

I. Democratic Constitutional Design and Public Policy

- i. In the last lecture, we examined the classic contributions to the theory of constitutional design.
- ii. Today's lecture jumps forward a few decades to see whether some of the main hypotheses of those early pieces (and more recent) ones have been borne out.
 - Do institutions have systematic effects on policy outcomes.
- iii. Congleton and Swedenborg (2006) provides a very useful and broad survey of the main results of the empirical literature that emerged in the period after 1990.
 - a. Much of today's lecture will be based on the chapter surveys in that volume.
 - b. It begins with a brief summaries of the chapters and then examines a few chapter in somewhat more depth.

A. Introduction:

- i. **Toward a Science of Constitutional Design: Roger D. Congleton and Birgitta Swedenborg**

There is a longstanding tradition of constitutional analysis in political science and law that extends back to Aristotle's *Politics*. For the most part, that tradition stresses the importance of culture and history as determinants of a nation's public policies, but also accords political institutions a major role. That tradition is also inductive insofar as scholars attempt to induce general principles from intra- and inter-national case studies.

The literature surveyed and extended in the present volume has deductive rather than inductive foundations. The rational choice-based literature addresses the longstanding issues of constitutional design, but also addresses new research questions that arise naturally in rational choice analysis, but not historical work. The pace of constitutional research accelerated during the 1990s. The new results do not necessarily overturn the conclusions of historical analysis or earlier studies, but extend our understanding of political institutions by applying more rigorous models and testing sharper hypotheses using modern statistical techniques.

B. Political Agents, Elections, and Democratic Performance

- i. **Direct Democracy: Bruno S. Frey and Alois Stutzer**

Frey and Stutzer summarize an extensive literature on the consequences of more or less direct forms of democracy within Switzerland, in particular, but also in U.S. states. Direct democracy may be expected to effect political outcomes because the principal-agent relationship between citizens and politicians differs in direct and representative systems.

Statistical evidence suggests that the cities/cantons/states that use more direct democratic methods tend to have higher levels of per capita income and employment and their citizens tend to perform better. For example, in Switzerland they tend to be more satisfied with local governance. To the extent that these are accepted as policy aims, Frey and Stutzer suggest that constitutions should include direct participation rights for the citizens, especially in the context of the European Union.

ii. **Constitutions and Economic Policy: Torsten Persson and Guido Tabellini**

Persson and Tabellini extensive survey of the recent literature on electoral institutions discusses their implications for some central features of representative democratic political constitutions and also how different electoral rules and forms of government affect the accountability of elected government officials. Their pioneering work suggests that accountability affects the size of political rents and corruption.

They conclude that presidential and parliamentary systems and plurality and proportional representation electoral systems have significant effects on the representativeness of government and fiscal policy choices.

Extensive empirical evidence is consistent with their analysis. Government expenditures per capita are systematically higher under proportional representation (PR) and parliamentary systems than under presidential and plurality systems.

iii. **Party-Line Voting and Committee Assignments in the Mixed Member System**

iv. **V. Thomas Stratmann**

Proportional representation systems tend to have multiseat districts, party lists, and multiple parties, whereas majoritarian systems tend to have geographically based, single-seat districts, district representatives who are chosen by plurality rule, and a two-party system. A relatively new electoral system is the mixed-member electoral system in which some of the legislators are elected through a majoritarian procedure, and the rest are selected through a proportional procedure.

Mixed-member electoral systems allow scholars to answer longstanding questions regarding the importance of electoral rules for legislative behavior and, subsequently, for political and economic outcomes without confounding country effects with electoral rule effects. Stratmann provides evidence from the German mixed-member system that members elected under plurality rule vote somewhat differently and seek out different committee appointments than members elected under proportionality rules.

C. Legislative Decisionmaking Procedures and Policy Outcomes

i. **Constitutions on Coalition Governments in Parliamentary Democracies: Daniel Diermeier, Hülya Eraslan, and Antonio Merlo**

Diermeier, Eraslan, and Merlo survey recent theoretical and empirical research on the effects of constitutions on coalition governments in parliamentary democracies.

