Chapter 1

Public Policy: The Lens of Political Economy

1.1 Introduction

Conflicts between the public interest and special interests naturally emerge in the design and implementation of public policies. Some public policies pursue the public interest by attempting to correct for market imperfections, lower transaction costs, effectively regulate externalities, or enhance productivity. Still other public policies are the result of manipulation by powerful groups actively engaged in the pursuit of their own self-interest. Regardless, conceptual formulations that attempt to explain or prescribe public policy emphasizing only one type of interest are doomed to fail. Frameworks that neglect the role of special interest groups have little explanatory power. Models that presume that government has neither autonomy nor any interest in the size of the economic pie will also face serious limitations as an explanatory, predictive, or prescriptive framework.

In any public policy-making process, political and economic forces are at play in resolving the strategic interactions among the various interests. A schematic representation of the policy-making process reflecting these forces is represented in Figure 1.1. Historically, the right-hand box has been the domain of political science, while the left-hand box has been the domain of economics. At the top of the right box, particular governance structures set the constitutional design establishing voting rules, the rule of law, property rights, laws governing exchange, and more generally the rules by which rules are made. Governance structures also determine the nature and scope of the

political feedback mechanisms from groups affected by public policies. In its most expansive representation, any causal analysis of constitutional rules investigates the implications of alternative legal, regulatory and institutional frameworks, as well as various degrees of political, civil, and economic freedoms. In other words, governance structures set the boundaries for the political economic link. Over the course of the last decade, economists have begun to make significant theoretical and empirical advancements in analyzing the link between governance structures, political economics, and the selection of actual policies.

Political economic analysis seeks to explain the selection and implementation of public policies. This link in the policy-making process endogenizes the instrument settings as a function of governmental bureaucracy and the actions of stakeholders. Interest groups as agents representing stakeholders rather than individuals are the unit of analysis. In these links of the policy-making process, interest groups compete by spending time, energy, and money on the production of pressure to influence both the design and the tactical implementation of policies.

The box at the bottom of Figure 1.1 recognizes that the implementation of public policies can lead to both intended and unintended consequences. For this link, the potential strategic conduct of both public and private sector agents and their representatives becomes critical. Modern economics has used the concepts of asymmetric information, incentive compatibility, participation constraints, and credible commitments to isolate the incentives embodied in specific policy regimes. Unintended consequences often result from hidden actions or hidden information. Hidden actions are typically characterized as moral hazard problems, while hidden information is generally

divided into adverse selection or signaling problems.

Once policies are designed and/or implemented, the process of incidence begins with the assessment of winners and losers. Some groups or segments of the market may bear the burden of the public policies while other groups may reap the gains. The actual incidence of any designed and implemented public policies depends on individual agent incentives and ultimately the market structure. The economic consequences are generally measured both in terms of economic growth or the size of the economic pie and its distribution among various interests. These economic consequences in turn lead to a distribution of political power, represented in the top box of Figure 1.1.

Much of the academic literature compartmentalizes the links depicted in Figure 1.1. This compartmentalization has allowed at least four analytical dimensions of public policy to be distinguished in accordance with their imposed assumptions or maintained hypotheses. Until the last few decades, the vast majority of public policy analysis has focused on an incidence analytical dimension represented in the left box of Figure 1.1. For this dimension, the impact of existing policies and/or the consequences of alternative policy instruments are evaluated. In this evaluation, the maintained hypotheses imposed often include perfect implementation, no feedback effects from interest group or coalition formation, and a given governance structure. Since the typical benchmark for any implemented public policy is a perfectly competitive partial or general equilibrium market structure, any public policy is often characterized as government failure.

The second analytical dimension generally takes place at the policy implementation link of Figure 1.1. For this dimension, the perfect implementation assumption is relaxed while still maintaining no feedback effects from interest group or

coalition formation, and a given governance structure. This typically involves exercises in mechanism design used to isolate the consequences of asymmetric information, misalignment of incentives, and the structured interpretation of signals. This analytical dimension highlights incentive effects, potential strategic behavior on the part of private sector and governmental agents, and the credibility of sustainable public policies.

Modern political economy is a third analytical dimension that comes in many shapes and forms. All of these formulations, however, relax the assumption of no feedback effects from interest group or coalition formation, but typically impose a given governance structure. The inherent value of this analytical dimension is that it formally recognizes that the groups and agents affected by public policies are not passive and can pursue strategies to influence and alter the selection and implementation of policies.

A fourth analytical dimension that has gained recent favor focuses on governance structures that delineate the boundaries on the negotiations and bargaining that takes place among stakeholders and governmental agents. In its most general form, this analytical dimension relaxes the assumptions of perfect implementation, no feedback effects among interest group or coalition formation as well as given governance structures. As reflected in Figure 1.1, this dimension is capable of analyzing how the distribution of political power leads to alternative governance structures. A maldistribution of political power can be expected to result in governance structure reforms. This causal link is the basis for conceptualizing the bargains and compromises that are undertaken to shape governance structures that are acceptable to those who have the greatest capacity to obstruct such structural reforms, as well as to others who have stakes in the outcome. Formally, this analytical dimension evaluates alternative collective

choice or constitutional rules governing access to the policy-making process, how admissible coalitions are formed, the space of the issues over which tradeoffs are structured, and the specification of default options.

1.2 The Lens of Political Economy

This book will focus on the links in Figure 1.1 stretching from political economics all the way to the distribution of political power. Thus, the different forms of government, electoral and legislative rules will be taken as given in most of our analysis. We embrace the lens advocated long ago by Steiner (1969: 31) on the distribution of political power or, in his terms, the weighting problem in public policy analysis:

> If objectives were genuinely multidimensional and not immediately comparable, some solution to the weighting problem is implicit in any choice and that solution reflects someone's value judgment. Formally, we now accept in principle that the choice of weights is itself an important dimension of the public interest. This choice is sometimes treated as a prior decision which controls public expenditure decisions (or at least should) and sometimes is a concurrent or joint decision that is an inseparable part of the process of choice.

Inherently, policy-making outcomes reflect personal exchanges and relationships. Accordingly, the relative positions and influence of agents, players or interest groups must represent the core of political economic analysis. In personal exchanges, relative positions and influence can be characterized by relative power. In this context, the argument advanced by Russell (1938) is compelling: "The fundamental concept in social science is power in the same sense in which energy is the fundamental concept in physics."

