated in our data by more specific provisions such as the freedom to form parties, the absence of legislative quotas, and restrictions on campaign contributions.

Our findings provide further support that executive constraints are crucial determinants of social infrastructure. While the previous literature includes aggregated information on executive

[3] Alternative areas where BMA has been applied in economics include credit spreads (Faust et al, 2016), trade flows (Eicher et al, 2012), price indices (Moulton, 1991), education (Tobias and Li, 2004), and inflation forecasts (Wright, 2008a, 2008b), see Moral-Benito, E. (2015) for a complete survey.

[4] These variables include LATITUDE – the distance to the equator, ENGFRAC and EUROFRAC referring to the fraction of the population speaking English and Western European languages, respectively, and Frankel-Romer forecasted trade shares (FRANKROM).

[5] These proxies include AGE - age of democracy, PRES - dummy identifying presidential regimes, PARL_DEMOC - Polity IV democracy score interacted with (1-PRES), MAJ - dummy for electoral systems which takes the value one if the lower house is elected under plurality rule, and FEDERAL - dummy identifying countries with federal political structures.

recruitment competition as proxies for executive constraints, we find no support for this particular type of restrictions. Instead we identify constitutional provisions relating to expedient executive replacement procedures as a key determinant of high-quality institutions. Most important are, however, constraints on the executive's authority such as constitutional decision rules that govern the power to declare a state of emergency and the ability of the legislature to investigate the executive.

Our approach also reveals an entirely novel set of key contributors to economic institutions: constitutionally guaranteed individual rights. Equality before the law, separation of church and state, and intellectual freedom are all systematically linked with better social infrastructure. In contrast, constitutional rules referring to individual rights that are associated with economic entitlements (adequate living standards, health care) lead to worse economic institutions. Similarly, we find that constitutional provisions which increase the accessibility of the judiciary, such as the requirement that trials have to be conducted in a language the accused understands and the right to redress for false imprisonment, are crucial factors in the development of social infrastructure.

Previous approaches to determinants of economic institutions commenced with Mauro (1995), who identified the effects of corruption on economic growth. Knack and Keefer (1995) constructed the first "property rights index" that combined assessments of corruption, rule of law, bureaucratic quality, and expropriation risk. Combining this measure with information on countries' trade openness, Hall and Jones (1999) then created a comprehensive index of social infrastructure and examined its impact on development. Both the property rights and trade openness components of the index are capturing the extent to which existing economic institutions in a country keep resources from being diverted to the government. The Hall and Jones social infrastructure index has since become the benchmark in the economics literature with over 7,000 citations.

The idea that political rules, anchored in constitutions, determine social infrastructure was first explored by Persson and Tabellini (2003) and Persson (2004). They regressed Hall and Jones' (1999) social infrastructure measure on constitutional proxies of democratic regimes

(presidential versus parliamentary), electoral rules, and age of democracy.[6] Other constitutional features as potential determinants of social infrastructure have received remarkably little attention to date, notably individual rights. Barro (1997) estimated a positive effect of a degree of democracy index on growth and found that the democracy proxy is also highly correlated with measures of civil liberties. While the civil liberties proxy is now popular in the literature, it is unclear through which exact channel it influences the quality of economic institutions.[7]

Methodologically, our paper introduces a new econometric approach to the determinants of social infrastructure literature in order to isolate the effects of primary constitutional rules on social infrastructure. As competing theories suggest a multitude of distinct determinants of economic institutions, traditional regression approaches inflate significance levels when they ignore the associated uncertainty surrounding the validity of a given theory. To resolve this issue, we leverage Iterative Bayesian Model Averaging (IBMA, Yeung et al., 2005; and Masanjala and Papageorgiou, 2008), an extension of BMA, to identify the effect of distinct constitutional features on social infrastructure. IBMA addresses model uncertainty and resolves the computational limitations of existing Bayesian Model Averaging (BMA) algorithms in the presence of a large set of candidate regressors.

The remainder of the paper is organized as follows. Section 2 discusses existing explanations of the impact of constitutional rules on social infrastructure. Section 3 presents our empirical approach, and section 4 discusses the data. Results are presented in section 5, while section 6 concludes.

2. Theories of Constitutional Rules and Economic Institutions

Two central elements have emerged in the literature that links the effects of constitutional rules to the quality of economic institutions (social infrastructure): *political accountability* and *representativeness*.[8] Accountability implies that voters can identify the policy makers responsible for policy choices. The threat of being voted out of office is thought to discipline executives and legislators resulting in decreased corruption and better public policy.

[6] Rockey (2012) also examines the differential impacts of presidential/parliamentary regimes but focuses on the fiscal effects.
[7] Barro's civil liberties indicator is an aggregated index that combines proxies for free speech, the right to organize or demonstrate, and the right to personal autonomy (freedom of religion, education, travel, and other personal rights) as specified by Gastil (1986–87).
[8] See, for example, Persson and Tabellini (2003, 2004), Cervellati et al. (2006), and Acemoglu and Robinson (2008).

Representativeness, on the other hand, indicates whether policy choices account for the preferences of large voter shares instead of minorities. Greater representativeness is thought to generate policies that benefit the broad population through increased public goods provision while lowering the risk of providing favors to minorities of the electorate.

Representativeness is influenced by electoral rules and the resulting forms of government. The literature mainly focuses on proxies such as district size or electoral formulas (plurality versus proportional) to capture representativeness.[9] Proportional representation is thought to result in policies that better represent voters' preferences, while plurality implies greater accountability since it is easier to identify who is responsible for legislation when two rather than many parties occupy the legislative chambers. However, proportional representation has been argued to lead to higher taxation and public spending as a result of negotiations and coalition formation within the chamber of representatives. As a result, the impact of proportional representation on social infrastructure is ambiguous. More fundamental features of electoral rules reference the freedom to form parties, competitive elections through donation limits, and the protection of voting rights. These rules have received little attention in the literature although they are likely to be important for the resulting policy choices. Besley et al. (2010) discuss, for example, the impact of voting rights on electoral competition and its link to policy outcomes.

Accountability, on the other hand, is thought to be affected by the form of government, in particular by the choice between a parliamentary and a presidential regime. Presidential regimes are thought to be more accountable as they concentrate executive powers in a single office which usually exhibits strong separation of powers through checks and balances. As a result, presidential regimes are expected to feature less rent extraction and better policies. Yet, identifying such an effect has proven elusive in the empirical literature; see Persson and Tabellini (2003). Parliamentary democracies, on the other hand, require cabinets and the confidence of a legislative majority. The confidence requirement fosters legislative cohesion and thus the pursuit of general interest policies and less targeted spending. From this perspective, presidential regimes may be more prone to corruption and preferential treatment of minority interest groups due to the lack of confidence requirements and legislative cohesion, which again renders ambiguous predictions.

[9] Persson and Tabellini (2003) provide an overview. Persson et al. (2007) consider the effects of electoral formulas.

The most prominent determinants of social infrastructure with regard to accountability are proxies for constitutionally imposed executive constraints. These may be direct constraints (impeachment, term limits, separation of military and government) or they can be implicit in decree powers (e.g., limits on state of emergency declarations). Executive constraints are also commonly related to the competition in the executive's recruitment process and/or decision rules that limit the power of the executive, where increased competition and checks and balances are thought to improve economic institutions.[10]

In contrast, up to now the literature on the determinants of social infrastructure has abstracted from individual rights and judiciary characteristics. Civil liberties are often assumed to be the outcome of political institutions and not the result of constitutional rules. But individual rights such as freedom of speech, access to education, and equality before the law can clearly determine both political and economic institutions through political competition and participation. These rights are also directly anchored in many constitutions. Since our dataset contains a plethora of rights, we introduce their effects to the literature. Using our empirical approach, we can untangle their individual effects on economic institutions, without needing to bundle different measures in a broad civil rights proxy.

Finally, it has been shown that legislative power is linked to democratization and political stability (Barro, 1999). Stronger and more independent legislatures are thought to increase an executive's accountability through better checks and balances. Similarly, the literature emphasizes that a more equal distribution of power within countries via federal structures provides better protections of rights and representation (Persson and Tabellini, 1996). Persson and Tabellini (2003) suggest, however, that federalism may also lead to less accountability and more corruption, implying an ambiguous relationship between the quality of economic institutions and constitutional rules that strengthen federalism.

Below we consider the actual written constitutional rules that relate to accountability and representativeness and examine their link to social infrastructure. We use data on specific constitutional provisions, ranging from executive constraints, civil liberties, to legislative powers, forms of government, and electoral rules to identify their effects on the quality of economic institutions. To disentangle the impact of this exhaustive collection of constitutional

[10] See Besley and Case (1995) on term limits, and Besley et al. (2010) on electoral competition.

regressors we employ Iterative Bayesian Model Averaging. The next section provides a sketch of the IBMA methodology.

3. Empirical Methodology: Juxtaposing Constitutional Data and Theories

The juxtaposition of diverse constitutional theories in order to elicit their effects on economic institutions poses an empirical challenge, especially when we contrast the effects of different data sources (primary and subjectively coded data). In the presence of competing theories and/or a multitude of alternative regressors, researchers encounter model uncertainty which results in overstated confidence intervals (Raftery, 1995). Bayesian Model Averaging (BMA) is designed to address model uncertainty surrounding any particular theory. The methodology reports the probability that a particular regressor associated with a particular theory exerts an effect on the variable of interest. In the presence of model uncertainty, the use of BMA is preferable to single-equation estimations since it minimizes the total error rate (sum of Type I and Type II error probabilities) and generates point estimates which have a lower mean-squared error than any single regression model. In addition, BMA results have a better predictive performance relative to single-equation approaches (Raftery and Zheng, 2003).