Their analysis is based on the solution and estimation of a multilateral bargaining model, which they use to investigate the consequences of constitutional features of parliamentary democracy for the formation and stability of coalition government.

Their theoretical analysis and evidence suggest that the rules governing government formation and dissolution affect the size and stability of majority coalitions in parliamentary systems.

ii. **On the Merits of Bicameral Legislatures:: Policy Stability within Partisan Polities**

Roger D. Congleton

This chapter explores the effects of bicameralism on policy choices in representative legislatures. Congleton analyzes the simplest form of bicameralism in which two chambers are elected under similar rules and each chamber has to approve legislation before it becomes law.

Simulation results and statistical evidence from the Danish parliamentary reform of 1953 and the Swedish parliamentary reform of 1970 suggest that bicameral legislatures tend to have more predictable public policy that better reflects long-term voter demands than unicameral legislatures.

Congleton thus argues that bicameralism can serve a useful constitutional purpose even when the two chambers represent similar interests. Thus, bicameralism is neither undemocratic, nor redundant. He also notes that bicameralism is a form of divided government with characteristics similar to those of presidential systems.

iii. **Bicameralism and Political Compromise: John Charles Bradbury and W. Mark Crain**

Crain and Bradbury argue that bicameralism arises and persists, in part, because of its ability to stabilize legislative outcomes and limit the majority's ability to take advantage of the national tax base.

If this is the case, fiscal policy in bicameral and unicameral legislatures ought to differ. Recent empirical studies using international data and U.S. state data suggest that bicameral legislatures are associated with lower public expenditures in comparison with unicameral chambers after controlling for other variables.

Moreover, differences in the degree of constituent homogeneity between the two chambers have a systematic effect on spending and tax policies. Greater constituent diversity between the chambers appears to constrain fiscal policies to those that more broadly promote the general welfare within the polity of interest.

D. **Decentralization and Federalism**

i. **Federalism: A Constitutional Perspective: Dennis C. Mueller**

Mueller reviews the extensive literature on the effects that decentralization has on the performance of local governments.

In principle, decentralized governance could improve or worsen the provision of local services relative to a centralized unitary state.

Both the benefits and costs of decentralization arise from the greater mobility that exists among local governments than among national governments. Mobility tends to increase the homogeneity of preferences in local communities and also the informational base that voters use to assess local policies. These affects narrow the gap between what voters want from government and what they get. This gap may be further reduced through the use of some of the institutions of direct democracy.

Mobility induces tax and yardstick competition among local governments, which tends to increase efficiency in provision of government services.

On the other hand, federalism can impose additional costs on communities in which the migration of citizens creates negative externalities or tax competition erodes government revenue sources.

The empirical evidence, however, implies that the benefits from decentralization outweigh its costs. Mueller thus concludes that decentralized forms of federalism are an attractive constitutional designs for countries seeking more responsive and efficient democratic institutions.

ii. **Common Tax Pool Problems in Federal Systems: Brian Knight**

Decentralization can also affect the policy choices of a nation's central government.

For example, local public goods financed from a national tax base provide concentrated benefits to recipient jurisdictions, but disperse costs throughout the nation as a whole. In central legislatures, this common pool situation creates incentives for each legislator to increase spending in their own jurisdiction and restrain spending in other jurisdictions due to the associated tax costs. The inefficiencies associated with this common pool problem are often considered a key drawback of decentralization.

Knight surveys empirical studies on the fiscal commons problem. This literature finds strong evidence of behavioral responses by both individual legislators and aggregate legislatures. Small population jurisdictions, which are often overrepresented in central legislatures and have low federal tax liabilities, tend to reap the largest benefits from common pool situations.

E. **Legal Institutions, Regulation, and Economic Growth**

i. **Judicial Independence and Economic Development: Lars P. Feld and Stefan Voigt**

This chapter surveys the political and rational choice literatures that analyze the relative merits of judicial independence.