The historical origins of the political economic lens can be traced back to the original architects of the economics discipline, namely Adam Smith, Mill, Wicksell, and Marshall. None of these authors were strangers to political economic analysis. In fact,

the foundation of the discipline of economics emerged from an integration of political science, economics and philosophy. With the introduction of the Walrasian framework, however, mainstream economics swept aside our political economic origins. This process was accelerated by the remarkable elegance and clarity of the Arrow-Debreu extensions of the basic Walrasian model. Essentially, many features of reality were discarded by mainstream economists in order to facilitate theorizing.

Although some of us might bemoan the distortions of reality emanating from the separation of our discipline from political science, it certainly had the value of allowing mainstream economics to proceed unencumbered. The separation of economics from other disciplines resulted in the formulation of an abstraction that might not otherwise have been delineated, and it permitted the development of the most significant of social theories, classical microeconomics (Alt and Shepsle 1990). However, the separation of politics and other social relationships from mainstream economics and the focus on impersonal exchange means that few conceptual frameworks existed for explaining the formation of public policies. Over the last three decades, this circumstance has changed dramatically with the emergence of the political economic analytical dimension. To varying degrees, the frameworks representing this policy dimension have allowed political forces to be integrated with economic forces.

In our articulation of the political economic lens, power is distributed between the government and various interest groups and a maldistribution of power can blunt any and all efforts at improved efficiency.[1] As argued by Williamson (1975), all collective action organizations, government or otherwise, consist of a "center" which directs group actions

[1] As noted in the political science literature, governments can have some separate autonomy and can seek "leadership surplus" (Froelich, Oppenheimer and Young 1971).

and peripheral participants. The center's choices affect individual well-being so that the objective functions of the peripheral participants are, to some extent, expressed in terms of the center's choices. Individual peripheral participants will naturally strive to influence the center's choices. The center also consists of individuals with their own private interests; and while it is not unreasonable to expect central decision makers to fully internalize the group's goals, it would be unrealistic to ignore their personal interests. As a result, the center is exposed to attempts to influence the center's choices by peripheral participants who are in a position to award or penalize members of the center. In this setting, the concept of price is not well defined, and unlike the non-personal Walrasian exchange, agents' identities do matter in "political markets".

The foundation of this political-economic framework emerged from the early Nobel Prize-winning work of Nash (1950, 1953) and Harsanyi (1963, 1977) on bargaining. A core concept in these formulations is bargaining power. As Dahl (1957) has noted, A has power over B to the extent to which "he can get B to do something that B would not otherwise do".[2] However, as Harsanyi (1963, 1977) has emphasized, power relationships need not be unilateral; bilateral or reciprocal power relationships also exist. Harsanyi employs these notions to structure the incentives for coalition formation and indirectly the failure of coalitions to exercise influence.

When a center's choices further the interests of particular peripheral participants, these interests may reward the center by extending material benefits and support. Conversely, peripheral participants may penalize the center by withholding material

[2] Hirshleifer (1991) has offered the following definition: "power is the ability to achieve one's ends in the presence of rivals". Bowles and Gintis (1993) offer a sufficient condition for the exercise of power, namely the ability of furthering one's interest by imposing (or credibly threaten to impose) sanctions on another agent when the converse is not also true.

benefits or imposing penalties when such choices are contrary to their interests. For the case of n peripheral participants, an $n + 1$ bargaining game is created whose cooperative solution constitutes an organizational equilibrium.[3] As we shall demonstrate, a cooperative equilibrium group choice is, in fact, a compromise among stakeholder or participant interests and the center's interests, reflecting the relative power of each group.

In the policy-making process, the center consists of policy makers constitutionally authorized to make policy choices. Constitutionally, a polycentric structure comprising several centers (e.g., federal, state, local) is required in some instances. Regardless, a hierarchy structures the relationship between the authoritarian center and the subordinate peripheral participants or interest groups. These interest groups may be of many types: organized structures capable of rallying group members into coordinated joint action (Olson 1965); unorganized but responsive interest groups; groups that share common interests but are unable to evolve any machinery for deliberate political action; politically inert interest groups; or groups which not only lack any mechanism for coordinated policy action but also have members unresponsive to policy choices.

The relationship between organized interest groups and policy-making centers defines a reciprocal power structure in which each party employs its means of power in the bargaining process. A political-economic equilibrium can be derived for this process, with a presumed cooperative outcome defined by group rationality. For applications

[3] There has been an active debate about cooperative versus non-cooperative outcomes of multilateral bargaining frameworks (Rausser and Simon 1999). In the political-economic context, even though politics appears to be conflict-ridden, it is essentially also a process of conflict resolution. In the Nash-Harsanyi world, when bargaining parties share similar perceptions on their respective disagreements payoffs it is rational for each party to seek an agreement which will benefit all interests compared to the disagreement outcomes. Essentially, the latter outcomes cannot be a long-equilibrium. Accordingly, the tendency will be for the bargaining parties to move from a non-cooperative short-run equilibrium to a cooperative outcome. As a result, Zusman (1976) presumes a cooperative solution or “group rationality” in characterizing a political economic equilibrium. A contrary perspective is reflected in the work of Hillman and Riley (1989) and Coggins (1995).

involving policy-making centers and n organized interest groups, the political-economic equilibrium corresponds to a cooperative solution of a $(g + n)$ person bargaining game.[4]

Two early applications of the political economic bargaining equilibrium were presented by Rausser and Freebairn (1974) and Zusman (1976). Both derive a governing criterion function or political preference function for the entire policy-making process.[5] Zusman's work is particularly insightful in isolating the equilibrium threat and reward strategies pursued by various interests attempting to influence the policy-making center. In both studies, the distribution of political power is quantified through reverse engineering from the political economic bargaining equilibrium. The revealed preference methodology employed in both studies presumes that there is a perfect agency relationship between any lobbying or agents representing organized interest groups as the principals. For imperfect agency relationships, a first best world no longer exists, and there is not one Pareto frontier but many. Recognizing that the political economic bargaining equilibrium is a local and not a global solution, Rausser and Freebairn (1974) suggest the construction of a functional set rather than a unique function. This set reflects the extreme viewpoints and preferences of different decision makers actively involved in the bargaining process, as well as preference sets lying between these extremes.[6]

Using the concepts of new institutional economics articulated by North (1990), the first analytical formulation linking the distribution of political power to alternative

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[4] When in addition to the g policy-making centers and n organized interest groups, the group configuration comprises k unorganized but unresponsive interest groups, the ensuing political economic equilibrium consists of a solution to a $(g + n)$ person bargaining game, where each of the $(g + n)$ organized parties takes into account the effects of the reactions of the k unorganized but unresponsive interest groups on its own policy objective function. Under these circumstances, a bargaining game emerges between $(g + n)$ Stackelberg leaders in the presence of k Stackelberg followers.