In the case of linear regression models, the BMA approach can be summarized as follows. Let Y be the dependent variable, the quality of economic institutions in our case, and let $X_1, X_2, X_3, \ldots, X_k$ be a set of candidate regressors that determine economic institutions. In our empirical approach, these regressors are constitutional rules and the potential determinants of economic institutions that have been previously suggested by Hall and Jones (1999), Acemoglu et al. (2001) and Persson and Tabellini (2003). Consider a subset $X_1, \ldots, X_p$ of the regressor space $X_1, X_2, X_3, \ldots, X_k$, and let a candidate model be

$$Y = \alpha + \sum_{j=1}^{p} \beta_j X_j + \varepsilon , \qquad (1)$$

where $\beta_1, \beta_2, \ldots, \beta_p$ are the coefficients to be estimated, α is a constant and ε is the error term. BMA proceeds in two steps. Given a dataset D, BMA first estimates a posterior distribution $P(\beta_r | D, M_m)$ for every candidate regressor r in every model M_m that includes the coefficient, β_r, as well as each model's posterior probability, $P(M_m | D)$. The second step consists of

combining all posterior distributions from the $\overline{m}$ models which include regressor *r* into the weighted averaged posterior distribution, $P(\beta_r|D)$, using as weights each model's posterior probability:

$$P(\beta_r|D) = \sum_{m=1}^{\overline{m}} P(\beta_r|D, M_m) P(M_m|D). \quad (2)$$

The posterior probability of model M_m describes its likelihood to be the true empirical model, which is formally defined as the ratio of the marginal likelihood (denoted *l*) of model M_m to the sum of the marginal likelihoods over all possible models:[11]

$$P(M_m|D) \equiv l(D|M_m) \Big/ \sum_{n=1}^{2^k} l(D|M_n). \quad (3)$$

These probabilities are also used as weights to compute the posterior mean and variance for each parameter:

$$\hat{\beta}_r^{BMA} \equiv E[\beta_r|D] = \sum_{m=1}^{\overline{m}} \hat{\beta}_{r,m} P(M_m|D) \quad (4)$$

$$\hat{\sigma}_r^{BMA} \equiv Var[\beta_r|D] = \sum_{m=1}^{\overline{m}} \left(Var[\hat{\beta}_{r,m}|D, M_m] + \hat{\beta}_{r,m} \right) P(M_m|D) - \left(\hat{\beta}_r^{BMA}\right)^2. \quad (5)$$

The posterior inclusion probability for each regressor, which measures the importance of a variable, can then be obtained by summing the posterior model probabilities over all models that include regressor *r*:

$$P(\beta_r \neq 0|D) = \sum_{m=1}^{\overline{m}} P(M_m|D). \quad (6)$$

The posterior inclusion probability indicates the likelihood that a regressor has an effect on the dependent variable. Effect thresholds for the inclusion of a particular regressor have been established by Jeffries (1961) and Kass and Raftery (1995). A posterior probability of less than 50% is seen as *evidence against* an effect; > 50% indicates that there is an effect, which in turn

[11] The marginal likelihood is a function of priors. We follow Raftery (1995) and impose the diffuse Unit Information Prior (UIP) that can be derived from frequentist principles (Kass and Wasserman, 1995). The UIP is seen as a conservative prior that is sufficiently spread out over the relevant parameter values and reasonably flat over the area where the likelihood is substantial.

can be either *weak*, *positive*, *strong*, or *decisive* when lying within the following thresholds: 50–75%, 75–95%, 95–99%, and >99%, respectively. In what follows, we will refer to a regressor as being 'effective' if the posterior probability exceeds 50%.

Given the size of the model space in our application, with over 150 candidate regressors, we employ the Iterative BMA (IBMA) algorithm developed by Yeung et al. (2005).[12] IBMA applies BMA iteratively on a reduced set of variables, $z = 40$ in our case, which is sufficiently small to be processed computationally. After the first z regressors have been processed, q variables whose posterior inclusion probabilities do not exceed a 0.1% threshold are removed from the regressor window and q unprocessed candidate regressors are added. BMA is then repeatedly applied until all regressors have been considered.

4. The Data

Our dependent variable is the social infrastructure index proposed by Hall and Jones (1999) that is comprised of proxies measuring law and order, bureaucratic quality, corruption, risk of expropriation, and government repudiation of contracts as well as the Sachs and Warner (1995) trade openness measure. Persson and Tabellini (2003) label the same index "structural policy*"* and variants of this index represent the most widely used measure of the quality of economic institutions in the literature (see also Rodrik et al., 2004; and Acemoglu et al., 2001, 2002).[13] Alternative measures of social infrastructure have been proposed, notably those based on the World Values Survey, which focuses on intangible social capital, such as trust (e.g., Knack and Keefer, 1997; Knack, 2002; and Balan and Knack, 2012).

4.1 Previous Determinants of Social Infrastructure

Hall and Jones (1999) first suggested Western European influence as a crucial determinant for social infrastructure. To proxy for Western European influence, Hall and Jones introduce two language variables: the fraction of a country's population speaking a Western European language as a mother tongue (EUROFRAC), and the fraction speaking English as a mother tongue (ENGFRAC*)*. Hall and Jones (1999) also include the distance from the equator (LATITUDE)

[12] IBMA has since been applied in economics by, among others, Eicher et al. (2007), Begun (2008), and Masanjala and Papageorgiou (2008).

[13] Acemoglu et al. (2001, 2002) and Acemoglu and Robinson (2012) also investigate the determinants of economic institutions. Since they focus only on former colonies, their proxy for economic institutions, settler mortality, is not included here.

and Frankel and Romer's (1999) predicted trade shares (FRANKROM). LATITUDE pays homage to Montesquieu's (1748) and Diamond's (1997) environmental/geographic determinism where climatic resource conditions are thought to explain differences in policies and customs. FRANKROM proxies for diversionary policies, as the divergence between actual and predicted trade shares implies distortive trade policies that generate political rents and breed corruption.

Persson and Tabellini (2003), on the other hand, motivate five constitutional rules as determinants of social infrastructure. First, they hypothesize that more mature democracies adopt systematically different policies as it takes time to build public goods such as pension systems. Older democracies might also have a better system of checks and balances to fight corruption and abuse of power.[14] Hence, the age of a democracy (AGE) is expected to positively affect social infrastructure. Second, an indicator of federalism (FEDERAL) is included, which is expected to induce a more equal treatment and improved economic outcomes across different regions (see Persson and Tabellini, 1996). Third is an electoral measure, majoritarian rule (MAJ), which takes the value one when the lower house is elected under plurality rule and zero if it is majoritarian. This variable is motivated by the comparative politics literature that portrays majoritarian and proportional elections as a trade-off between better accountability (less corruption) and representation. When candidates with the highest vote shares win every seat at stake (rather than seats proportional to vote shares), politicians are thought to target small and geographically concentrated interest groups (see Persson and Tabellini, 1999).

The fourth indicator motivated by Persson and Tabellini (2003) proxies for presidential versus parliamentary regimes; it is denoted PRES and takes the value one in the former case and zero otherwise. Presidential regimes are thought to provide more accountability because they concentrate the executive power in a single office that is directly responsible to voters. In addition, presidential systems are presumed to feature better separation of powers as well as checks and balances, which makes it harder for politicians to collude at the voters' expense (Persson et al., 1997, 2000). Weaker electoral accountability in parliamentary regimes is then thought to result in greater rent extraction and higher taxes than in presidential systems. Finally, Persson (2004) includes as fifth determinant of social infrastructure a measure of the degree of

[14] Rockey also used the age of democracy to examined its impact on the size of government.

democracy in non-presidential regimes (PARL_DEMOC), which is the interaction of (1-PRES) and a country's democracy score from the Polity IV project.[15]

At this stage, it is also helpful to discuss causality. Following the approaches by Hall and Jones (1999) as well as Persson and Tabellini (2003), the literature on the determinants of social infrastructure is concerned with long term effects, which assumes that variables in these regressions change very slowly. There is no notion that changes in one year immediately translate into variation of the dependent variable. Hence, the regressors in this literature do not necessarily predate the social infrastructure index, which contains information from 1950 to 1995. Often variables such as 'type of democracy' or 'fraction of the population speaking English' are included without much temporal concern, since they are seen as proxies of deep and long-lasting foundations of economic institutions.

A related issue that deserves consideration is endogeneity. For instance, better social infrastructure might have attracted migrants which in turn affects today's measure of ENGFRAC. Here we follow the unanimous approach in the literature and assume that the determinants suggested by Hall and Jones (1999), Acemoglu et al. (2001, 2002) and Persson and Tabellini (2003) as well as our constitutional variables are exogenous with respect to social infrastructure. Lastly, our dataset on actual dimensions of written constitutions does not differentiate between *de jure* and *de facto* institutions. While this distinction is certainly of interest, there is currently no dataset available that covers *de facto* constitutional rules at a similar breadth. Hence, we are limited to testing the impact of *de jure* constitutional features on economic institutions.

4.2 Primary Constitutions Data

Our data on primary constitutional rules is based on the Comparative Constitutions Project (2014), which provides detailed information on all countries' constitutions. The Comparative Constitutions Project data is an exhaustive sequence of coded constitutional provisions that we convert into dichotomous variables. After excluding variables that are extraneous or ambiguous (see the Appendix for details) our dataset contains 156 constitutional rules as candidate determinants of social infrastructure. Variable definitions and summary statistics are in Table 1.

[15] We follow the literature and include regional controls (AFRICA, LAAM ASIAE) and colonial dummies (COL_UKA, COL_ESPA, and COL_OTHA). See Table 1 for details.

The constitutional variables can be grouped into six dimensions that pertain to the theories outlined in Section 2. There are 40 variables relating to *Executive Constraints,* distinguishing, among other things, checks and balances for the head of government and the head of state. Constitutional features in this category pertain to the executive selection process, executive powers (and limits thereof) and executive dismissal mechanisms. The second dimension includes 24 variables on *Legislative Rules* that cover legislative procedures, powers of the legislature, and the dismissal of lawmakers. Together the constitutional rules in the executive and legislative categories cover the executive and legislative constraints discussed above. Indeed, they provide a much richer set of candidate regressors that capture executive constraints in constitutions at a much more detailed level than previous aggregate proxies.

