Chapter 9

CONSTITUTIONAL PRESCRIPTION AND POLITICAL POWER COEFFICIENTS

9.1 Introduction

The political power and bargaining (PPB) paradigm can be used to evaluate and assess alternative constitutional rules, or the rules by which rules are made. Even though PPB focuses on the endogenous selection of public policies, it embeds a set of constitutional rules and other institutional structures. Alternative settings on these ”rules” can be normatively evaluated in terms of their implications for the distribution of political power (Chapter 6) and the degree to which the public interest is effectively pursued. In essence, actual constitutional settings determine the boundaries of the tradeoff between public and private or special interests. Thus, the PPB paradigm allows prescriptive investigations of alternative constitutional rules that can be given both theoretical and empirical content to the constitutional determination of various types of governance structures. The relationship between the underlying constitution and the ”preference weights” emerging in the governance structure quantifies what Steiner (1969) recognized long ago, namely, that some solutions to the ”power coefficient” problem are implicit or explicit in any public action that might be taken.

An important distinction can be drawn between constitutions and institutional structures. As defined by North (1991), institutions are humanly-designed constraints or rules that shape
human interaction. They reduce uncertainty by providing structure to political, social, and economic exchange. Ostrom (1986) decomposes the formal rule structure into (1) position rules (specified by a set of positions and how many participants hold each position), (2) boundary rules (specified by how participants are chosen to hold these positions as well as exit these positions), (3) scope rules (specified by the set of outcomes that may be affected and the external inducements or costs assigned to each of these outcomes), (4) authority rules (specified by the set of actions assigned to a position at a particular note), (5) aggregation rules (specified by the decision functions to map action into intermediate or final outcomes), and (6) information rules (specified by channels of communication among participants and specified by the language and form in which communication will take place). In contrast to these formal rules, constitutions are a subclass of institutional structures that are interpreted here as rules by which rules are made. In other words, what is the structure of the decision-making process that will generate the formal rules specified by Ostrom? Hence, a prescriptive analysis of constitutional rules will require an assessment of (i) the relative merits of who has access to this decision-making process; (ii) what is an admissible coalition (e.g., majority rule, unanimity); (iii) whether or not any agents or interests are essential; (iv) what, if any options exist; and (v) what proposals are feasible or admissible?

Government organization and intragovernment distribution of policymaking authority are prescribed by a country’s political constitution whether in the form of a written explicit charter or implicitly formulated and accepted. To be sure, governance structures are determined by instrumental considerations as well as ideological views (see Chapter 7) with respect to the desired regimes and the distribution of political power. At any point in time, the prevailing structure is certainly path-dependent. Attempts can be made to endogenize the selection of alternative constitutional rules or, for that matter, alternative institutional structures. A scientifically refutable theory requires that some forces be predetermined or exogenous. Without such a specification, at some point, infinite regress naturally arises. In this chapter, it is presumed that the most logical point to separate what is endogenously
determined from what is exogenous occurs in the constitutional or institutional space.

In the proposed normative use of PPB, constitutional economics can be quantified partly in terms of expected transaction costs that arise in pursuing the public interest. Basic questions that must be answered by this framework include the following: What role does pure economic efficiency play in selecting among alternative constitutional rules? What role do bargaining cost and decision-making cost play in this selection? How does the selection of the constitution rules affect the arguments or performance measures that appear in the governance structure?

As argued in Chapters 4 and 7, policymaking authorities are usually distributed across the entire governmental structure. This distribution determines the configuration of policymaking centers that are assigned responsibility for particular policy issues. When a policymaking authority is fully vested in a single structural element, only one policymaking center exists. A policymaking center may be composed of a group of offices or a single office in which policymaking authority is vested. Constitutionally prescribed rules of procedures are presumed to be followed when deciding on a particular policy. In contrast, when several structures are vested with policymaking authority with respect to the same set of policies, a polycentric configuration of policymaking centers emerges. A polycentric configuration often arises when distinct structural elements decide on different components of a particular policy – its financial burden, its design, its implementation. It may also arise when the disparate structural elements are constitutionally charged with the responsibility of producing a mutually agreed-upon policy. The balance of power among the legislative, executive, and judicial branches of the United States government was in fact designed to raise the transaction costs that would be incurred by any attempts of special interests to seek public-sector rents (Madison 1787).