[5] In some of the literature, this governing criteria function has been defined as a policy support function or a policy preference function (de Gorter and Swinnen 2002).

[6] One of the purposes of their analysis is to generate information that might contribute to the efficiency of the bargaining process in reaching a consensus.

governance structures was presented by Rausser and Zusman (1992). Here, as in the analysis of Persson and Tabellini (2003), the focus is on the direct or reduced form link between constitutions and policies. However, aside from a large number of empirical applications (de Gorter and Swinnen 2002)[7] the bargaining power formulation remained dormant, in part because of the conscious attempt of the Chicago school of political economy led by Stigler, Peltzman, and Becker to sweep aside the notion of political power, much the same as *taste* is not a critical component of consumer theory.[8] In recent years, however, we have witnessed a sea change from the lens provided by the Chicago school, as revealed in the literature review presented in the following section. New advancements in political economy increasingly focus on the distribution of political power, the role of governance structures, coalition formation, and the mechanism design issues that are faced in the implementation of public policies.

1.3 Literature Review

There have been a number of surveys of the political economic literature over the course of the last few years. General reviews of the literature have been presented by Mueller (2003) and Weingast and Whitman (2006). For reviews focusing on game theory formulations since the year 2000 from leading economic journals, the survey of

[7] In the political science literature there are a number of exceptions, most notably Baron and Ferejohn (1989) who extend the Rubenstein (1982) alternating bargaining game to transcend the boundary between the disciplines of economics and political science. In this model, however, the only source of political power is patience or which actor is assigned the right as a proposer or controller of the agenda.

[8] In the conclusion to "Toward a more general theory of regulation" (1976: 240), Peltzman explains: "In the way I have chosen to model the regulatory process, these power relationships play a role analogous to tastes in consumer choice theory. They shape the regulator's utility function. It has proved a highly rewarding research strategy for consumer choice theorists precisely to beg questions of taste formation and concentrate instead on the behavioral effects of changes in constraints in a regime of stable tastes. With some qualification, there is an analogous history in production theory."

Dewan and Shepsle (2008a, 2008b) is invaluable. More specific reviews are available for trade policy (Grossman and Helpman 2001, Rodrik 1995); fiscal and monetary policy (Persson and Tabellini 2000); the relationship between governance structures and fiscal and growth-promoting policies (Persson and Tabellini 2003); and agricultural policies (de Gorter and Swinnen 2002).

From the perspective of this book, we briefly summarize in this section the principal schools of thought on political economy and how these schools have evolved. All of these schools of thought owe a debt of gratitude to Anthony Downs for his seminal book *An Economic Theory of Democracy* (1957). In his spatial model of elections, Downs demonstrates with great clarity that in representative democracies, citizens demand and political parties supply public policy.

The political economy formulation with the longest history is the "theory of the state" or in its earliest form, "the radical political economy" framework. Here, political power plays a crucial role. In this framework, the interest groups of other formulations are replaced by two classes: the dominant capitalist class and the working class. In its simplest versions, the dominant class or owners of capital make use of their political power to control the resources of the state. The dominant class transfers wealth to itself via the government through a number of institutional mechanisms (O'Conner 1973, Jessop 1977, Roemer 1978). As the observed distribution of income and wealth becomes very unequal, the legitimacy of government is maintained by the state providing a range of social services and income supplements for the non-dominant classes (i.e., working class, unemployed, impoverished, farmers).

Originally, no attempt was made in the theory of the state formulation to explain

the formation and maintenance of the dominant class. Markets for outputs or inputs are ignored and monopoly power is assumed, never explained. The asymmetric knowledge between the dominant and non-dominant classes is imposed with the empirically unjustified result that the working classes remain ignorant and never learn. However, this formulation has been creatively reconstructed by Bowles and Gintis (1993), who introduce the concept of a "contested exchange" where the benefit agents derive from a transaction depends on their respective capacities to enforce competing claims. In this reconstructed formulation, power continues to play a critical but empirically non-testable role. More recently, Acemoglu and Robinson (2005, 2008) focus on wealth inequality and how it affects the stability of governments and ultimately the implementation of public policies. They derive a political economic equilibrium explaining why elites strategically dilute their influence, exposing their wealth and income to governmental redistributive policies that benefit other interest groups.

In terms of historical origins, the second school of thought was the rent-seeking perspective, which emerged with the classic paper by Tullock (1967). This work extended the deadweight losses which were measured as Harberger "triangles" to large rent dissipations associated with "rectangle" losses. The original Tullock formulation was extended by Krueger (1974), whose model presumes that all rents are dissipated through competition among interest groups; Brock and Magee (1979), who formally introduced political parties and voting and found that all competition in political economic markets is wasteful, providing the basis for their "black hole" theorems; and Bhagwati (1982), whose model focuses on directly unproductive activities that form the basis for social waste. In this formulation, as with many of the other schools of thought,

governments have no autonomy and all special interests engage in lobbying, which is a "bad" from a public interest perspective. To be sure, all political economic formulations have rent seeking to some degree and strategic attempts to establish institutions that counter the incentives for rent dissipation.

Another school of thought emerged from the public finance literature investigating the size of government and the distribution of income and wealth. Initially, this school of thought generated a number of so-called liberal/pluralist frameworks concentrating on forces shaping the distribution of income and wealth in the private sector. Examples include the "self-interested coalition"; the "self-interested median voter"; the "private insurance"; the "social insurance"; the "pareto-optimal income redistribution"; and the "relative income" specifications. Each of these formulations was advanced to account for the observed changes in the distribution of income (Rausser, Lichtenberg, and Lattimore 1982). This school of thought has mushroomed with the substantive work of Persson and Tabellini, summarized in two recent books. In their 2000 treatise they provide a theoretical formulation for explaining public policy, and in their 2003 treatise they investigate the relationship between constitutions or the political landscape and selected public policies.