The third dimension of our dataset contains detailed information on 23 *Judiciary Rules* covering constitutional design, legal processes, and legal rights. The fourth category, *Federalism*, contains 6 constitutional rules that identify the powers of subnational governments, as suggested by Persson and Tabellini (2003). This detailed information enables us to examine exactly which aspects of federalism (if any) affect social infrastructure. The category also includes variables covering the administration of autonomous and ethnic groups. The fifth dimension includes 17 variables that characterize *Elections,* containing detailed descriptions of electoral rules and processes. Hence, the dataset features direct measures that can test the electoral systems hypotheses put forward by Persson and Tabellini (2003). An entirely new set of possible determinants of social infrastructure is contained in our sixth constitutional dimension which covers *Individual and Human Rights*. The 46 different variables in this category include basic rights, such as free speech, academic freedom, equality before the law, and entitlements.

Our final dataset includes 69 countries (see Table A.2 for a complete list), which constitutes the intersection of the Hall and Jones (1999), Persson and Tabellini (2003) and Comparative Constitutions Project datasets. While the number of observations differs slightly from Persson and Tabellini and substantially from Hall and Jones, our dataset replicates the same signs and similar coefficient magnitudes as in the original papers (see Table A.1).

5. Results

5.1 Determinants of Social Infrastructure

We present our results in two stages. First, we include only primary constitutions data as potential determinants of social infrastructure. Then we add the variables suggested by Hall and Jones (1999) (EURFRAC, ENGFRAC, LATITUDE and FRANKROM) and Persson and Tabellini (2003) (PRES, MAJ, AGE, FEDERAL, PARL_DEMOC). Since we are processing over 150 regressors, we report only variables that exhibit at least a weak effect, i.e. a posterior inclusion probability of at least 50%.

Panel 1 in Table 2 provides IBMA results when considering our 156 primary constitutional rules as candidate regressors, as well as dummies for colonial and continental origin. We find that 26 constitutional regressors surpass the weak effect threshold to determine the quality of social infrastructure.[16] The second panel adds the Hall and Jones variables as well as the constitutional proxies used by Persson and Tabellini. Of all variables that have been suggested by the previous literature, only one remains effective: AGE (the age of a democracy), which exhibits a 100% inclusion probability implying that it is a key determinant of social infrastructure. The positive sign and the magnitude of the posterior mean indicate that the quality of economic institutions substantially improves with the age of a democracy. Proxies previously employed to examine the effects of different types of democracy or electoral systems are not effective (and hence not reported in the table), which implies that primary constitutional rules better capture particular features of democracies than these aggregate measures. Similarly, none of the Hall and Jones (1999) variables surpass the weak effect threshold (and are hence not reported in the table) as their effects are absorbed by the primary constitutions data. Even LATITUDE and the trade policy variable FRANKROM are not effective anymore as their explanatory power is superseded by more specific constitutional rules.

The models in both panels fit the social infrastructure data remarkably well, as measured by both the R-squared and the Bayesian Information Criterion (BIC). The adjusted R-squared of the best model is high in the first panel at 0.95, indicating the substantial explanatory power of the primary constitution variables, compared to a fit of 0.3 to 0.6 in the previous literature (see Table A.1). The explanatory power barely changes with the inclusion of the Hall and Jones and Persson and Tabellini variables, as the adjusted R-squared reaches 0.97 in the second specification.

[16] To minimize clutter, Table 2 does not report results for variables that do not surpasse the 50% effect threshold.

Overall, there is a substantial overlap in the results from the two specifications, with half of the effective variables in panel 1 appearing also in panel 2. Nevertheless, we also observe important variations which indicate that the AGE of a democracy, a crucial determinant missing in panel 1, does not have an analog in the primary constitutions data. This explains the observed difference in the best models in panel 1 and 2. The inclusion of AGE in panel 2 improves the fit and eliminates some primary constitution regressors that are effective in panel 1. Intuitively, the introduction of AGE allows for a different set of models to be selected by the IBMA algorithm.

In our discussion of the results we focus on the specification in panel 2, which provides the best fit in terms of the Bayesian Information Criterion and the adjusted R-squared. Variables from each of the six constitutional dimensions show an effect: *Elections*, *Executive Constraints*, *Federalism*, *Legislative Rules*, *Judiciary Rules* and *Individual and Human Rights*. First of all, we note that electoral rules do matter, but not the distinction between presidential and majoritarian systems. Using actual primary constitution data, we find that three features of the electoral system exert a crucial impact on social infrastructure: restrictions on campaign contributions (LimitsOnCampaignDonations) improve social infrastructure outcomes while quotas for minorities in the legislature (MinorityQuotaInLegislature) and limits on the freedom to organize in political parties (PartiesCanBeProhibited) have a detrimental effect. These three features of the electoral process are also among the most important constitutional rules in terms of the magnitude of their influence on social infrastructure, as indicated by their posterior means.

One of the most important constitutional rules pertaining to *Executive Constraints*, as measured by its posterior mean and inclusion probability, is the absence of the right for the legislature to investigate the executive (LegCannotInvestigateExecutive). This result is particularly noteworthy given that previous measures of executive constraints focused only on electoral competition of the chief executive and limitations of his/her powers. While variables to that effect are included in our dataset (see Table 1, for example HOSELECT or HOGIMM_2), none are found to be effective. In contrast, creating a balance of power between legislators and the executive seems to be a crucial determinant of social infrastructure. In line with this observation, the presence of a single executive (NumberOffExec=1) who is equipped with the power to declare a state of emergency (ExecCanDeclareStateEmergency) and the fact that in an emergency the head of state is not expediently chosen (HOSReplace=NormalSelection) all have a negative impact on social infrastructure. At the same time, the results show that simply

including a provision which states violations of the constitution by the head of state can lead to his/her dismissal (ReasonHOSDismissal=Violation) is an insufficient executive constraint to ensure high-quality social infrastructure. Moreover, the ability of a country's legislature and executive to declare a state of emergency in times of crisis (ReasonStateEmergency=General) proves to have a positive impact on a country's economic institutions.

Only one constitutional rule relating to *Federalism* serves as an effective determinant of social infrastructure: whether the constitution recognizes autonomous indigenous groups (FederalAutonomousIndigenous). The magnitude of this determinant is large in terms of the posterior mean and inclusion probability, and the negative coefficient indicates that federal governments can be costly in terms of economic efficiency. Three further constitutional rules that affect social infrastructure pertain to *Legislative Rules*. Most importantly, the possibility for legislators to be removed (IndivLegislatorsCanBeRemoved) enters with a 100% inclusion probability and has a large negative effect. This result is in line with the previously discussed prediction that more independent legislators create better policy outcomes. In addition, constitutional rules that recognize international organizations (LegalProvisionsForIntOrgs) and require a supermajority for new laws in the legislature (NewLawsRequireSuperMajority) have a significant positive effect, indicating that both representativeness and openness improve the quality of economic institutions.

Effective constitutional rules concerning *Individual and Human Rights* are equally plentiful, and at times even more influential (in terms of posterior means). Indeed, two variables in this category exert the strongest observed effects of all constitutional rules. The variable with the largest positive impact on social infrastructure is the absence of discrimination (EqualRights&NonDiscrimination), while the strongest negative effect results from constitutional rules stipulating that the state must provide for an adequate standard of living (AdequateLivingStandardProvision). The positive effect of the former is intuitive, while the negative impact of the latter is likely due to a weaker incentive structure which hampers economic activity. Several other human rights are also documented to exert decisive effects: rules that limit corruption (CounterCorruptionComission), the separation of church and state (SeparationChurch&State), and the guarantee of academic freedom (AcademicFreedom) all improve social infrastructure. On the other hand, we find that making rights provisions binding for both the state and private parties (AllRightsBinding) as well as constitutionally guaranteed

healthcare (Healthcare) exert negative effects. Better healthcare is often related to better economic performance, but excessive entitlements anchored in the constitution might also signal excessive reach into the economic rights and affairs of individuals. Economic theories of entitlements have been developed by Sen (1983), who focused on abject poverty and famine, but we are unaware of entitlement theories being linked to social infrastructure or the protection of property rights, which is what our data indicate.

The final category of constitutional determinants that affects social infrastructure is *Judiciary Rules*. The constitutional guarantee of a redress mechanism for false imprisonment (FalseImprisonRedress), the requirements that trials are conducted in a language that the accused understands (TrialsInAccusedLanguage) and in public (TrialPublic) are all effective determinants. The former two constitutional rules exert a positive and the latter a negative effect on the quality of economic institutions. It is also important to note that the absence of sufficiently stringent bankruptcy laws when debtors cannot be detained (DebtorsCannotBeDetained) exert a negative impact on social infrastructure, which highlights that the economic dimensions of social infrastructure are well captured by our dataset on primary constitutional rules.

5.2 Economic Effects of Constitutions

Having been concerned with the question of *which* constitutional rules affect social infrastructure, we now turn our attention to the economic effects. To gauge the economic impact of individual constitutional rules, we consider the magnitude of the posterior means in panel 2 of Table 2, which allow for a direct comparison given that all effective regressors (including AGE) are restricted to the zero-one range. Figure 1 ranks the effective variables based on the sign and magnitude of their respective posterior means (excluding locational and colonial controls) to emphasize the size of their effects on social infrastructure.

While Persson and Tabellini's AGE variable has the greatest individual impact on the quality of a country's economic institutions, the simultaneous inclusion of a number of constitutional rules easily outpaces this effect. In particular, there are five constitutional provisions whose presence improves social infrastructure by 0.1 or more – a substantial effect given that our dependent variable is also confined to the zero-one range. These variables include EqualRights&NonDiscrimination, LimitsOnCampaignDonations, TrialsInAccusedLanguage, AcademicFreedom and the presence of a CounterCorruptionCommission. The strongest impact

is exerted by EqualRights&NonDiscrimination. Countries that include such a provision in their constitution increase their social infrastructure index by one standard deviation, i.e. 0.25. LimitsOnCampaignDonations is a close second with a slightly weaker impact of 0.21 points.

Figure 1 also highlights that a number of constitutional rules exert detrimental effects on social infrastructure. That is, a country cannot only improve its economic institutions by including certain rules in its constitution but also by actively excluding others. Our results indicate that there are 11 constitutional rules whose presence worsens the quality of economic institutions. The greatest negative effects are exercised by provisions that specify PartiesCanBeProhibited, IndivLegislatorsCanBeRemoved, fixed quotas in the legislature (MinorityQuotaInLegislature), autonomous governments for indigenous groups (FederalAutonomousIndigenous), and guaranteed minimum living standards (AdequateLivingStandardProvision). Hence, constitutional rules with a negative impact are just as crucial for explaining the formation of social infrastructure as provisions with positive effects.