To the extent that participants in a policymaking center are politically homogeneous, or the center comprises a single decision maker, the center’s policy objective function reflects its participants’ policy preferences. Whenever participants in the center have diverse
preferences, under certain conditions the center’s policy objective function is a weighted aver-
age of the individual agents’ objective functions with the weights being proportional to the individual agents’ political power in much the same manner as depicted in the primary PPB framework (see Chapter 4). The principal political power base of policymaking centers is, of course, legitimate power derived from the center’s constitutional authority. However, individual decision agents may well enjoy other sources of power (e.g., knowledge, social networks, access, political, economic, strategic, etc.).

The performance measures that enter the center’s policy objective function, whether composed of a single or many participants, are to some degree determined by constitutional choice. For example, consider the implications of the length of the center’s planning horizon; generally, a shorter planning horizon entails efficiency losses. Such a horizon causes group action to sub-optimally favor the immediate over the distant. Accordingly, an important prescriptive issue is the constitutional choice of the length of time that a policymaker is allowed to serve an organization. There are, of course, obvious tradeoffs. As an insurance mechanism against policymakers who pursue their self-interest instead of the public interest, constitutional rules must exist for selecting another set of agents to represent the center.

A constitutional democratic process could be specified that allows the opportunity for removing all agents who fail to pursue the public interest. This perspective argues for a shorter time period between appointments and elections and thus a shorter rather than a longer planning horizon. This has direct implications for the specification of the performance measure in the policymaking center’s objective function and presumes that the collective will of voting citizens can determine what is the public interest. However, for democratic constitutional rules to operate effectively other principles are required; namely, those allowing human and civil rights so that citizens can assemble and speak out against and/or in support of those agents representing the ”center.” Another alternative is, of course, authoritarianism, which although it can sustain good economic policies by turning a deaf ear to protest, can also repress demand for reforms that serve the public interest.
The analysis presented in this chapter focuses on an evaluation of alternative constitutional rules in the context of multiple policymaking centers. During the selection of constitutional rules, each policymaking center is uncertain as to its respective socio-economic position where the term, "position" refers, among other things, to their relative power. Accordingly, they are also uncertain as to other policy center’s positions and the political situation that will prevail during the selection of actual policy instruments.

9.2 Constitutional Rules and Policymaking Centers

In a quantitative empirical analysis it must be recognized that the b’s can vary. Among the most important conditioning elements of this variability is the underlying collective choice rules or the constitutional space that dictates the decision-making process. Representing an alternative collection of constitutional rules by $r_k$, the governance weights of interest become $b_i(r_k)$. Construction of those coefficients allows prescription among alternative $r_k$.

The major ideas that emerge in constitutional prescription can be illustrated by means of a simple example of three policymaking centers faced with a two-dimensional, group-choice problem in which any one of four possible constitutional rules may be selected. Even though this is a simplified example, it nevertheless graphically captures the essential features of the constitutional selection problem. The three policymaking centers must decide sometime during the operational phase on two policy issues, say, the location of a public good investment, and the timing of when this investment will take place.

The preferences of the individual policy centers among the various policy combinations are represented by the indifference curves drawn in Figure 9.1. Thus, points A, B, and C represent the policy combinations most favored by policy center 1, 2, and 3, viz., their ideal points, respectively; and the utility levels associated with the various indifference curves satisfy the relation, $U_{i0} > U_{i1} > U_{i2} > ... \ (i = 1, 2, 3)$.  

\footnote{The following analysis employs an approach that has been developed in order to explain constitutional choice in cooperative enterprises (See Zusman, 1992).}
The preference structure depicted in Figure 9.1 may be explained as follows. As travel costs are borne by the consumers of the public goods, policy centers 1 and 3, who happen to represent neighboring consumer interests, prefer essentially the same site location. Policy center 2, on the other hand, represents interests located farther away from city X. Also, because of "horizon problems," say, policy center 1 is more impatient than policy center 2 who, in turn, is more impatient than policy center 3. The policy center's time preferences are revealed by their attitude toward the timing of the government's investment in the public good. The more impatient the policy center, the sooner they prefer the investment and associated financing take place.