In related work, Persson, Roland and Tabellini (2000) provide the microfoundations for public finance in political regimes where the standard self-interest motivation is presumed for all agents or political actors. They identify three conflicts of interest: (i) between politicians and voters over the level of political rents; (ii) among politicians over the division of rents; and (iii) among voters over governmental spending priorities. They derive political-economic equilibriums in which various conflicts of

interest are in balance under alternative political landscapes. These landscapes include presidential regimes with dispersed political power and parliamentary regimes with more concentrated political power. [9] The resulting political-economic equilibriums are particularly insightful. Presidential governments are found to be associated with a smaller public sector, fewer rents enjoyed by politicians, and less redistribution, but inadequate investment in public goods. A larger public sector and more rents enjoyed by politicians emerge from parliamentary government, but in contrast to the presidential regimes, more is spent on both public goods and redistribution.

Another paper looking at the political landscape as explanatory variables is Lizzeri and Persico (2001). Here, the explanatory variables are different structures of the electoral system rather than the political regime. In this model, political candidates offer either a pure public good or a pure transfer option that must satisfy a balanced budget constraint. Under different voting arrangements, the political-economic equilibrium for political candidates' strategies turns on how the public good is valued by voters. Pure equilibrium strategies exist when the value of the public good is above some upper threshold or below some lower threshold. Over the intermediate range there are only mixed strategies in equilibrium.

A major contribution on the relationship between the political landscape and income distribution is the work of Austen-Smith (2000). This model provides stripped-down insights into the mutual interplay between political and economic incentives induced by two different collective decision schemes: proportional representation with legislative bargaining, and simple majority rule with winner-take-all legislative decision

[9] The authors follow the seminal work of Baron and Ferejohn (1989) by specifying political power in terms of which actors or groups possess proposal or agenda power.

making. Investigating multi-party proportional representation relative to two-party winner-take-all arrangements, Austen-Smith identifies a political-economic equilibrium which reflects an economic component consisting of a distribution of ability types allocated endogenously in response to taxes across three occupational categories: employers, employees and voluntarily unemployed. One of the more interesting results of his model is that national income is lower and voluntary unemployment higher in proportional representation systems than under two-party majority rule. These results are traced to the differences in the pivotal voter between the two systems. Under proportional representation, the pivotal voter is "the voter with average employee income amongst only those types who choose to be employees ex post" (Austen-Smith 2000: 1236). In contrast, under two-party majority rule the pivot is "the voter with median income in the electorate at large, irrespective of that voter's (equilibrium) choice of occupation" (Austen-Smith 2000: 1239).

In any political-economic analysis of collective decision-making structure, a critical element is the allocation of authority between one level of government and another. Such questions are often addressed in terms of the centralization of power at the federal level (Cremer and Palfrey 2000). Decentralization or devolution of policy-making authority have typically been analyzed in terms of the classic tradeoff between the greater efficiency of public goods provision and the cost of policy uniformity when imposed from the national or federal level. Weingast, Shepsle and Johnsen (1981) analyze public good policies in terms of the distribution effects across various members of the economy where the cost and benefits of local public goods can generate externalities on other geographic regions. This work has been extended by Lockwood (2002), who draws a

distinction between decentralized and centralized regimes in accordance with the financial burden of financing public good projects.[10] One of the key results is hardly surprising: a centralized government is less responsive to the preferences of local citizens.

The lens of political finance has also been used to reverse engineer the causal relationship between public policy or policy reform and the governance structure or constitutional choice. For example, in the constitutional choice framework of Aghion, Alesina and Trebbi (2004), the focus is on the degree of "insulation" of policymakers. Once appointed, an insulated leader can rule with little or no ex post control. A non-insulated policymaker or leader instead has to form large majorities to pass legislation and many groups may have veto power ex post. There is asymmetric information with respect to the politician's type; a good type always implements the reform, and a bad type always expropriates from the citizenry. The constitutional choice on the degree of insulation is driven in part by the distribution of voter preferences, the nature of uncertainty, the feasibility and cost of compensating losers from policy reforms, the average benefits and costs of potential policy reforms, and the degree of risk aversion. The comparative static results in this model show that the optimal level of insulation is increasing in the constitutional level of individual protections and decreasing in the level of uncertainty over the benefits and costs of the reform.

The next school of thought can be characterized as the Chicago school of political economy. This framework emerged with Stigler's (1971) theory of economic regulation, Peltzman's (1976) corrections and extensions of Stigler's theory, and Becker's (1983)

[10] In the decentralized regime each region pays for its own project, while under the centralized regime delegates from the regions vote and the funding of projects are determined nationally by majority rule.

perspective that governmental intervention can be conceptualized as rational and efficient. In each of these models, the government acts as a broker for redistribution among interests groups. The government has no autonomy, and the public interest is hidden form view.[11] The Stigler model results in interest groups totally capturing the government; the Peltzman formulation corrects this result which leads to only partial capture; and the Becker model isolates the price of redistribution as the per unit dead weight loss that result from governmental taxes and subsidies. For each of these models, public policy emerges from the competition among private self-interested stakeholders and easily manipulated governments.

Peltzman specifies a number of reasonable assumptions, including: (a) opposition is enhanced by increasing tax rates and mitigated by voter per capita educational expenditures; (b) the probability of the members of the beneficiary group granting support is subject to decreasing returns with respect to per capita net transfers; (c) the probability of opposition exhibits similar properties with respect to per capita educational expenditures; and (d) there are increasing political costs of taxation. One of the most critical assumptions imposed by Peltzman is that the wealth of each member of the potential opposing group is a decreasing function of the transfer tax. This assumption rules out a "pure" transfer, i.e., one which has no allocative effects. The general proposition that wealth is not totally inelastic with respect to taxes has important implications for the evaluation of the whole range of government redistributive policies.

[11] A second paper by Becker (1985) admits both envy and altruism on the part of interest groups. Accordingly, for this specification it is possible for governmental intervention to supply public goods that serve the collective interest. It is also important to note that Becker recognizes but neglects in his model the critical role of coalition formation in political economic processes.