Finally, we examine predicted social infrastructure values for each country to highlight the distance to the ideal constitution. With BMA, the median model as reported in panel 2 of Table 2 generates the best predictive performance (Raftery and Zheng, 2003). Hence, we use the sum of the posterior coefficient means of the effective regressors to create an overall constitutional quality index for each country (where absent constitutional rules are excluded on a country-by-country basis). This value is then normalized by the "optimal constitution value" generated by the artificial country whose constitution contains all variables that exert a positive effect and none of the variables that exert a negative effect. The values of this index are plotted in Figure 2 and reported in Table A.2, ranging from zero (worst constitution) to one (best constitution). As the fitted regression line in Figure 2 shows, the constitution index is indeed an excellent predictor of social infrastructure across countries. The more positive (fewer negative) constitutional rules are contained in a constitution, the greater is also the measured social infrastructure. Mauritius and Finland have the best constitutions index and also rank among the highest in social infrastructure, while Bangladesh has the lowest scores in both indices.

6. Concluding Remarks

Much of the development literature in the past decade emphasizes the economic effects of social infrastructure. Meanwhile, the determinants of social infrastructure are still unclear as competing

theories suggest different candidate regressors and empirical studies report mixed effects. Moreover, many of the determinants suggested in the literature lack precision or are excessively aggregated and previous econometric studies do not systematically juxtapose all competing candidate regressors. We introduce a rich new dataset to the literature that codifies all dimensions of actual constitutional rules into 156 variables, and contrast their effects on social infrastructure with previously suggested determinants by using Iterative Bayesian Model Averaging. With the exception of the age of a democracy, we find that most of the measures hitherto employed as social infrastructure determinants lose their explanatory power once detailed constitutional rules are introduced. The regression fit improves dramatically and it is clear that the primary data absorbs the effects previously attributed to aggregate constitutional proxies.

Three important results can be highlighted. First, electoral systems matter, but in a more fundamental fashion than previously suggested. Persson and Tabellini (2003) focused on effects of majoritarian versus proportional elections, but we find that instead campaign contribution regulations and limits on party formations are important. Second, as found in prior studies, executive constraints are also crucial determinants of social infrastructure. The key variable is, however, not competition in the executive selection process as suggested by the previous literature, but the ability to investigate transgressions by executives and legislators. And third, individual rights and equal access to the judiciary prove to be pivotal as well. To date, these factors have not been considered as determinants of social infrastructure. Moreover, excessive constitutional guarantees of entitlements are shown to exert a negative effect on social infrastructure, indicating that the absence of personal economic responsibility results in less desirable economic outcomes.

Once we control for actual constitutional rules using primary constitution data, our results challenge the previous literature's broad conclusions and indicate that prior findings were an artifact of either limited controls (omitted variable bias) or imprecisely aggregated proxies (errors in variables). In particular, this paper suggests that the vast majority of political, geographic and economic determinants of structural policies proposed in the literature lose their explanatory power once we control for the subtle details of countries' constitutions.

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Table 1: Variable Names, Definitions, Sources, Summary Statistics

Variable	Definitions and sources	Mean	SD	Min	Max
Legislative Rules					
AdoptAmendmentRequires>60%	What proportion of the vote is needed to approve a constitutional amendment? 345: 3/5 or 3/4 majority	0.07	0.26	0	1
AMNDAMAJ	Do constitutional amendments require more than a simple majority by the legislature to be approved?	0.66	0.48	0	1
ASSETS	Does the Constitution require legislators disclose their earnings and/or assets?	0.10	0.30	0	1
HOUSENUM	How many chambers or houses does the Legislature contain?	0.48	0.50	0	1
IMMUNITY_2	Does the constitution provide for immunity for the members of the Legislature under some conditions? 2: limited immunity	0.79	0.41	0	1
IndivLegislatorsCanBeRemoved	Are there provisions for removing individual legislators?	0.72	0.45	0	1
INITIAT	Does the constitution provide for the ability of individuals to propose legislative initiatives (referenda from below)?	0.31	0.47	0	1
LegalProvisionsForIntLaws	Does the constitution contain provisions concerning the relationship between the constitution and international law?	0.76	0.43	0	1
LegalProvisionsForIntOrgs	Does the constitution contain provisions concerning international organizations?	0.63	0.49	0	1
LEGAPP_1	Who has the power to approve/reject legislation once it has been passed by the legislature (not including reviews for constitutionality)? 1: Head of State	0.86	0.35	0	1
LEGAPPDF_4	Which of the following describes the default mode for the approval of legislation? 4: Executive is required to take action: either sign/promulgate or return to the legislature	0.37	0.49	0	1
LEGAPPPT_123	Does the approving/vetoing actor have the power to approve/reject parts of the bill, the bill in its entirety, or both? 1: Can only veto parts of the bill (line-item veto), 2: Can only veto the bill in its entirety, 3: Can veto either specific parts or the bill in its entirety	0.41	0.50	0	1
NewLawsRequireSuperMajority	Is a supermajority needed for passing any legislation?	0.27	0.45	0	1
OVERPCT 2_3_3_5	What proportion of the vote is needed to override a veto? 2_3: 2/3 majority, 3_5: 3/5 majority	0.32	0.47	0	1
OVERPCT_1_2	What proportion of vote is needed to override a veto? 1: Plurality, 2: majority	0.17	0.38	0	1
OVERRIDE	Can vetoes of legislation be overridden?	0.63	0.49	0	1
PUBMEET	Does the constitution prescribe whether or not the meetings of the Legislature are (generally) held in public?	0.45	0.50	0	1
PUBMIN	Is a record of the deliberations of the Legislature published?	0.18	0.39	0	1
SpecialLegProcessForBudgetBills	Does the constitution provide for any of the following special legislative processes? 2: budget bills	0.79	0.41	0	1
SpecialLegProcessForSpendingBills	Does the constitution provide for any of the following special legislative processes? 5: spending bills	0.32	0.47	0	1
SPECLEG_1	Does the constitution provide for any of the following special legislative processes? 1: organic law	0.21	0.41	0	1
SPECLEG_3	Does the constitution provide for any of the following special legislative processes? 3: tax bills	0.62	0.49	0	1
SPECLEG_4	Does the constitution provide for any of the following special legislative processes? 4: finance bills	0.44	0.50	0	1
UNAMEND	Are any parts of the constitution unamendable?	0.28	0.45	0	1
Elections					
LegChamber1IsElected	Does the constitution specify the electoral system for the first (or only) chamber? 1: Yes, one method, 2: Yes, two methods (a mixed system)	0.47	0.50	0	1
LegChamber2IsElected	Does the constitution specify the electoral system for the Second Chamber? 1: Yes, one method, 2: Yes, two methods (a mixed system), 3: Yes, but without providing any specific details	0.20	0.40	0	1
LHSELECT_3	How are members of the first (or only) chamber of the Legislature selected? 3: elected by citizens	0.97	0.17	0	1
LimitsOnCampaignDonations	Are there any provisions for limits on money used for campaigns?	0.12	0.32	0	1
MinorityQuotaInLegislature	Does the constitution stipulate a quota for representation of certain groups in the Second Chamber?	0.09	0.28	0	1
OVERSGHT_123	Does the constitution provide for an electoral commission or electoral court to oversee the election process? 1: electoral commission, 2: electoral court, 3: both	0.61	0.49	0	1
PartiesCanBeProhibited	Does the constitution prohibit one or more political parties? 2: Yes, certain parties, 3: Yes, certain types of parties	0.24	0.43	0	1
PARTRGHT	Does the constitution provide for a right to form political parties?	0.48	0.50	0	1
REFEREN	Does constitution provide for referendum (or plebiscite) proposals?	0.65	0.48	0	1
UHAGE_UNDER22	Is the minimum age limit for eligibility to serve as a member of the Second Chamber of the Legislature 22 or under 22?	0.16	0.36	0	1
UHSELECT_1	How are members of the Second Chamber selected? 1: appointed	0.16	0.36	0	1
UHSELECT_2	How are members of the Second Chamber selected? 2: elected by electors	0.16	0.36	0	1
UHSELECT_3	How are members of the Second Chamber selected? 3: elected by citizens	0.27	0.45	0	1