The lines, AB, AC, and BC, connecting the most favored combinations are loci where the indifference curves of policy center i and policy center j (i, j = 1, 2, 3) are tangential to each other; i.e., they are the corresponding contract curves. Let the triangular shaped area enclosed by the contract curves be denoted by the symbol Γ. Note that for any policy combination outside Γ, there is at least one combination in Γ which is Pareto superior to it and will, therefore, be unanimously preferred by all policy centers. As an example, consider points G and H. H is unanimously preferred to G. Note, also, that for each policy combination in Γ, there is another combination in Γ which will be chosen over it by majority voting, e.g., a majority consisting of policy centers 2 and 3 will choose point I over H. Furthermore, by the same rule, J will be selected over I and H over J. Hence, the simple majority voting rule is cyclical on Γ, and the ultimate political choice is path dependent (Sen 1986). There is a large set of constitutional rules that could be evaluated – expert rule (or almost expert rule), tie-breaking chairman rule, rule of the chairman and two aids, unanimity, restricted simple majority rule, multiple majority rule, simple majority rule (Nitzan and Paroush 1985). Any of these rules could be evaluated by enumerating their effects on the governance structure and on associated decision costs.² Here, for illustrative purposes, assume that only four collective choice rules are admissible at the constitutional

²See also Rausser and Goodhue (2002).
Figure 9.1: Preferences and collective choice for three policymaking centers
phase. These rules are:

- **r₁**: Elect one policy center who will serve as the sole decision maker on all policy issues ("president").

- **r₂**: Conduct a referendum over pairs of policy alternatives where the winner in each pair is decided by simple majority, and no bargaining and/or coalition formation is permitted ("referendum").

- **r₃**: Use the same procedure as under referendum, but bargaining and coalition formation are allowed ("voting cum bargaining").

- **r₄**: Select a policy combination with which all policy centers concur ("unanimity").

At the constitutional phase, each policy center is presumed to know the individual preferences associated with every political position, but is uncertain whether or not the policy center will be in the position of policy center 1, 2, or 3. In fact, there may be many more political positions which each center may consider possible, but these will be ignored for the sake of simplicity and brevity. In the same vein, the policy center is ignorant as to who will be elected president if r₁ is chosen, or of the policy combination in Γ that will eventually be decided upon if a referendum (r₂) is constitutionally preferred; neither can it be foretold which coalition structure will emerge under voting cum bargaining (r₃). At most, the policy center possesses a subjective probability distribution over the universe of all possible combinations of political positions and solutions (political outcome space) which is not entirely uninformed.

Note that, even if all policy centers were completely certain about their exact future social position, a great deal of uncertainty would still remain. This is due to the wide range of possible political solutions, particularly under constitutional rules which do not require

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³In contrast to a referendum which ordinarily involves numerous voters (all policy centers, say), voting cum bargaining takes place in smaller groups (e.g., the board or directors or executive branch working groups of the public sector).
full unanimity. Also note that, with the exception of unanimity \((r_4)\), all political solutions involve potential externality costs in the sense that a subset of the policymaking centers makes choices that determine the well-being of all centers. To retain simplicity, complete ignorance is assumed, i.e., all possible political outcomes (policy center positions and political solutions) under the constitutionally-selected rules are viewed by each policy center as equally likely. This implies that all policy centers have identical compounded preferences over the universe of uncertain political outcomes. Unless all political positions are identical, removing some of the ignorance introduces diversity into policy centers’ compounded preferences since subjective probability distributions over the political outcome space now vary across policy centers. Moreover, the uncertainty still remaining during the constitutional phase after some ignorance with regard to political positions has been removed, tends to narrow down the inherent differences among policy centers.

### 9.3 Evaluation of Alternative Constitutional Rules

The behavior of risk-averse policy centers under various constitutional choices depends upon their respective objective functions. If the indifference contours in Figure 9.1 represent income or wealth rather than utility, then the choice problem is reduced to a standard problem of individual choice under uncertainty. If however, individual preferences in different political positions are represented by utility functions, then an interpersonal comparison of utilities is implied. In this case, it is presumed that each policy center can assess these utilities by the process of ”imaginative empathy” proposed by Harsanyi, ”i.e., by imagining himself to be ’put in the place’ of individual \(j\)...” (Harsanyi 1977: 52), in various political situations. Under a presidential system \((r_1)\), there are three possible political solutions: \(A\), \(B\), and \(C\). That is, we suppose unrestricted selfishness on the part of decision agents, although electoral and ethical considerations may, in reality, mitigate such inclinations. The
policy center’s expected utility is then

\[(9.1) \quad V(r_1) = \frac{1}{3} \left[ \sum_{i=1}^{3} U_i(A) + \sum_{i=1}^{3} U_i(B) + \sum_{i=1}^{3} U_i(C) \right]. \]

If a referendum \((r_2)\) is selected, every point in \(\Gamma\) is a likely candidate for a solution since the path selected in the operation phase cannot be foretold with certainty. The policy center’s expected utility is then

\[(9.2) \quad V(r_2) = \frac{1}{3S(\Gamma)} \sum_{i=1}^{3} \int_{\Gamma} \int U_i(x_1, x_2) dx_1 dx_2, \]

where \(S(\Gamma)\) is the area of \(\Gamma\).