Feld and Voigt note, however, that judicial independence is difficult to assure through constitutional design, because judicial systems that are nominally independent may be influenced through a variety of political and economic pressures. The authors develop two indicators of judicial independence to distinguish between de jure and de facto independence.

They find that de facto judicial independence has a robust and highly significant impact on economic growth, although de jure independence does not have a statistically significant effect. Individual subcomponents of the de jure and de facto measure of judicial independence are estimated for their impact on economic growth.

The authors find that constitutionally specifying procedures of judicial review and protecting the job security and salaries of judges tend to encourage judicial independence and economic growth.

ii. **Legal and Economic Institutions and the Wealth of Nations: Randall G. Holcombe, Robert A. Lawson, and James D. Gwartney**

An economic constitution provides a stable legal and economic framework within which people undertake their economic activities.

This paper uses a subset of a widely used economic freedom index to measure the quality of a nation's economic constitutional framework and shows that better economic institutions and policies, as measured by this subindex, lead to greater economic prosperity within OECD countries.

These new results and other more encompassing studies that rely on a broader range of countries suggest that the economic freedom index is a useful guide to both constitutional design and public policy.

To encourage economic development, civil law and public policies should protect property rights, minimize the regulation of economic transactions both within the country and across national boundaries, and open capital and financial markets.

F. **Constitutional Design, Durability, and Stability**

i. **Constitutional Amendment Procedures: Bjørn Erik Rasch and Roger D. Congleton**

This chapter surveys the wide range of procedures through which modern democracies may formally amend their constitutions.

Most democratic constitutions include a formal process of amendment, but these procedures vary widely. The empirical work surveyed by Rasch suggests that more demanding amendment procedures tend to decrease the number of formal amendments observed, although the result is not robust.

Moreover, although the formal amendment process is the main path of constitutional change in democracies, it is by no means the only one. Rasch and Congleton note that there are many informal routes to constitutional reform as well as the formal procedure specified in a nation's constitutional documents.

ii. **Designing for Constitutional Stability: Barry R. Weingast**

Weingast analyzes what makes some constitutions more likely to survive than others. He briefly surveys the theory of self-enforcing constitutions and then applies it to nineteenth-century United States and twentieth-century Spain.

Both constitutional durability and stability can be increased by informal agreements among powerful elites that reduce the probability of revolution by formally or informally reducing the stakes of public policy.

Weingast argues that, but for the issue of slavery, constitutional democracy in the United States was self-enforcing by about 1800.

Nonetheless, crises over slavery threatened the nation on numerous occasions, because slavery threatened the wealth and power of Southern elites.

Similarly, many of the threatening issues that divided Spaniards in their civil war reemerged after Franco died in 1975. In the Spanish case, however, despite a history of violence over this wide range of fundamental controversies, Spaniards resolved their differences peacefully through a series of pacts that reduced the stakes of the new political regime

II. More Detail on Direct Democracy (Stutzer and Frey)

- A. Direct democracy (or, more precisely, semi-direct democracy) does not substitute for parliament, government, courts and all the other features known in representative democracies.
- i. Instead, it shifts the final rights in determining issues to the citizens. The extent of direct participation rights may vary, but they always include constitutional changes, normally by an obligatory referendum.
 - ii. Optional referendums and initiatives (allowing citizens to put issues on the political agenda) require a predetermined number of signatures by the citizens before they can take place.
 - iii. Over the period 1990 to 2000, no less than 405 popular referendums on the national level were recorded (see Gross and Kaufmann 2002, Butler and Ranney 1994).
 - More than half took place in Europe, namely 248 (and again half of them in Switzerland); 78 in America, 37 in Africa, 26 in Asia and 16 in Oceania.
 - In the decade before (1980 to 1990), there were only 129 national referendums.
 - Up until August 2002, issues of European integration led to no less than 30 national referendums.
- a. There are a very large number of popular referendums at lower levels of government.
- In the German state of Bavaria there were as many as 500 since its adoption.
 - In Switzerland, there are thousands of referendums at all three levels of government: local, cantonal and federal.
- B. Political Cartels
- i. Politicians have a common interest to protect and extend their rents where possible.
 - ii. That means they have an incentive to form a cartel against the ordinary citizens.
 - There is, however, a public good problem involved: an individual politician has an incentive to break out, if such action is positively sanctioned by the electorate.
 - Such action can regularly be observed in democracies, but it is rarely of much consequence for the cartel.