Variable	Definitions and sources	Mean	SD	Min	Max
UHTERM_3_5	Is the maximum term length for members of the Second Chamber of the Legislature between 3 and 5 years?	0.24	0.43	0	1
VOTELIM_1	Besides age limits, which additional restrictions does the constitution place on voting? 1: must not be incapacitated (mentally or physically)	0.31	0.47	0	1
VOTERES	Does the constitution place any restrictions on the right to vote?	0.90	0.30	0	1
VOTEUN	Does the constitution make a claim to universal adult suffrage?	0.56	0.50	0	1
Executive Constraints					
ATGEN	Does the constitution provide for an attorney general or public prosecutor responsible for representing the government in criminal or civil cases?	0.73	0.45	0	1
BANK	Does the constitution contain provisions for a central bank?	0.45	0.50	0	1
BANKGOAL_1	What are the policy goals of the central bank? 1: Price stability alone	0.07	0.26	0	1
COMCHIEF_1	Who is the commander in chief of the armed forces? 1: head of state	0.73	0.45	0	1
DEPEXEC	Does the constitution specify a deputy executive of any kind (e.g., deputy prime minister, vice president)?	0.67	0.47	0	1
EMAPPR_1	Who approves a state of emergency? 1: does not need approval	0.16	0.36	0	1
EMCOND_2	Under which of the following circumstances can a state of emergency be called? 2: internal security	0.45	0.50	0	1
EMCOND_3	Under which of the following circumstances can a state of emergency be called? 3: national disaster	0.34	0.48	0	1
EMDECL_457	Who can declare a state of emergency? 4: government/cabinet, 5: first (or only) chamber of the legislature, 7: both chambers of the legislature are required	0.12	0.32	0	1
EMRIGHTS	Does the constitution provide for suspension or restriction of rights during states of emergency?	0.61	0.49	0	1
ExecCanDeclareStateEmergency	Who can declare state of emergency? 1: head of state, 3: either head of state or head of government	0.61	0.49	0	1
EXECINDP	Does the constitution contain an explicit declaration regarding the INDEPENDENCE of the central executive organ(s)?	0.13	0.34	0	1
HOGDEC	Does the Head of Government have decree power?	0.14	0.35	0	1
HOGIMM_2	Is the Head of Government provided with immunity from prosecution? 2: Yes, limited immunity	0.10	0.30	0	1
HOGSUCC_12	Should the head of government need to be replaced before the normally scheduled replacement process, what is the process of replacement? 1: The normal selection process (whether it be election or appointment) is implemented, 2: The legislature appoints a successor	0.24	0.43	0	1
HOSCanDismissLegislature	Who, if anybody, can dismiss the legislature? 1: head of state	0.59	0.50	0	1
HOSDCOND_2	Under what grounds can the head of state be dismissed? 2: crimes and other issues of conduct	0.52	0.50	0	1
HOSDCOND_3	Under what grounds can the head of state be dismissed? 3: treason	0.21	0.41	0	1
HOSDCOND_5	Under what grounds can the head of state be dismissed? 5: incapacitated	0.35	0.48	0	1
HOSDEC	Does the Head of State have decree power?	0.55	0.50	0	1
HOSDISS	Are there provisions for dismissing the Head of State?	0.82	0.39	0	1
HOSELECT_1	How is the Head of State selected? 1: heredity/royal selection	0.17	0.38	0	1
HOSELECT_2	How is the Head of State selected? 2: elected by citizens	0.56	0.50	0	1
HOSELECT_3	How is the Head of State selected? 3: elected by elite group	0.24	0.43	0	1
HOSELSYS_1	Which best categorizes the electoral system for the Head of State? 1: plurality	0.09	0.28	0	1
HOSELSYS_4567	Which of these best categorizes the electoral system for the Head of State? 4: Majority, unspecified, 5: Majority, alternative vote method, 6: Majority, by two round method with popular run-off, 7: Majority, by two round method with assembly run-off	0.39	0.49	0	1
HOSReplace=NormalSelection	Should the head of state need to be replaced before the normally scheduled replacement process, what is the process of replacement? 1: normal selection process (whether it be election or appointment) is implemented	0.37	0.49	0	1
HOSSUCC_2	Should the head of state need to be replaced before the normally scheduled replacement process, what is the process of replacement? 2: the legislature appoints a successor	0.06	0.24	0	1
HOSSUCC_4	Should the head of state need to be replaced before the normally scheduled replacement process, what is the process of replacement? 4: A predetermined line of succession is followed	0.45	0.50	0	1
HOSTERM_UNDER5	Is the maximum term length of the Head of State 5 years or under?	0.63	0.49	0	1
LegCannotInvestigateExecutive	Does the legislature not have the power to investigate the activities of the executive branch?	0.06	0.24	0	1
NumberOfExec=1	One executive is specified in the constitution.	0.44	0.50	0	1
ReasonHOSDismissal=Unrestricted	Under what grounds can the Head of State be dismissed? 1: general dissatisfaction with the leadership (i.e., dismissal is fairly unrestricted)	0.09	0.28	0	1
ReasonHOSDismissal=Violation	Under what grounds can the head of state be dismissed? 4: violations of the constitution	0.39	0.49	0	1
ReasonStateEmergency=Econ	Under which of the following circumstances can a state of emergency be called? 5: economic emergency	0.13	0.34	0	1

Variable	Definitions and sources	Mean	SD	Min	Max
ReasonStateEmergency=General	Under which of the following circumstances can a state of emergency be called? 4: general danger	0.38	0.49	0	1
ReasonStateEmergency=War	Under which of the following circumstances can a state of emergency be called? 1: war/aggression	0.49	0.50	0	1
TERR	Does the constitution define the geographic borders/territory of the state?	0.18	0.39	0	1
WAR_13	Who has the power to declare war? 1: head of state, 3: the government/cabinet	0.42	0.50	0	1
WAR_47	Who has the power to declare war? 4: First (or only) Chamber of the Legislature, 7: Both Chambers, acting jointly	0.20	0.40	0	1
Judiciary Rules					
CAPPUN	Does the constitution universally prohibit the use of capital punishment?	0.32	0.47	0	1
CorporalPunishmentProhibited	Does the constitution universally prohibit the use of corporal punishment?	0.07	0.26	0	1
COUNS	Does the constitution provide the right to counsel if one is indicted or arrested?	0.65	0.48	0	1
DebtorsCannotBeDetained	Does the constitution forbid the detention of debtors?	0.21	0.41	0	1
DUEPROC	Does the constitution explicitly mention due process?	0.17	0.38	0	1
EXAMWIT_3	Does the constitution provide for the right to examine evidence or confront all witnesses? 3: both	0.06	0.24	0	1
EXPOST	Does the constitution prohibit punishment by laws enacted ex post facto?	0.79	0.41	0	1
FAIRTRI	Does the constitution provide the right to a fair trial?	0.47	0.50	0	1
FalseImprisonmentRedress	Does the constitution provide for the right of some redress in the case of false imprisonment, arrest, or judicial error?	0.37	0.49	0	1
HABCORP	Does the constitution provide for the right to protection from unjustified restraint (habeas corpus)?	0.85	0.36	0	1
ILLADMIN	Does the constitution contain provisions protecting the individual against illegal or ultra-vires administrative actions?	0.34	0.48	0	1
JC	Does the constitution contain provisions for a Judicial Council/Commission?	0.63	0.49	0	1
JREM	Are there provisions for dismissing judges?	0.82	0.39	0	1
JUDCRTS_1	For which of the following specialized courts does the constitution contain provisions? 1: administrative courts	0.38	0.49	0	1
JUDCRTS_2	For which of the following specialized courts does the constitution contain provisions? 2: constitutional court	0.37	0.49	0	1
PREREL	Does the constitution provide for the right/possibility of pre-trial release?	0.41	0.50	0	1
PRESINOC	Is there a presumption of innocence in trials?	0.58	0.50	0	1
RGHTAPP	Do defendants have the right to appeal judicial decisions?	0.29	0.46	0	1
RuleOfLaw(GermanRechtsStaat)	Does the constitution contain a general statement regarding rule of law, legality, or Rechtsstaat (the German equivalent)?	0.41	0.50	0	1
SPEEDTRI	Does the constitution provide for the right to a speedy trial?	0.54	0.50	0	1
TrialsArePublic	Does the constitution generally require public trials?	0.65	0.48	0	1
TrialsInAccusedLanguage	Does constitution specify trials have to be in a language the accused understands or right to an interpreter exists if accused cannot understand the language?	0.38	0.49	0	1
WOLAW	Does the constitution mention nulla poena sine lege or the principle that no person should be punished without law?	0.61	0.49	0	1
Federalism					
FEDERAL_1	Does the constitution recognize any of the following subnational governments? 1: Local/Municipal Government	0.75	0.44	0	1
FederalAutonomousIndigenous	Does the constitution recognize any of the following subnational governments? 3: Autonomous Indigenous Groups	0.13	0.34	0	1
FederalState/Region	Does the constitution recognize any of the following subnational governments? 2: Subsidiary units (regions, states, or provinces)	0.62	0.49	0	1
FEDREV	Does the constitution contain provisions allowing review of the legislation of the constituent units in federations by federal judicial or other central government organs?	0.17	0.38	0	1
FEDUNIT_12	Is the state described as either federal, confederal, or unitary? 1: federal, 2:confederal	0.17	0.38	0	1
FEDUNIT_3	Is the state described as either federal, confederal, or unitary? 3: unitary	0.23	0.42	0	1
Individual and Human Rights					
AcademicFreedom	Does the constitution guarantee academic freedom?	0.47	0.50	0	1
ACHIGHED_1	Does the constitution guarantee equal access to higher education? 1: Yes	0.17	0.38	0	1
ACHIGHED_2	Does the constitution guarantee equal access to higher education? 2: Yes, but qualified	0.18	0.39	0	1
AdequateLivingStandardProvision	Does the constitution provide for a right to an adequate or reasonable standard of living?	0.30	0.46	0	1
AllRightsBinding	Are rights provisions binding on private parties as well as the state?	0.18	0.39	0	1
ASSEM	Does the constitution provide for freedom of assembly?	0.90	0.30	0	1
ASSOCEXPRESSOPINION	Combination of ASSOC ('Does the constitution provide for freedom of association?'), EXPRESS ('Does the constitution provide for freedom of expression or speech?'), and OPINION ('Does the constitution provide for	0.93	0.26	0	1