Under voting *cum* bargaining \((r_3)\), the set of possible political solutions depends on the solution concept employed. Here, we adopt the ”bargaining set” approach (Asscher 1976) as the appropriate concept. There are three possible solutions: policy combination \(D\) corresponding to the coalition structure \(\{1, 3\}, \{2\}\); policy combination \(E\) corresponding to coalition structure \(\{1, 2\}, \{3\}\); policy combination \(F\) corresponding to coalition structure \(\{2, 3\}, \{1\}\).\(^4\) Under this constitutional rule, the policy center’s expected utility is

\[(9.3) \quad V(r_3) = \frac{1}{9} \left[ \sum_{i=1}^{3} U_i(D) + \sum_{i=1}^{3} U_i(E) + \sum_{i=1}^{3} U_i(F) \right]. \]

The political solution under unanimity \((r_4)\) is the outcome of a bargaining game and depends again on the solution concept employed. Thus, if one adopts a concept yielding a unique solution, e.g., the Nash-Harsanyi solution to an \(n\)-person, simple bargaining game (Harsanyi 1977: chapter 10), then a single policy combination such as point \(J\) in Figure 9.1

\(^4\)It can be verified that \(E\) is a bargaining point for the coalition structure \(\{1, 2\}, \{3\}\). This is, because at \(E\), any threat by policy center \(k\) of the coalition \(\{1, 2\}\) to form the coalition \(\{k, 3\}\) with policy center 3 – which will raise the payoffs of both policy centers \(k\) and 3 relative to \(E\) – can be countered by the other policy center of \(\{1, 2\}\), say policy center \(h\). The latter’s counter-threat to form a coalition \(\{h, 3\}\), yielding policy member 3 an even higher payoff without loss to \(h\). A similar argument applies to points \(D\) and \(F\) as well.
is to be considered. In this case, the policy center’s expected utility is

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V(r_4) = \frac{1}{3} \sum_{i=1}^{3} U_i(J).
\]

In addition to the different expected utilities represented by (9.1) through (9.4), each of the various constitutional rules entail different bargaining costs. Let \(C(r_k)\) denote the cost of reaching a decision ("decision cost")\(^5\) per policy center associated with the \(r_k\) selection of constitutional rule; then one expects \(C(r_1) < C(r_2) < C(r_3) < C(r_4)\). Note that \(C(r_k)\) consists mostly of the negotiation cost but may include other types of costs, such as losses due to calculation errors. \(C(r_1)\) is the smallest since, under the presidential system assumed here, collective decisions are made by a single person; \(C(r_4)\) is the greatest, since, under unanimity, each individual enjoys a veto power; and \(C(r_3)\) is greater than \(C(r_2)\) since \(r_3\) involves bargaining while \(r_2\) does not.\(^6\)

Visual inspection of \(\Gamma\) in Figure 9.1 suggests that, while the mean values of the political solutions under alternative constitutional rules are similar, large differences exist among the corresponding spreads. To formally evaluate both the mean and dispersion values of alternative constitutional rules, let \(D_k\) denote the decisive group (the winning coalition) given an \(r_k\). When \(D_k\) is small, a political solution maximizing the well-being of policy centers in \(D_k\) at the expense of those not in \(D_k\) is easily attained. This is clearly so when \(D_k\) consists of just one policy center (as in \(r_1\)). When \(D_k\) is large, its policy centers’ preferences are more diverse and the solution agreed upon by policy centers in \(D_k\) is less likely to maximize their preferences at the expense of the policy centers excluded from \(D_k\). Consequently, the disparity between the utility level of policy center \(i\) – when it belongs to the decisive group and the utility level of policy center \(i\) when it does not belong, is greater the smaller the size of the decisive group. In terms of the illustrative example, the disparity is greatest under the presidential system \(r_1\) and smallest under the unanimity rule \(r_4\), with the voting rules \((r_2\) and

\(^{5}\)The term is due to Buchanan and Tullock (1962).