- iii. The politicians in many countries form a close-knit group of people clearly differentiated from the rest of the population.
 - Their main contacts are within the group, so that the social disapproval of the few who dare to break out of the cartel is acutely felt and carries a high cost.

C. Constitutional provisions against the politicians' cartel

- i. All the actors involved, **in particular the voters**, are well aware that there are strong and ubiquitous incentives for the politicians to form a cartel and to exploit the voters. In response, one finds three quite different forms of institutions in democratic constitutions designed to check such action:
- ii. (a) Rules prohibiting the (excessive) appropriation of rents by the politicians, the most stringent ones being to prevent corruption.
- iii. (b) The establishment of special courts, with the task of preventing citizens' exploitation.
- iv. (c) Competition between parties is the classical institution in representative democracies to prevent politicians from pursuing their own goals at the population's expense.
 - On the basis of these arguments, it must be concluded that neither constitutional rules, nor courts, nor party competition are particularly successful in reducing the possible exploitation of the general population by the politicians.
 - It is not argued, of course, that the constitutional features elaborated are useless, but that they do not provide a sufficient safeguard against politicians' rent-seeking. It is therefore desirable to search for, and to seriously consider, other constitutional means of fighting the politicians' cartel.

D. Referendums as a constitutional provision against the politicians' cartel

- i. A referendum, in which all the citizens have the possibility of participating, meets the crucial requirement that it gives decision-making power to people outside the politicians' cartel.
- ii. The individuals making the decision are not integrated into the 'classe politique' and they avoid the control of politicians. In an initiative, the demands are explicitly directed against the political establishment represented in parliament and government.
- iii. Optional and obligatory referendums serve more of a controlling function because, if successful, they overrule the decisions taken by the executive and the legislative bodies.

E. Empirical Evidence on the Effects of Referenda on Government Policies

- i. In order to substantiate these hypotheses, systematic empirical analyses are necessary.
- ii. A number of studies exist for both Switzerland and the United States (for surveys see, e.g., Bowler and Donovan 1998, Eichenberger 1999, Kirchgässner, Feld and Savioz 1999, Gerber and Hug 2001 or Matsusaka 2003).
 - The two countries are particularly suited for comparative empirical analyses, because direct democratic rights are developed to a very different extent at the level of Swiss cantons and US States respectively.
 - While we briefly mention a wide range of results, some particularly important findings are presented in greater detail.
- iii. In order to study whether direct democracy makes a difference to the outcomes of the political process, a natural starting point is to begin with public expenditures and revenues.
 - Fiscal decisions are the central activities of most governments, and policy priorities are to a large extent formed in the budgeting process.