Variable	Definitions and sources	Mean	SD	Min	Max
	freedom of opinion, thought, and/or conscience?')				
BUSINES	Does the constitution provide a right to conduct/establish a business?	0.38	0.49	0	1
CensorshipAllowed	Does the constitution prohibit censorship? 1: Yes, 2: Censorship allowed in exceptional cases (i.e. war, state of emergency, or in the interest of public safety, etc.)	0.49	0.50	0	1
CounterCorruptionComission	Does the constitution contain provisions for a counter corruption commission?	0.07	0.26	0	1
CULTRGHT	Does the constitution refer to a state duty to protect or promote culture or cultural rights?	0.63	0.49	0	1
ECONPLAN	Does the constitution mention the adoption of national economic plans?	0.17	0.38	0	1
EDCOMPFREE	Does the constitution stipulate that education be compulsory until at least some level? Or does the constitution stipulate that education be free, at least up to some level?	0.68	0.47	0	1
EqualRights&NonDiscrimination	Does the constitution refer to equality before the law, the equal rights of men, or non-discrimination?	0.96	0.21	0	1
ETHINCL	Does the constitution contain provisions concerning national integration of ethnic communities?	0.27	0.45	0	1
EXPCOND_137	Under what conditions or for what purposes can the state expropriate private property? 1: Infrastructure, public works, 3: national defense, 7: general public purpose	0.66	0.48	0	1
EXPCOND_2456	Under what conditions or for what purposes can the state expropriate private property? 2: redistribution to other citizens, 4: land, natural resource preservation, 5: exploitation of natural resources, 6: land reform	0.16	0.36	0	1
EXPRCOMP_1234	What is the specified level of compensation for expropriation of private property? 1: fair/just, 2: full, 3: appropriate, 4: adequate	0.55	0.50	0	1
EXPROP	Can the government expropriate private property under at least some conditions?	0.87	0.34	0	1
FREECOMP	Does the constitution provide the right to a free and/or competitive market?	0.21	0.41	0	1
FREEMOVE	Does the constitution provide for freedom of movement?	0.83	0.38	0	1
FREEREL	Does the constitution provide for freedom of religion?	0.94	0.24	0	1
GOVMED_2	How does the constitution address the state operation of print or electronic media? 2: State can operate media outlets	0.14	0.35	0	1
Healthcare	Does the constitution mention the right to health care?	0.38	0.49	0	1
HEALTHF	Does the constitution specify that healthcare should be provided by government free of charge?	0.18	0.39	0	1
HR	Does the constitution contain provisions for a human rights commission?	0.16	0.36	0	1
INFOACC	Does the constitution provide for an individual right to view government files or documents under at least some conditions?	0.35	0.48	0	1
INTPROP_1234	Does the constitution mention any of the following intellectual property rights? 1: patents, 2: copyrights, 3: trademark, 4: general reference to intellectual property	0.44	0.50	0	1
JOINTRDE	Does the constitution provide for the right to form or to join trade unions?	0.73	0.45	0	1
LIBEL	Does the constitution provide for the right of protection of one's reputation from libelous actions?	0.31	0.47	0	1
MEDCOM	Does the constitution mention a special regulatory body/institution to oversee the media market?	0.16	0.36	0	1
MEDMARK_12345	Does the constitution mention any of the following general principles about the operation of the media market? 1: no monopoly or oligopoly, 2: competitive, 3: pluralism, 4: balanced, 5: fair	0.20	0.40	0	1
OFFREL_1	Does the constitution contain provisions concerning a national or official religion or a national or official church? 1: Yes, national religion specified	0.16	0.36	0	1
OPGROUP	Does the constitution provide for positive obligations to transfer wealth to, or provide opportunity for, particular groups?	0.18	0.39	0	1
PROPRGHT	Does the constitution provide for a right to own property?	0.78	0.42	0	1
PROVHLTH	Does the constitution mention a state duty to provide health care?	0.37	0.49	0	1
RELTAX	Are religious organizations granted tax free status?	0.10	0.30	0	1
REMUNER	Does the constitution provide the right to just remuneration, fair or equal payment for work?	0.45	0.50	0	1
SCIFREE	Does the constitution provide for a right to enjoy the benefits of scientific progress?	0.13	0.34	0	1
SELFDET	Does the constitution provide for a people's right of self-determination?	0.17	0.38	0	1
SeparationChurch&State	Does the constitution contain an explicit decree of separation of church and state?	0.23	0.42	0	1
SHELTER	Does the constitution provide for the right to shelter or housing?	0.32	0.47	0	1
STRIKE_12	Does the constitution provide for a right to strike? 1: Yes, 2: Yes, but with limitations	0.48	0.50	0	1
TAXES	Does the constitution refer to a duty to pay taxes?	0.31	0.47	0	1
TORTURE_12	Does the constitution prohibit torture? 1: Universally Prohibited, 2: Prohibited Except in the Case of War	0.69	0.47	0	1

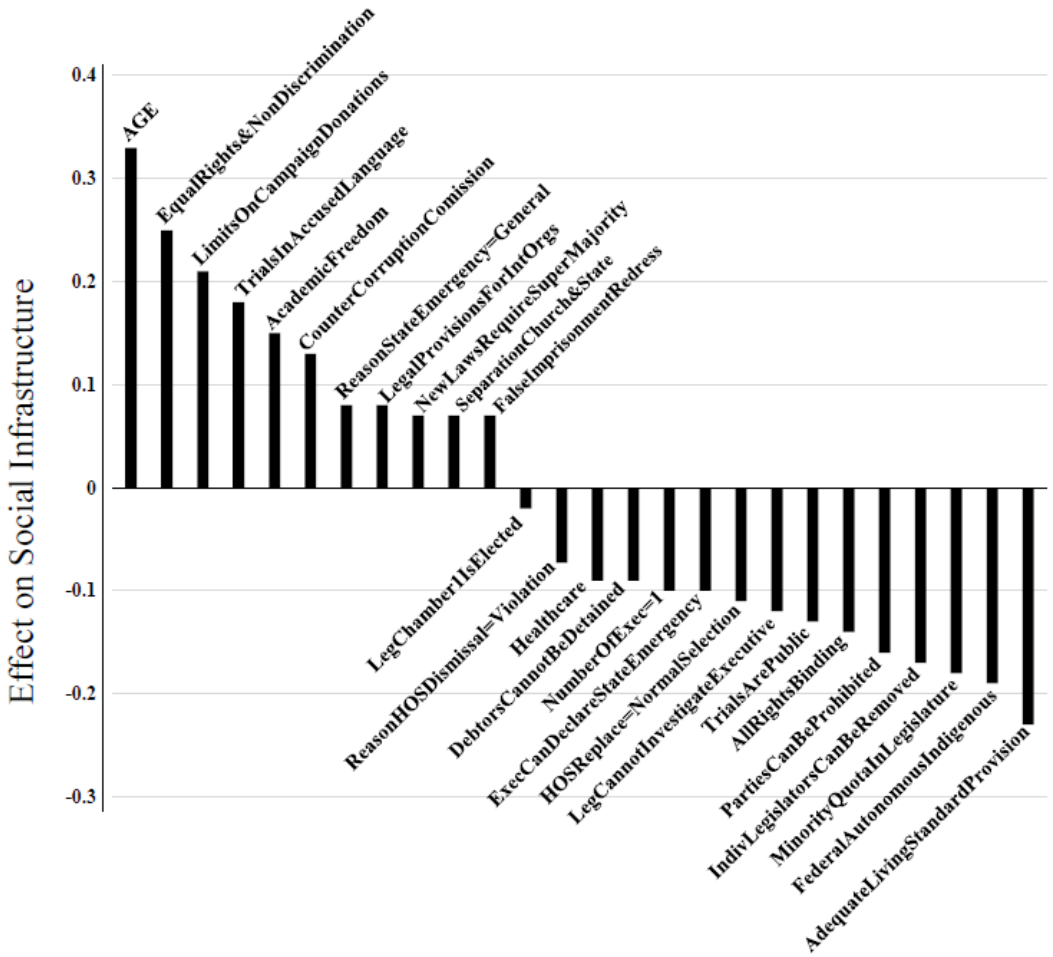
Variable	Definitions and sources	Mean	SD	Min	Max
WORK	Does the constitution refer to a duty to work?	0.27	0.45	0	1
Location and Colony Controls					
AFRICA	Regional dummy variable, equal to 1 if a country is in Africa, 0 otherwise. Source: Persson and Tabellini (2003)	0.16	0.36	0	1
ASIAE	Regional dummy variable, equal to 1 if a country is in East Asia, 0 otherwise. Source: Persson and Tabellini (2003)	0.16	0.36	0	1
COL_ESPA	Spanish colonial origin, discounted by years since independence), and defined as COL_ESPA = COL_ESP*(250 − T_INDEP)/250. Source: Persson and Tabellini (2003)	0.07	0.14	0	0.79
COL_OTHA	Colonial origin other than Spanish or British, discounted by years since independence, and defined as COL_OTH*(250 − T_INDEP)/250. Source: Persson and Tabellini (2003)	0.16	0.30	0	0.96
COL_UKA	British colonial origin, discounted by years since independence, and defined as COL_UKA = COL_UK*(250 − T_INDEP)/250. Source: Persson and Tabellini (2003)	0.28	0.39	0	0.92
LAAM	Regional dummy variable, equal to 1 if a country is in Latin America, Central America or the Caribbean, 0 otherwise. Source: Persson and Tabellini (2003)	0.28	0.45	0	1
Hall and Jones & Persson and Tabellini Variables					
AGE	Age of democracy, defined as: AGE=(2000 − DEM_AGE)/200 and varying between 0 and 1, with US being the oldest democracy (value of 1). Source: Persson and Tabellini (2003)	0.22	0.22	0.03	1
ENGFRAC	The fraction of the population speaking English as a native language. Source: Hall and Jones (1999)	0.10	0.28	0	1
EURFRAC	The fraction of the population speaking one of the major languages of Western Europe: English, French, German, Portuguese, or Spanish. Source: Hall and Jones (1999)	0.38	0.43	0	1
FEDERAL	Dummy variable, equal to 1 if the country has a federal political structure, 0 otherwise. Source: Persson and Tabellini (2003)	0.17	0.38	0	1
FRANKROM	Natural log of the Frankel-Romer forecasted trade share, derived from a gravity model of international trade that only takes into account country population and geographical features. Source: Hall and Jones (1999)	2.81	0.82	0.94	5.64
LAT01	Latitude measure, normalized to lie between 0 and 1. Source: Hall and Jones (1999)	0.32	0.19	0	0.71
MAJ	Dummy variable for electoral systems. Equals 1 if all the lower house is elected under plurality rule, 0 otherwise. Only legislative elections (lower house) are considered. Source: Persson and Tabellini (2003)	0.35	0.48	0	1
PARL_DEMOC	Score for democracy from POLITY IV project interacted with (1-PRES). Source: Persson and Tabellini (2003)	4.68	4.74	-2	10
PRES	1 in presidential regimes, 0 otherwise. Regimes where the confidence of the assembly is not necessary for the executive (even if an elected president is not chief executive, or if there is no elected president) are included among presidential regimes. Most semi-presidential and premier-presidential systems are classified as parliamentary. Source: Persson and Tabellini (2003)	0.44	0.50	0	1
STRUCTURAL	Social infrastructure: average of years open and gadp. Source: Hall and Jones (1999)	0.58	0.25	0.16	1
Note: There are 69 observations. If answer to question is YES, dummy variables take value one, and zero otherwise.					