\(^{6}\)Buchanan and Tullock (1962) analyze in some detail the relationship between the size of the decisive group (the winning coalition) and the "decision cost." They conclude that the two are positively related.
occupying an intermediate position. However, the difference in the spreads of political outcomes associated with the two voting rules derives from a completely different source – the wide range of possible "decision paths" under referendum \( r_2 \) as compared to the limited and centrally-oriented set of possible solutions under voting *cum* bargaining \( r_3 \). The general pattern of variation in the policy center's utility level under the alternative constitutional rules reflects the spread of the policy combinations under these rules. Letting "spread \( r_k \)" denote a measure of the partial dispersion of the political solutions in \( \Gamma \) under \( r_k \), it follows that \( \text{spread } r_1 > \text{spread } r_2 > \text{spread } r_3 > \text{spread } r_4 \). Given the "mean preserving spread" argument implied by the above observation, it follows that for sufficiently risk-averse policy centers \( V(r_1) < V(r_2) < V(r_3) < V(r_4) \). Recall, however, that \( C(r_k) \), too, rises with \( k \) and, as contracts are purported to be economically efficient, the selection of a constitutional rule would strive to maximize \( V(r_k) - C(r_k) \). Nevertheless, for sufficiently risk-averse policy centers, a "mean preserving spread" criterion implies that a unanimity constitutional rule can dominate all other rules from the standpoint of the benefits dimension of the proposed calculus.

### 9.4 Constitutional Space Prescription

The scope for prescription at the constitutional phase may be decided by alternative rules selected in accordance with the sensitivity of the policy centers’ expected utility to the ultimate decision and its associated cost. For example, the sole decision-maker case, \( r_1 \), exhibits maximal spread but minimal bargaining costs, and it is usually confined to matters of less importance. The prime minister or president of a country, or the chairperson of a board, may be granted full authority to decide on current operational problems; on the other hand, important policy issues are ordinarily decided by simple majority of the membership, cabinet, or board. Simple majority rules entail medium spreads and decision costs. Special majority,\(^7\)

\(^7\)Note that \( V(r_k) - C(r_k) \) is meaningful only if \( V \) and \( C \) are expressed in identical units, say dollars and cents.
or even unanimity, with minimal spread and maximum bargaining costs may be required when fundamental rights are at stake. A structure consistent with the above-mentioned revealed constitutional rules is presented in Figure 9.2, where $M_k = V(r_k) - C(r_k)$. Note that, for a given choice problem, the relationship is characterized by increasing marginal decision cost; and, as group-choice problem areas are in some sense “more important,” both the decision cost and the expected utility associated with any particular constitutional rule assigned to this problem area also increase. However, the significant structural characteristic – and the one necessary in order to account for the observed behavior – is the shift in the relative values of expected utilities and decision costs perceived by the various interests. As the group-choice problem area becomes more important, interests attach increasingly higher values of the riskiness (spread) of group choice relative to the attendant decision cost. In Figure 9.2, the relevant choices are indicated by the constitutional rules associated with the highest $45^\circ$ line segments (each representing a graph of the equation, $V - C = \text{constant}$). These rules are the revealed group preferences during the constitutional phase.

The preceding analysis was carried out under the assumption of complete ignorance regarding the policy centers’ political positions. However, what if the complete ignorance assumption turns out to be invalid and the various interests are characterized by more informed and, thus, diverse subject probability distribution over the political outcome space? Under these circumstances, policy centers’ preferences concerning constitutional rules are diverse, and constitutional choice involves bargaining. The predicted outcome then depends on the preferred solution concept to the corresponding bargaining game.

### 9.5 Conclusion

The constitutional structure within a political economy will determine the collective choice rule employed in that economy. In this chapter, we considered four possible collective choice rules, and evaluated the behavior of the policy centers under those rules.
Figure 9.2: The structure of \((C, V)\) over the constitutional rules and policy issues space
Different choice rules imply different expected utilities of the policy centers; assuming that decision costs (Buchanan and Tullock, 1962) also change, being the smallest when the decisive group in the economy is the smallest, we show that a unanimity choice rule will generally dominate other rules, such as referendum and presidential rules, and will generate the minimal disparity between the utility levels of different policy centers.

Not all decisions are necessarily made by the same collective choice rule; the constitution may assign different rules according to the perceived importance of the choice ahead. The benefit from a more important and risky decision will generally be associated with a choice rule that involves more agents in the process.