- iv. In a study covering the 26 Swiss cantons and the years between 1986 and 1997, Feld and Kirchgässner (2001) measure the effects of a mandatory fiscal referendum on aggregate expenditure and revenue.
- In 217 cases of the totally 312 annual observations, cantons adopt a mandatory referendum on new expenditure above a given threshold.
 - It is found that expenditure and revenue in cantons with fiscal referendums are **lower by about 7 percent and 11 percent respectively**, compared to cantons that don't have this institutional provision.
- v. In a sample of 132 large Swiss towns in 1990, the same authors replicate their test for the mandatory referendum on budget deficits.
- In cities where a budget deficit has to be approved by the citizenry, expenditure and revenue, on average, are **lower by about 20 percent, while public debt is reduced by about 30 percent**.
- vi. With an extended panel data set from 1980 to 1998, the effect of the mandatory expenditure referendum is analyzed, taking the spending threshold into account (Feld and Matsusaka, in press).
- At the median threshold of 2.5 million Swiss francs (SFR), spending per capita is reduced by 1,314 SFR, i.e. by 18 percent for an average expenditure level of 7,232 SFR (compared to cantons that either have an optional financial referendum or no referendum on new public expenditure).
 - The difference in overall spending significantly varies between cantons, applying a low threshold of 0.5 million SFR (25th percentile) and a high threshold of 15 million SFR (75th percentile).
 - For the former, expenditure is estimated to be lower by 1,389 SFR, while for the latter the reduction is 845 SFR.
 - Moreover, it is found that the mandatory financial referendum has less effect when it is easier for citizens to launch an initiative for a new law or to change an existing law (measured by the signature requirement).
 - Thus, there is a substitutive relationship between the two institutions with regard to their consequences on cantonal fiscal outcomes.
- vii. Very similar results are found for analyses across US States (Matsusaka 1995, 2003).
- a. In a panel from 1970 to 1999, including all states except Alaska, the effect of the initiative right is estimated on public expenditure, as well as on revenue. The institutional variable (a dummy variable) captures any type of initiative, whether it is statutory or for a constitutional amendment.
- After controlling for the average income in the state, federal aid, population size and growth, the percentage of metropolitan population and whether it is a southern or western state, initiative states, on average, have lower expenditure, as well as lower revenue, than non-initiative states.
 - **States with the initiative spend \$ 137 less per capita than states that do not provide the initiative, ceteris paribus.**
 - **They also raise less revenue, \$ 117 per capita compared to non-initiative states. Both effects are about 4 percent, compared to average expenditure and revenue respectively.**
- b. The effects are, however, significantly different when the signature requirements to launch an initiative are taken into consideration.
- States with a **2 percent requirement are estimated to levy \$ 342 less taxes** and fees per capita than non-initiative states (for the modal signature requirement of 5 percent, revenue is 6 percent lower and expenditure is 5 percent lower) (Matsusaka 2003, chapter 3).
 - These effects reflect robust results that can be assigned to the referendum process and not, for example, to the ideology of a state's electorate.

- Controlling for roll call voting of state senators, as a proxy for voters' conservatism, does not change the results in a substantive manner; if anything, the effects for the institutional variable increase (Matusaka 2003, chapter 3).

viii. Often these kinds of results are interpreted as clear evidence that direct democracy produces favorable outcomes for the citizens.

- However, they mainly provide clear evidence against a simple median voter world, in which representatives implement the preferred expenditure and revenue levels of the median voter, and referendums and initiatives would have no effect.
- It could well be that low expenditure and revenue levels mainly serve some well-organized interests (e.g. rich people) that rely less on public services. Therefore, the efficiency in the provision of public goods has to be analyzed.

III. More on Fiscal and Political Federalism (Mueller)

A. One of the key decisions that a community must face when writing its constitution is whether to structure itself as a federation or not.

- Many benefits have been claimed for federalist institutions. Given these it is somewhat paradoxical that we observe so few countries in the world, which possess all of the attributes of a strong federalist structure.
- There are two possible explanations for this paradox.
 - First, there may also be many disadvantages associated with federalism, so many that for most countries the disadvantages outweigh the advantages. Thus, full-blown federalism may be rare, because in fact it is undesirable.
 - The second possible explanation for federalism's rarity is that it is somehow inherently unstable.
 - When it is chosen it fails to survive, not because of any fundamental difficulty in the outcomes it produces, but because of the existence of forces in a democracy, which undermine it.
 - This paper will argue that it is the latter characteristic of federalism, which accounts for its rarity.

B. Once the decision has been made to have a federalist system, the next question concerns its optimal design.

- How many levels of government should there be? What should be the boundaries at each lower level?
 - What expenditure responsibilities should be assigned to each level? What revenue sources should be assigned to each level?
 - What should be the form of representative government at each level? These are difficult and interrelated questions, and no single set of answers will be optimal for all countries.
 - Again the answers will depend in part on the nature and scale of transaction costs.
- The assignment of expenditure responsibilities ought to be made on the basis of the dimensions of geographic spillovers of each market failure addressed by the state.
 - Once responsibilities for expenditures have been assigned, the next step is to assign revenue sources.
 - Since the main purpose for creating a federalist state is to facilitate the revelation of preferences for public services, the choice of revenue sources should be made with this same goal in mind.