More recently, Becker and Mulligan (2003) created a model in which the size of the government is the amount of redistribution between taxpayers and beneficiaries. Both groups invest resources to support their cause among legislators and voters. Their efforts are arguments in an "influence function". The taxpayer group attempts to minimize tax payment, deadweight cost of taxation and its lobbying efforts, and the beneficiaries try to maximize subsidies, net of deadweight cost and lobbying. Becker and Mulligan show that with a higher marginal deadweight cost of taxation, the taxpayers' pressure increases and total taxation is lower. Similarly, if the deadweight cost of the subsidies increases, the recipients' pressure decreases and taxation is lower. A flat income tax has lower deadweight costs, and as such it will increase taxation. The model has a consequence for government spending programs; contrary to the idea that direct, decoupled payments will be more efficient than price supports, this model implies that direct payments will result in more effort from the beneficiary group to increase those payments.

An extension of the Chicago model has been advanced by Besley and Coate (2001). In contrast to the Stigler/Peltzman political economy model, lobbying funds do not affect a politician's probability of winning an election, but rather are direct transfers that enhance the politician's self-interest. This takes the form of explicit bribes or slightly disguised transfers[12], not campaign contributions. The resulting political economic equilibrium is characterized by a set of bribe schedules and a public good level conditional on bribes received. By combining an electoral process and a policy process in the same model, Besley and Coate are able to demonstrate the conditions under which an electoral phase can effectively counter subsequent lobbying.

[12] These transfers may assume the form of post-electoral career employment for the politician, or current employment of a spouse or child.

Caselli and Morelli (2004) also focus on bribes, with the interesting result that such incentives may actually increase the likelihood that talented politicians may be attracted to seek political power. Dal Bo and Di Tella (2006) explore the case where interest groups use threats of physical harm or legal harassment rather than bribes. A key feature of their analysis is that threats, unlike bribes, obviously always have a negative effect on politicians' motivations. In a world of both threats and rewards, policy makers may be punished for pursuing policies preferred by most citizens but detrimental to powerful specialized interest. To serve the public interest and increase the probability of reelection, protection must be forthcoming from other institutional arrangements, e.g. political parties, for policy makers to creditably counter the wishes of otherwise powerful special interests.

The analytical value of integrating political and economic forces is not confined to the explanation of government policies. In fact, such forces play a role in all organizations and thus the focal point of the political-economic analytical dimension could quite simply be collective decision making. Based on this observation, the advances in new institutional economics can be identified as a fourth school of thought. The original intellectual architects of this school are Coase (1937), North (1981, 1990), and Williamson (1975, 1985, 1993). This framework extends transaction cost economics to the theory of organizations and the design of governance structures. As noted by Williamson (1993), the transaction cost economics perspective "...examines alternative forms of organization that differ in kind (that is, in discrete structural rather than marginal respects)... and examines only feasible forms of organization, the efficacy of which forms are assessed comparatively".

One of the most notable contributions to the transaction cost lens on political economy has been provided by Dixit (1996), borrowing from North and Williamson. Dixit's main thesis is that transaction costs provide a useful analytical tool for integrating both positive and normative models of political processes. Much the same as Williamson's arguments in the context of firm behavior, Dixit's dominant theme is that political arrangements often look inefficient on the surface but may actually represent the best means for coping with the unavoidable transaction costs of politics. In political interactions as in market interactions, Dixit sees "clear potential benefit from economizing on transaction cost" and concludes that "rules and institutions should and do evolve to serve this purpose" (1996: 61). Dixit brings to bear a number of modern economic concepts including information cost economics, agency problems and commitment problems in interpreting the transaction cost lens on political processes.

Still another lens has emerged from the political science literature, and is sometimes characterized as the public choice school or the positive political economic theory school (Weingast and Wittman 2006). In these frameworks, some government autonomy emerges with formal attempts to integrate political science and economics. The founding political scientists of this school of thought are Black (1958) and Riker (1962). Buchanan and Tullock (1962) are also early contributors. Riker and his followers focused on rational self-interest choice, providing the theoretical underpinnings for the determination of coalition size. This work has been extended in many directions. For example, Laver and Shepsle (1990) draw a distinction between coalition building and government formation as a process. In the seminal work of Baron and Ferejohn (1989) a rational-choice equilibrium is derived for a stripped-down version of divide-the-dollar

bargaining where government formation is viewed as a sequential bargaining process in which certain agents have proposal rights.

Building on contributions from the core schools, two fields of applied political economy research have received much attention. The first field that has been the subject of numerous political economic formulations is international trade. As surveyed by Rodrick (1995), these formulations range from the political support specification of Hillman (1989), the tariff formation approach of Finley and Wellisz (1982), the median voter formulation of Mayer (1984), the campaign contribution framework of Magee, Brock and Young (1989) and more recently the "menu-auctions" approach of Grossman and Helpman (1994, 1995). The latter formulation has become the standard model in the field of international trade, and as noted by Rodrick, one of the main reasons is that it provides the microfoundations for lobbying.

As with the structural models presented in this book, Grossman and Helpman (1994, 1995) have designed their political economic process as a two-stage game where in the first stage organized interest group lobbies present contribution schedules to the government which in turn "auctions" support to various sectors or organized interest groups. The result of this two-stage game is shown to be equivalent to the government maximizing a weighted sum of campaign contributions and aggregate welfare. By contrast, the two-stage game for the models presented in this book is based on bargaining or negotiations rather than an auction format. One of the principal limitations or restrictions of the Grossman-Helpman model is that the distribution of power across all interest groups that offer any campaign contributions *are equal*.

While the profession has embraced the core Grossman-Helpman model, it has

been widely recognized that the model is inconsistent and in conflict with some basic empirical observations. To address these shortcomings, several authors have adjusted the basic Grossman-Helpman model. For example, Baldwin and Robert-Nicoud (2007) expand the model to explain the support that goes to declining industries by incorporating an asymmetry in the ability of interest groups to appropriate the benefits of lobbying. In an expanding industry policy-created rents attract new entry, while in declining industries this is not the case. Since sunk market-entry costs create quasi-rents, profits in declining industries can be raised without attracting entry as long as the level of quasi-rents does not raise above a normal rate of return on the sunk capital. The result is that losers lobby harder and government policy is adjusted accordingly.[13] Cadot, de Melo and Olarreaga (2004) take a related approach by introducing factor-market rivalry and input-output linkages, giving rise to counterlobbying. This yields results more in line with empirical observations--protection escalates with the degree of processing, rich countries protect agriculture more than industry, and poor countries do the reverse. Balaoing and Francois' (2006) empirical work emphasizes the importance of the strength of the downstream linkages for policy weights and redistributive policy.