Table 2: Determinants of Economic Institutions

Dependent Variable: Hall and Jones (1999) Social Infrastructure			Primary Constitution Data			Primary, Hall and Jones & Persson and Tabellini Data		
Category		Variable	Post. Prob.	Post. Mean	Post. SD	Post. Prob.	Post. Mean	Post. SD
Constitution Data	Elections	LimitsOnCampaignDonations				100	0.21	0.04
		PartiesCanBeProhibited	100	-0.12	0.03	100	-0.16	0.03
		MinorityQuotaInLegislature				100	-0.18	0.03
		LegChamber1IsElected				61	-0.02	0.02
		LegChamber2IsElected	99	-0.09	0.03			
	Executive Constraints	ReasonStateEmergency=General	100	0.12	0.03	100	0.08	0.02
		NumberOfExec=1	100	-0.19	0.03	100	-0.10	0.02
		ExecCanDeclareStateEmergency	100	-0.10	0.03	100	-0.10	0.03
		HOSReplace=NormalSelection				100	-0.11	0.03
		LegCannotInvestigateExecutive				98	-0.12	0.04
		ReasonHOSDismissal=Violation	100	-0.17	0.03	98	-0.07	0.03
		ReasonStateEmergency=War	100	-0.14	0.03			
		ReasonStateEmergency=Econ	100	-0.15	0.04			
		ReasonHOSDismissal=Unrestricted	86	0.09	0.06			
		HOSCanDismissLegislature	100	-0.17	0.04			
	Federalism	FederalAutonomousIndigenous				100	-0.19	0.04
		FederalState/Region	68	0.04	0.03			
	Legislative Rules	IndivLegislatorsCanBeRemoved	100	-0.14	0.03	100	-0.17	0.02
		LegalProvisionsForIntOrgs				100	0.08	0.02
		NewLawsRequireSuperMajority				100	0.07	0.02
		LegalProvisionsForIntLaws	100	-0.15	0.03			
		SpecialLegProcessForBudgetBills	97	-0.15	0.05			
		AdoptAmendmentRequires>60%	87	-0.09	0.06			
		SpecialLegProcessForSpendingBills	51	0.03	0.04			
	Individual and Human Rights	AdequateLivingStandardProvision	100	-0.17	0.03	100	-0.23	0.02
		AcademicFreedom	100	0.18	0.03	100	0.15	0.03
		EqualRights&NonDiscrimination	100	0.29	0.07	100	0.25	0.05
		AllRightsBinding				100	-0.14	0.03
		SeparationChurch&State				99	0.07	0.03
		CounterCorruptionComission	99	0.16	0.05	99	0.13	0.04
		Healthcare	97	-0.09	0.04	99	-0.09	0.03
		CensorshipAllowed	93	0.10	0.04			
	Judiciary Rules	DebtorsCannotBeDetained	100	-0.22	0.04	100	-0.09	0.03
		TrialsArePublic	82	-0.05	0.04	100	-0.13	0.02
		FalseImprisonmentRedress				100	0.07	0.02
		TrialsInAccusedLanguage				100	0.18	0.03
		RuleOfLaw(GermanRechtsStaat)	88	-0.05	0.03			
		CorporalPunishmentProhibited	87	0.09	0.06			
Location and Colony Controls		AFRICA	100	-0.20	0.04	100	-0.17	0.05
		LAAM	96	-0.15	0.06	100	-0.20	0.04
		ASIAE				78	0.06	0.05
		COL_UKA				83	-0.07	0.05
Hall and Jones		EURFRAC						
		ENGFRAC						
		LATITUDE						
		FRANKROM						
Persson and Tabellini		AGE				100	0.33	0.06
		PARL_DEMOC						
		MAJ						
		PRES						
		FEDERAL						
		nobs		69			69	
		R2		0.952			0.968	
		BIC		-86.78			-110.48	

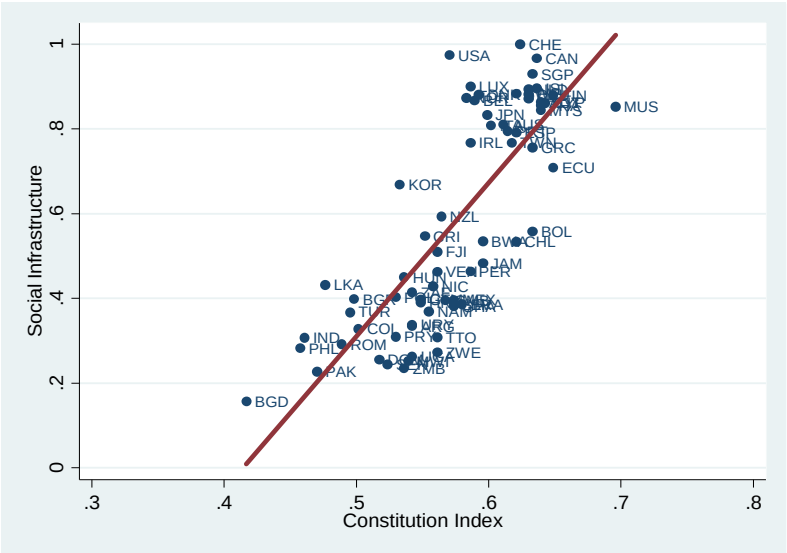
Figure 1: The Economic Effects of Constitutional Rules on Social Infrastructure

(Coefficient magnitudes of effective regressors in panel 2 of Table 2)



Note: Variable Definitions in Table 1. Social infrastructure ranges from 0 to 1.

Figure 2: Constitution Index versus Social Infrastructure



Note: Index is constructed as described in main text (see Table A.2 for values).

Appendix: Description of the Constitution Data and Additional Tables

The original 'Characteristics of National Constitutions' dataset (version 1.0) was downloaded from http://www.comparativeconstitutionsproject.org/ on January 2, 2015. It included information on the most recent constitutions in 184 countries. To conduct the empirical analysis, a number of variables needed to be recoded or dropped. Below we provide the details on the necessary changes to generate the dataset used in our analysis. The specific adjustments are programmed in the provided UNBUNDLING_DATA.do Stata file. Recoding of the original data was necessitated for seven major reasons.

I) Irrelevant Variables

A number of variables are irrelevant to our analysis, for example COWCODE (Correlates of War country code) or SOURCE (**'**What is the source for the text of the Constitution?'). Other variables excluded on this basis are ACCESS, AMPARO, ARMS, ASYLUM, ATTEND, CENSUS, CHILDWRK, CITDEP, CITREN, CITREV, CIVIL, CIVMAR, COLONY, COLRULE, COUNTRY, DOCS, DOCTIT, DOUBJEP, ENDYEAR, EVNTID, EVNTTYPE, EVNTYEAR, EXCRIM, FNDFAM, GRJURY, HEADFORN, HOGLEGR, HOGPARD, HOGREST, HOSDECIM, HOSREST, HOSPARD, JUDSAL, LANG, LANGSRCE, LENGTH, LHCOHORT, LHNAME, LHREST, LHTERM, LIFE, MARRIAGE, MATEQUAL, MIRANDA, MODEL, NOMIL, PREAMBLE, PREAMBW, PROFLEG, RGHTWRDS, SAMESEXM, SYSTID, SYSTYEAR, TESTATE, TRANSLAT, TREATAP, TREATINI, TREATRVW, UHNAME and UNCONPER. In addition, we dropped all variables containing detailed article listings and "additional comments."

II) Variables that Required Recoding

A number of variables are originally coded categorically. If variables are of the enumerated type, we recoded them into dichotomous (binary) variables. Details on which variables were recoded are provided in the UNBUNDLING_DATA.do Stata file. There are a number of variables which, given a large number of potential answers, cannot be grouped into binary variables. If none of the individual answers had a meaningful interpretation, we dropped the constitutional rules: CABDISS, CHALLEG, INTERP, EXSESS, EMOTHER, LEGREP and PARTUNCO.

III) Imprecise Variable Definitions

A number of variables are imprecisely defined. Their definitions typically include the terms "refer" or "mention" without further definition, for example, the variable MARKET ('Does the constitution refer to the 'free market,' 'capitalism,' or an analogous term?') – in this case 'refer' does not reveal the context of the constitutional rule (positive or negative). Variables that were excluded because their descriptions were too vague to allow for a clear binary interpretation are indicated in the UNBUNDLING_DATA.do Stata file.

IV) Variables That Lack Variation

We drop the variables PRTYDUTY, TRADEUN, HOGTRMLIM_5 and LEGISL, since they either take the value zero or one for all countries in the dataset. In addition, if a variable takes the value zero or one for just one country, it assumes the role of a fixed effect and has to be deleted, too. LHLEGIS is the only variable in our dataset which we removed for this reason.

V) Ambiguous Variable Codings

Several variables are coded ambiguously, implying unclear alternative hypotheses and interpretations of potential effects. Below we list the variables that needed to be dropped or recoded to provide a clear interpretation.

AMEND ('Does the constitution provide for at least one procedure for amending the constitution?') is deleted since it contradicts in part UNAMEND ('Are any parts of the constitution unamendable?').

CRUELTY ('Does the constitution prohibit cruel, inhuman, or degrading treatment?') is deleted for lack of an interpretation for a zero, since no country in our dataset explicitly allows cruel treatment in the constitution.

CUSTLAW2_123 ('What is the status of customary international law in the constitution?') is dropped since the answer is conditional on a positive response to CUSTLAW ('Does the Constitution refer to 'customary' international law or the 'law of nations'?'), which we exclude based on its imprecise definition, see point III) above.

FREEELEC ('Does the constitution prescribe that electoral ballots be secret?') is dropped since it is unclear whether a zero necessarily implies that elections are not free. Australia and the United States are prominent examples for countries that do not specify secret ballots in their constitution.

HOSIMM_12 ('Is the Head of State provided with absolute or limited immunity from prosecution?') is eliminated because no country in our dataset explicitly denies immunity to the head of state.

HOSTERML_5 (‘Are there no restrictions in place regarding the number of terms the Head of State may serve?’), LHTRMLIM_5 (‘Are there no restrictions in place regarding the number of terms members of the first (or only) chamber may serve?’) and UHTRMLIM_5 (‘Are there no restrictions in place regarding the number of terms members of the second chamber may serve?’) are deleted since most countries do not specify term limits in their constitution, leaving us with an unclear alternative hypothesis.