C. Empirical Evidence on the Effects of Federalism

A. Federalism and Allocative Efficiency

1. *The Flypaper Effect*

- i. Perhaps no single hypothesis in the literature on federalism has more empirical support than the prediction that intergovernmental grants lead to an expansion of the public sector.
- ii. In a literature dating back some forty years countless studies have established that a local government generally spends a far larger fraction of an unconditional grant from a higher level of government than its citizens would appear to consider optimal.
 - Moreover, the additional amounts spent often exceed the optimal amounts by factors of three, four and more.
 - As always when a controversial hypothesis receives empirical support, the findings of the flypaper literature have been challenged. But the overwhelming weight of the evidence still supports the conclusion that the use of block intergovernmental grants leads to an expansion of the size of local government budgets beyond that favored by citizens of the local community.

2. *Government Size*

- iii. Taking into account only the flypaper effect, one might predict that the size of the total government sector would be larger in a federalist system than in a centralized one.
- iv. Offsetting the effects of intergovernmental grants, which can conceal government expenditures from the view of citizens, are the effects of greater overall transparency in a federalist system, competition across governments at a given level, and therefore greater overall accountability of elected officials in a federalist system.
- v. Once again the question of whether the government sector should be larger or smaller in a federalist system requires an empirical answer.
- vi. In a recent study, Gemmell, Morrissey and Pinar (2002) have shown how the **creation of a close link between taxes and expenditures at the local level of government can increase voter awareness of the costs of government services and thereby greater government accountability.**
 - This happened in Great Britain in 1990 when the highly controversial poll (head) tax was introduced.
- vii. Unfortunately, empirically identifying a causal link between the full set of federalist institutions and governmental efficiency and accountability is difficult owing to the scant number of countries that are true federalisms.
- viii. To my mind there are only five true federalist states in the world – Australia, Brazil, Canada, Switzerland and the United States.
 - Given its different state of development, Brazil is difficult to compare with the others.
 - **Within the set of rich, developed countries of the world, Australia, Switzerland and the United States have somewhat smaller government sectors – that is under 40 percent of GDP.**
 - Canada's government sector is about average in size (around 50 percent of GDP).
- ix. Most studies, which claim to test for the impact of federalism on government size, compute an index of decentralization, and test to see whether government size is inversely related to decentralization.

- In general it has not been found to be significantly related to measures of decentralization.
- x. Recent work by Jonathan Rodden, however, has established a significant relationship between the strength of a country's federalist institutions and various measures of government performance.
 - His work reveals quite clearly that the full benefits from a federalist structure can only be obtained when all of the components of a strong federalist structure are present.
 - In countries in which lower level governments have the authority to set both the levels of their expenditures and their taxes, government deficits are smaller as is total government spending.
 - When local governments are heavily dependent on grants from the central government, they are more prone to run deficits and the country has a higher rate of inflation.

IV. Economic Constitutions and Economic Development

- A. An economic constitution provides a legal and economic framework within which people undertake their economic activities.
- i. Both the economics of regulation and public economics implies that public policies matter.
 - That is to say, they imply that tax rates, barriers to trade, grants of monopoly power, mandated design parameters, policy unpredictability, etc. all affect economic decision making in a manner that affects a nation's pattern of economic activity, its current income level and/or the growth rate of national and average income.
 - ii. Economics suggests that both macro and micro public policies can affect economic prosperity.
 - Consequently, if there is connection between political institutions and the extent to which broad welfare enhancing (or reducing) policies ("good" or "bad") micro and macro policies) are put in place, then we should be able to identify this relationship in broad international data.
- B. A large number of studies have been done in this area, several of which are summarized in various surveys.
- i. We will focus primarily on two surveys.
 - An early overview was published in published in the *Journal of Economic Perspective in Summer 1993*. (the *Symposia: Democracy and Development*)
 - A later one was developed by Holcombe, Lawson, and Gwartney in the Congleton and Swedenborg volume.
 - ii. Olson (Ec P, 1996) argues that basic data from large scale migrations allow us to reject both the hypothesis that national boundaries are irrelevant and the hypothesis that capital labor ratios explain all differences in wage rates.
 - a. It is fair to say that evidence of better economic performance among democracies than dictatorships has been found, but the relationship between democracy and growth is evidently not very robust. (See table above.)
 - b. There are several possible explanations for this.
 - First, there may be no systematic relationship, some "median voters" opt for good policies and others for bad ones, at least as far as aggregate income is concerned.
 - Second, it is possible that countries are improperly classified as democracies when in fact they are dictatorships. Many dictatorships (authoritarian regimes) maintain many of the institutions of democracy: For example, there may be elections to a parliament, but the elections may be rigged or the parliaments may have little or no power.