A second field of a more recent vintage focuses on the intersection between mechanism design and political economy, emphasizing dynamics and limited information problems. Much of this literature provides new foundations for inefficient redistribution policies. Among the sources of inefficiency are: politicians seeking to mask or obfuscate

[13] A corollary to this reasoning accounts for the tendency of special interest groups to fight harder to avoid losses than they do to win new gains – as in Hillman (1982) and Swinnen and de Gorter (1993) using a political support function model.

transfers[14]; voters uninformed about the effects of policy and/or the behavior of politicians; the identification of losers and the amount lost is more certain than the identification of gainers and the amount gained, so symmetry and reversibility do not hold; politicians cannot commit to honor promises, so their future actions cannot be assured without outside enforcement; and voters and/or interest groups cannot commit to support politicians in the future.

In many of these formulations the key concepts are the inability of the government to commit, time inconsistency, and self-interest on the part of the government. These concepts allow Acemoglu, Golosov and Tsyvinski (2006) to isolate the potential misuse of resources and information by the government in its implementation of public policy. In an earlier paper Acemoglu (2003) argues that the state or government cannot write contracts that are enforceable. Hence, the Coase Theorem doesn't apply. In essence, groups controlling the government cannot commit to not using their power to renege on their promises. This presents a double commitment problem. If for whatever reason their power is relinquished, private parties cannot commit to making side payments to them in the future. Because of the lack of enforceability or credible commitments, efficiency considerations cannot be separated from distributional conflicts. Typically, contracts and explicit promises are enforced by the state.[15]

In Robinson and Verdier (2003), the commitment problem is solved through political patronage or employment in the public sector. Self-interested politicians face a commitment problem because policies which would induce people to vote for them are

[14] In the case of the US, see Rausser (1992) where the marginal benefit of masking tends to equate with its marginal cost.
[15] This leads to a potentially useful distinction between soft versus hard property rights.

not in their interest to implement ex post. Here, redistributive policies are conceptualized as an exchange between politicians and voters, with the issue of credibility being two-sided. In Acemoglu and Robinson (2001a), the key theme is again the commitment role of different political regimes. Two basic regimes are analyzed (democratic and non-democratic societies controlled by a rich elite), and the experience of Latin America and Western Europe is used to motivate a theory of political transitions.

An important issue addressed in this literature is the persistence of inefficient policies. Some of this literature addresses the general issue of policy persistence throught he usual "status quo" arguments. However, Coate and Morris (1999) have offered an alternative hypothesis to the usual proposition that policy persistence arises from powerful interest groups defending current policies. Inefficient policies or government failure, quite obviously, is defined as a policy sequence emerging in political equilibrium that can be pareto dominated. Such outcomes arise because voters forego support for policies which provide temporary efficiency benefits, anticipating that they will persist once they have been implemented. Unsurprisingly, Coate and Morris find that implementation of policies increases the political effectiveness of beneficiaries in lobbying. This model incorporates elections and voting, providing an account of how increased willingness to pay for a policy may influence policy outcomes. In a related model, Acemoglu and Robinson (2000) reject the working hypothesis that powerful interest groups block the introduction of new technologies in order to protect their economic rents. Their alternative hypothesis is that economic change (new technology) affects the distribution of political power. Agents who have political power and fear losing it (not their economic rents) will be those who have incentives to block reform.

Once again, the notion of credible commitments is critical, since powerful groups will have incentives to block economic change if there is no credible commitment to compensate them once economic changes have been implemented.

A more specific issue analyzed in this literature is the question why inefficient policies are used for income redistribution and why such policies have persisted. Coate and Morris (1995) argue that inefficient redistribution arises when politicians exploit the uncertainty of voters regarding which policies are efficient. Besley and Coate (1998) show how certain types of inefficiencies may arise because efficient policies would affect the identity of those in power, and emphasize the importance of commitment problems. Implicit in Dixit, Grossman and Helpman (1997) and Staiger and Tabellini (1987) is the argument that when the amount of redistribution is endogenous, politicians may want to commit to using inefficient methods in order to reduce total redistribution. In Dixit and Londregan (1995), the inability of politicians to commit to future transfers prevents efficient mobility. They argue that agents employed in specific transfers, e.g. farmers, who currently receive transfers realize that if they switch to other sectors they will lose those transfers. This framework explains why redistribution may lead to inefficiencies, but not why the form of redistribution is inefficient.

Acemoglu and Robinson (2001b) ask specifically why redistribution takes an inefficient form. The motivation for the paper is agricultural subsidization in developed countries. [16] Their theory of inefficient redistribution is based on two critical assumptions: first, that the government cannot commit today to future policies, as such

[16] Fundamentally, they find that price supports are pareto-inefficient since agricultural incomes could be maintained and everyone else made better off by a form of redistribution that did not involve resource misallocation. Most of the facts the authors cite on developed country agricultural policies are highly questionable.

policies will be determined by whoever has political power in the future; second, political power increases with group size, at least over some range. As a result of these two critical assumptions, inefficient redistribution may arise as a way to expand or maintain the size of the group in order to guarantee its future political power.

In summary, there is now a large literature on political economy. Various schools have developed, all of which have contributed to a better understanding of how political and economic forces and institutions affect each other and ultimately public policy-making. The literature is rapidly expanding. As this review has illustrated, the past few years have seen the publication of important new contributions. Our objective in this book, as elaborated in the next section, is to synthesize the political economy work focusing on the determinants and the role of power in setting public policies. We demonstrate how our power theoretic framework can be applied to a wide area of theoretical and empirical questions relating to important economic and policy issues.

1.4 Structure and Major Themes of the Book

In this book, our focus is largely on the political economic forces that emerge for a given governance structure. We follow Persson and Tabellini (2003) by specifying the governance structure as given or as an explanatory force, although we will analyze a few instances in which the governance structure is endogenous and thus not predetermined. Actual policy-making centers will have partial autonomy. In other words, the clearinghouse lens of the Chicago style political economic models will not be part of our maintained hypotheses.