INVEXE (‘Does the legislature have the power to investigate the activities of the executive branch?’) is replaced with LegCannotInvestigateExecutive, which only takes the value one if the constitution explicitly prohibits the legislature to investigate the activities of the executive, and zero otherwise.

INTEXEC_123 (‘Does the legislature have the power to interpellate members of the executive branch, or similarly, is the executive responsible for reporting its activities to the legislature on a regular basis?’) had to be dropped because the meaning of interpellate differs widely across constitutions (ranging in meaning from “has the right to submit questions” to “has the ability to schedule a vote of confidence”).

JUDPREC (‘Does the constitution stipulate that courts have to take into account decisions of higher courts?’) is dropped because the definition does not indicate in which way higher court decisions have to be “taken into account”.

JUDIND (‘Does the constitution contain an explicit declaration regarding the independence of the central judicial organ(s)?’) is dropped because the variable does not indicate what the declaration exactly refers to, e.g., which central judicial organs are included and whether their independence is ensured or ruled out.

OCCUPATE (‘Does the constitution provide for the right to choose ones occupation?’) is dropped from the dataset, since specific rights are frequently subsumed under more general statements in constitutions. For example, the US constitution contains no statement regarding “free occupational choice” (hence OCCUPATE=0), but the 9th amendment states “The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.” PRIVACY (‘Does the constitution provide for a right of privacy?’), DEVLPERS (‘Does the constitution provide for an individual's right to self-determination or the right to free development of personality?’) and SAFEWORK (‘Does the constitution mention the right to safe/healthy working conditions?’) are dropped for the same reason. For example, while the US constitution makes no explicit statement regarding PRIVACY (hence PRIVACY =0), there are a number of provisions that refer to the right of privacy, such as the protection of home and property (4th amendment) or the privacy of beliefs (1st amendment).

OFFREL_3 (‘Does the constitution contain provisions that specifically prohibit a national religion?’) is deleted because its simultaneous inclusion with OFFREL_1 (‘Does the constitution contain provisions that specify a national religion?’) would imply an unclear alternative hypothesis for both variables.

PRESS (‘Does the constitution provide for freedom of the press?’) is deleted due to some unclear codings in the data. For instance, the current French constitution does not contain an explicit statement on the freedom of the press, implying PRESS=0. However, it declares in the preamble that the country’s standard for citizens’ guaranteed rights is the “The Declaration of the Rights of Man and of the Citizen of 1789”, which in article 11 states that “The free expression of thought and opinions is one of the most precious rights of man: thus every citizen may freely speak, write, and print, subject to accountability for abuse of this freedom in the cases determined by law.”

SLAVE (‘Does the constitution universally prohibit slavery, servitude, or forced labor?’) is dropped because no country in our dataset explicitly allows slavery in its constitution.

VI) Correlation

There are a number of constitutional rules that feature excessive correlations. These variables are dropped to minimize multicollinearity issues:

OVERWHO_13456 (‘Can the legislature override vetoes of legislation?’) is dropped due to its perfect correlation with OVERRIDE (‘Can vetoes of legislation be overridden?’).

UHLEGISL (‘Is the Second Chamber of the Legislature given the power to legislate?’) and HOUSENUM (‘Does the legislature contain one chamber or house?’) have a correlation coefficient of -.97; we thus eliminate UHLEGISL. In addition, HOGELECT_4 (‘Is the Head of Government appointed?’) and HOGDISS (‘Are there provisions for dismissing the Head of Government?’) are highly correlated with NumberOfExec=1 ('One executive is specified in the constitution.'), with correlation coefficients of -.92 and -.94, respectively. We only keep NumberOfExec=1.

EDCOMP (‘Does the constitution stipulate that education be compulsory until at least some level?‘) and EDFREE (‘Does the constitution stipulate that education be free, at least up to some level?’) are combined into EDCOMPFREE given their correlation of .85. EDCOMPFFREE takes the value one if we observe a positive response for one of the variables, and zero otherwise.

ASSOC (‘Does the constitution provide for freedom of association?’), EXPRESS (‘Does the constitution provide for freedom of expression or speech?’), and OPINION (‘Does the constitution provide for freedom of opinion,

thought, and/or conscience?') are combined for the same reasons into ASSOCEXPRESSOPINION, which takes the value one if either of the three variables features a positive response.

EXPLIM ('What limits/conditions are placed on the ability of the government to expropriate private property?') has an interpretation that is nearly identical to EXPROP ('Can the government expropriate private property under at least some conditions?'). We therefore only keep the latter variable.

VII) Variables with Conditional Codings

The coding of several variables is conditioned on other constitutional rules, which complicates their interpretation. For instance, HOGDECIM ('Which arrangement describes the implementation procedure for Head of Government decrees?') is only answered when HOGDEC ('Does the Head of Government have decree power?') takes the value one. In this case, we only keep the latter variable. Other variables excluded on this basis are DEPSEL, EDCOMPL, EDFREEL, COUNSCOS, HOGDCOND, HOGTERM, HOSDECEX, HOGDECEX, INDPOLGR, INITIATP, REMCON, JUDFIN, LEG_IN, RELLAW, INDCIT, UHQUOTAD and UHREST. Detailed information is available in the UNBUNDLING_DATA.do Stata file.

Table A.1: Replicating Hall and Jones & Persson and Tabellini Results

	Dependent Variable: Hall and Jones (1999) Social Infrastructure			
	Hall and Jones Specification		Hall and Jones + Persson and Tabellini Specification	
Variable	Hall and Jones	Our Sample	Persson and Tabellini	Our Sample
FRANKROM	0.058**	0.064*	0.081***	0.073**
	(0.023)	(0.036)	(0.030)	(0.030)
ENGFRAC	0.118	0.105	-0.106	-0.149
	(0.086)	(0.114)	(0.109)	(0.132)
EURFRAC	0.130***	0.072	0.111	0.125*
	(0.045)	(0.062)	(0.072)	(0.072)
LATITUDE	0.708***	0.650***	-0.036	-0.132
	(0.098)	(0.153)	(0.224)	(0.227)
PARL_DEMOC			0.008	0.012
			(0.022)	(0.019)
PRES			-0.004	0.019
			(0.187)	(0.161)
MAJ			0.031	0.031
			(0.066)	(0.068)
AGE			0.414***	0.440***
			(0.120)	(0.129)
FEDERAL			0.062	0.050
			(0.054)	(0.055)
AFRICA			-0.158	-0.211
			(0.139)	(0.157)
ASIAE			0.012	-0.027
			(0.136)	(0.163)
LAAM			-0.216**	-0.234**
			(0.098)	(0.105)
COL_ESPA			-0.062	-0.063
			(0.213)	(0.243)
COL_OTHA			-0.107	-0.036
			(0.092)	(0.114)
COL_UKA			-0.111	-0.057
			(0.117)	(0.147)
Constant	0.079	0.153	0.310	0.327
	(0.068)	(0.102)	(0.229)	(0.226)
nobs	127	69	72	69
R2	0.409	0.336	0.636	0.641

We use both Hall and Jones and Persson and Tabellini data. The number of observations in our sample is thus the intersection of the two.

Table A.2: Predicted Constitutional Quality

Code	Country	Constitution Index	Social Infrastructure	Code	Country	Constitution Index	Social Infrastructure
MUS	Mauritius	0.696	0.852	SLV	El Salvador	0.574	0.386
FIN	Finland	0.649	0.879	USA	USA	0.571	0.974
ECU	Ecuador	0.649	0.709	GMB	Gambia	0.567	0.395
CYP	Cyprus (G)	0.643	0.862	NZL	New Zealand	0.564	0.593
AUT	Austria	0.639	0.864	ZWE	Zimbabwe	0.561	0.273
THA	Thailand	0.639	0.856	VEN	Venezuela	0.561	0.462
MYS	Malaysia	0.639	0.844	FJI	Fiji	0.561	0.510
ISL	Iceland	0.636	0.896	TTO	Trinidad & Tobago	0.561	0.308
CAN	Canada	0.636	0.966	NIC	Nicaragua	0.558	0.428
BOL	Bolivia	0.633	0.557	NAM	Namibia	0.555	0.369
SGP	Singapore	0.633	0.930	CRI	Costa Rica	0.552	0.546
GRC	Greece	0.633	0.756	HND	Honduras	0.549	0.390
FRA	France	0.630	0.871	GTM	Guatemala	0.549	0.397
NLD	Netherlands	0.630	0.894	ARG	Argentina	0.542	0.334
DEU	Germany	0.630	0.882	ZAF	South Africa	0.542	0.415
CHE	Switzerland	0.624	1.000	URY	Uruguay	0.542	0.338
CHL	Chile	0.621	0.534	UGA	Uganda	0.542	0.262
SWE	Sweden	0.621	0.883	MWI	Malawi	0.539	0.252
ESP	Spain	0.621	0.790	HUN	Hungary	0.536	0.450
TWN	Taiwan	0.618	0.767	ZMB	Zambia	0.536	0.234
PRT	Portugal	0.614	0.795	KOR	South Korea	0.533	0.668
AUS	Australia	0.611	0.810	PRY	Paraguay	0.530	0.310
ITA	Italy	0.602	0.808	POL	Poland	0.530	0.403
JPN	Japan	0.599	0.833	SEN	Senegal	0.524	0.244
JAM	Jamaica	0.596	0.483	DOM	Dom. Republic	0.517	0.255
BWA	Botswana	0.596	0.535	COL	Colombia	0.502	0.327
DNK	Denmark	0.592	0.881	BGR	Bulgaria	0.498	0.398
BEL	Belgium	0.589	0.866	TUR	Turkey	0.495	0.367
IRL	Ireland	0.586	0.767	ROM	Romania	0.489	0.292
LUX	Luxembourg	0.586	0.900	LKA	Sri Lanka	0.476	0.432
PER	Peru	0.586	0.464	PAK	Pakistan	0.470	0.227
NOR	Norway	0.583	0.873	IND	India	0.461	0.307
BRA	Brazil	0.580	0.386	PHL	Philippines	0.458	0.282
MEX	Mexico	0.574	0.396	BGD	Bangladesh	0.417	0.157
GHA	Ghana	0.574	0.381				

The Constitution Index is based on the results in panel 2 of Table 2. The Social Infrastructure values are from Hall and Jones (1999).