- Third, there tend to be data problems in all international data. And it turns out that data from dictatorships is generally far less reliable than that from democracies. (Current research by David Levy, Mari Pia and me.) THIS IS ONE OF MANY REASONS WHY ONE MIGHT BETTER FOCUS ON LEVELS THAN ON GROWTH RATES.
- Fourth, there may be more than one kind of dictatorship and/or democracy. Some may be more interested in economic growth than others. Those that are may do better at growth than those that are not.
- Fifth, regression results may be biased because the models being estimated do not properly isolate cause and effect.

C. Other complementary literature has focused on various differences in the architecture of governance and standing policy institutions (e.g. independent central banks etc) arrangements that may make them more or less prone to adopt growth enhancing policies.

- These studies focus on such institutional arrangements (and symptoms) as bicameralism, federalism, rule of law, corruption, justice system, central bank institutions etc.

D. **The Holcombe, Lawson, and Gwartney chapter** (in Congleton and Swedenborg 2006) provide estimates a more recent series of growth equations for the OECD that show that standing economic policies matter.

- i. Their chapter use an economic freedom index (EFW) as a measure of the quality of the constitutional framework, and shows that better constitutional rules, as measured by this index, lead to greater economic prosperity.
- ii. In general, they find that the more liberal the economic constitution is (the greater economic freedom is), the faster economic growth rates tend to be.
 - Their results suggest that economic constitutions be designed to protect property rights, to limit the size of government and government transfer programs,
 - to minimize the regulation of economic transactions both within the country and with foreigners, to produce monetary stability, and to foster unfettered capital and financial markets.

E. The EFW ratings are used as a measure of “economic institutional quality” have been computed for 123 countries and its various components are described in Gwartney and Lawson (2003).

- i. The EFW index rates countries on a scale of from zero to 10.
- ii. For the 99 countries used in Gwartney, Holcombe, and Lawson (2003) the average EFW ratings for 1980-2000 vary from 3.51 for the Democratic Republic of the Congo to 8.61 for Hong Kong.
- iii. It is clear that with this range of variation, higher EFW ratings are positively correlated with higher levels of income and higher rates of income growth.
- iv. (Their index can be regarded as an index of economic liberalism.)
- v. The empirical work presented in Congleton and Swedenborg narrows the list of countries to 18 OECD countries with EFW ratings that vary from 7.98 for the United States and Switzerland to 6.13 for Italy. It also uses a relatively “constitutional” subset of the index for estimation.
 - (This was done at the request of the editors--why do you think that they asked for a smaller sample size?).
- vi. Their empirical strategy is fairly straightforward and transparent. The estimate several institution (policy) augmented national production functions.

vii. A good example is their table 3, which appears below:

Table 3
Institutions and Per Capita Income
Dependent Variable: Real GDP Per Capita

Independent Variables	(1)	(2)	(3)
EFW	3570 (5.73)		3570 (6.91)
K per Worker		0.126 (3.97)	
L per Worker		1555 (4.75)	
K res. per Worker			0.103 (3.17)
L res. per Worker			1072 (2.67)
Constant	-3924 (0.90)	-997 (0.34)	-3924 (1.08)
Adj. R²	47.6	61.0	67.1
(t-values in parentheses)			