The second major theme is to allow both public good policies and redistributive

policies in our core model formulations, as with the work of Persson and Tabellini (2000). We follow Rausser (1982) in recognizing the possibility that these two types of policies can be and often are jointly determined. Redistributive policies can often be implemented to counter or compensate for the distributional consequences of public good policies. We will treat as synonymous "public good policies" and "productive policies" or "PERT (political economic resource transactions) policies". PERT policies are those political economic policies that are intended to correct for institutional or market failures by reducing transaction cost of the private economic system. The net effect of such policies is to increase the "size of the pie." In contrast, "redistributive policies" will be treated as synonymous with "predatory policies" or "PEST (political economic seeking transfers) policies". These policies decrease the size of the potential economic pie via deadweight losses and wasteful political economic activities resulting from rent seeking of interest groups or policy-making authorities.

The remaining themes of the book are dictated by the desire to theoretically explain and quantify the distribution of political power. We will link the distribution of political power to the underlying constitutional structure, the degree of autonomy of the policy-making centers, and the influence and pressure brought to bear by specialized interests. In all instances, the models are designed to be empirically tractable, allowing hypotheses to be formally tested and refuted or supported based on the available evidence.

The balance of Part 1 of the book, Chapters 2-6, presents the foundations of political-economic bargaining and interest group analysis. In Chapter 2, the Nash Solution to the Bargaining Problem is presented. A bargaining game among organized

groups with conflicting interests offers the means to model the process of accommodation among policymakers and interest groups. Under certain conditions, the equilibrium of a political-economic system with government intervention is identified with the solution of the corresponding bargaining model. Given the Nash as axioms, it is shown that a unique solution can be derived. A number of alternative "strategic" formulations are reviewed and shown to generate solutions that are equivalent to the results of Nash's axiomatic specification for a two-person, two-stage bargaining problem.

The basic formulation and solution of the axiomatic bargaining problem are expanded in Chapter 3. First, the Nash bargaining solution with endogenous disagreement payoffs is presented, followed by Harsanyi's *n*-person generalization of Nash's solution. Harsanyi's solution is useful for our class of problems because in most real world political- economic situations there are more than two organized groups involved (including government). Finally, Harsanyi's model of the social power is presented.

The political power of the organized interest group derives from its capacity to affect the well-being of policymakers. The political power of organized interest groups is defined in Chapter 4 within the framework of a bargaining game in which uncoordinated but predictable responses of unorganized interest groups are taken into account. The analysis induces a governing criterion or political preference function whose maximization with respect to the policy instrument leads to a political-economic equilibrium, given the prevailing economic structure. It is shown that the political preference function is a weighted sum of the policymaker center(s) and organized interest

groups' policy objective function, where the weights are proportionate to the interest groups' political power over the policymaking center.

The normative properties of the resulting political-economic equilibrium are investigated in Chapter 5. The welfare implications are evaluated using the standard benefit-cost criterion. Despite the structure of the policy governance function, the resulting political-economic equilibrium is not necessarily efficient. The normative problem is investigated and efficiency conditions are established, stated in terms of the underlying economic and political power structures. The analysis considers social gains and losses due to the choice of policy instruments and the attendant political-economic transaction costs.

In Chapter 6 we examine several general features of political-economic dynamics. This exploration suggests that as a result of systematic positive feedback loops, political-economic systems tend to gravitate toward particular equilibria sustained by politically powerful status quo forces. To the extent that such equilibria are manifestly inefficient, reforms occur largely as a result of political crises involving major shifts in the underlying power structure. When the political power structure is fixed over time, the dynamic behavior of a political economy is exclusively determined by the economic structure. Accordingly, the analysis is carried out in the same fashion as the static political-economic analysis except for the economic structure, which now contains various dynamic relations, while the participants' policy-objective functions are expressed in terms of trajectories. Moreover, the political power structure exhibits certain dynamic behavioral regularities and thus can be endogenously determined.

Part 2 of the book, Chapters 7-9, expands the theoretical framework of Part 1 to investigate several important topics in political economy. After examining a multidimensional specification for political power, the role of ideology in policy formation is examined in Chapter 7. Ideologies, consisting of beliefs concerning the functioning of the system, and ethical social values play a crucial role in the determination of political power coefficients. In particular, ideological commitments assist group leaders in controlling the proclivity of participants to free ride. Ideology, along with organizational structures, also affects interest groups' policy objective functions and their relative political power. The relationship is explored between the organization of interest groups and the government, on the one hand, and policy formation, on the other hand.

Political power parameters are influenced by the allocation of real resources and lobbying by interest groups. The structural determinants of lobbying are identified in Chapter 8. The political power associated with the facility of each interest group depends on its allocation of labor resources. Lobbying absorbs labor resources and leads to redistributional gains but incurs a net social loss. The resulting social waste is shown to depend critically on the distribution of relative political power. Analysis of PEST policies is shown to have quite different implications than an analysis of the joint determination of both PEST and PERT policies. An alternative formulation introduces asymmetric information and admits the possibility of social gains resulting from labor resource allocations to lobbying efforts. The path of the political power structure depends critically upon whether lobbying is "information-revealing" or "information-concealing."

In Chapter 9, the relationship between constitutional rules and the political power parameters is explored. The most important conditioning elements of the political power coefficients are the underlying collective choice rules or the constitutional space that sets boundaries on the policy formation process. Prescriptive selection across alternative constitutional rules entails evaluating their associated expected utility and bargaining costs. Bargaining and organizing costs are specified to increase as the constitutional rules change from sole decision-maker rule to unanimity rule. Constitutional choices are determined by minimizing the expected transaction costs of implementation. A contract-theoretic approach is employed to explain the logic of the constitutional selection of alternative collective-choice rules.

Part 3 of the book, Chapters 10-19, presents conceptual applications to specific structures and policy instruments. Chapter 10 explores the political economy of commodity market intervention. While the dynamic performance of commodity markets may be unsatisfactory at times, the corresponding market equilibria are in principle efficient. Hence, political economic equilibrium-oriented government intervention is usually redistributive and is affected by politically powerful groups seeking transfers. The distributional and allocational implications of commodity market intervention are captured by examining tradeoffs among economic surpluses, political-economic transaction costs and rent-seeking costs. The roles of the economic forces and political power structures in determining chosen policy regimes and values of policy instruments are analyzed.

The political economy of public research and development is examined in Chapter 11. Private investment in R&D is often suboptimal because innovators are

unable to fully appropriate the social benefits of their innovation. Public funding of R&D is designed to remedy this and other sources of market failure. This phenomenon is especially significant in food and agriculture, which is the case study focus of this chapter. Funding decisions are made within a political-bureaucratic hierarchy, and the political-economic equilibrium constitutes a solution to multilevel nested bargaining games. The group configuration, the political power of the groups, and their policy objectives vary systematically across the policy-making hierarchy. The welfare implications of the political-economic equilibrium are analyzed with the aim of deriving possible organizational and constitutional prescriptions.

Chapters 10 and 11 treat commodity intervention policies and public research policies separately. For many governments throughout the world, however, these two sets of policies are jointly determined. In Chapter 12, we analyze governments as jointly determining the two policies within a political-economic framework. We examine the effect that the joint determination of these two types of policies has upon the functional relationship between the policies, given the political power theory framework. It is shown that the joint determination of the two types of policy instruments can lead to results which are both puzzling and subject to misinterpretation if the joint determination of the policies is not explicitly recognized.

In many political-economic models, the members of interest groups are presumed to be homogeneous, with no entry or exit. Chapter 13 demonstrates that to the extent that heterogeneity exists among members of a particular interest group, it is possible through creative mixes of policies or the introduction of new political technology to split interest groups as well as to form new coalitions of interest groups. Effectively, a potentially

winning group may tax itself in order to mitigate the losses suffered by another group whose political strength lies in its ability to veto a move from the status quo. In a prescriptive sense, a robust political and economic mix of policies can manage special interests whose influence might otherwise obstruct the public interest.

In Chapter 14, moving from trade protection to liberalization is shown to harm some groups, which can block moves from the status quo if they are sufficiently powerful. From a political-economic perspective, an understanding of pareto-fulfilling compensation forms the basis for assessing the likelihood of reform taking place. Given that losers from a policy change can delay, restrict, or even block the change, the pareto-fulfilling compensation represents a barrier to the trade reform process. In this chapter, we show that if the principles provided by the constitution are reflected in an institutional structure that promotes resource mobility or asset diversification, an interest group structure will emerge that has little if any incentive to acquire political power and exercise influence.

Chapter 15 presents the political-economic analysis of land reform. As suggested by political-economic dynamics, land reform is preceded by a major power shift involving the ascent of reform-minded political groups. The organization, motivation, and power bases of groups constituting the political economy of land reform are examined. Land reform consists of major changes in the structure of property rights in land and the stringent restriction of tenurial contracts. The efficiency of a land-reform program depends on both legislation and implementation, with the latter generally the responsibility of local bureaucrats. The ensuing political-economic equilibrium is consequently reconceived as a solution to a two-level, nested bargaining game. Land

reform is essentially redistributive, inducing major changes in the contractual equilibrium. The shift in the equilibrium resource allocation, though hindered by observability problems, is assessed and evaluated.

The case study in Chapter 16 explores the performance of a political economy of natural resource policy processes with a focus on water resource systems. The political configuration consists of two policymaking centers: a central water supply project and a governmental fiscal authority; it also includes n water districts, each acting as an organized interest group whose policy objective is the maximization of the district's net incomes. For simplicity, the analysis focuses on steady states in the water-resource system. It is found that due to the narrow rationality of water districts, the political-economic equilibrium is inefficient. Politically set water prices are too low and water utilization quotas are too liberal, so that either an excessive amount of land is lost through water logging or groundwater aquifers are overutilized.

Chapter 17 turns to the active involvement of governments in setting quality standards, including labeling, environmental, social, and safety and/or risk tolerance requirements. A political power and lobbying perspective (Chapter 8) provides the lens for understanding how interest groups attempt to influence the government in the implementation of such standards. A general model of the political economy of public standards is presented, focusing on the interest group landscape. Both trade and economic development implications are investigated. Perhaps most importantly, a dynamic model (Chapter 6) of government strategic interactions on setting standards that influence intercountry trade is developed.

In Chapter 18, we present a bargaining-theoretic model of an important dilemma inherent in any major political-economic transition process. While swiftly removing the old order is a necessary condition for a successful transition, it also leads to widespread social disruption that may threaten the viability of the reform process. This issue lies at the heart of much of the "big bang/gradualism" debate in the literature. We argue that this dichotomy is overly simplistic. In particular, the debate as currently framed has failed to capture the significance of interest group competition. Interest group competition matters precisely because the political environment during transition is fluid and malleable and is thus open to manipulation by interests seeking to mold post-transition governance structures to best serve themselves. As different economic and political structures will give rise to different incentives within these interest groups, one might expect that transition strategies will differ across societies. We show this to be the case with two interesting examples. First, we consider how transition strategies differ in open and closed economies. We are able to derive a number of results, the most striking of which identifies conditions under which closed economies outperform open economies in terms of social welfare. Our second set of scenarios examines Krueger's (1993) "vicious and virtuous circles" theory of policy reform. We identify conditions under which societies with political systems that reward rent-seeking behavior may enjoy higher social welfare than those with political systems that promote public good policies.

In Chapter 19, we emphasize the relationship between the policy-making process and the underlying constitutional structure. The constitutional structure is specified in terms of the rules of agenda setting and decision making and how this effects the distribution of power across special interests. The conceptual formulation in this chapter

is motivated by the policy-making process in the European Union and the role of the European Commission in this process. A structural model is presented linking the underlying rules for agenda setting and policy making to the actual distribution of political power.

In Part 4, Chapters 20-24, we present various econometric formulations of political-economic power systems introduced in Parts 1 through 3. Chapter 20 presents the conditions required for econometric estimation of the distribution of political power. To be validated, a theory must successfully pass stringent qualification tests in which the behavioral implications of the theory are compared to actual observations on the selection and setting of the policy instruments. The key concepts of the underlying political-economic theory are not directly observable, and thus refutability of the theory requires creative empirical formulations. Solutions to the non-observability of a number of crucial variables are developed, identification rules are derived, and prediction validation tests are presented.

In Chapter 21, the econometric estimation of the political power structure is determined for the Israeli governmental intervention in its dairy industry in the 1960s and 1970s. The policy instruments include import quotas, farm prices for raw milk, and consumer retail prices. Moreover, differential subsidy support across various dairy products is also recognized in the constructed econometric model. The empirical results reveal a crucial principal agency problem between interest groups (principal) and their political representation (agent).

In Chapter 22, the application of political-econometric analysis is demonstrated with a case study of the U.S commodity market intervention. The political governance

structure is specified representing the relative power of consumers, taxpayers, producers who participate in the policy programs, and producers who voluntarily choose not to participate. Historical observations on the four policy instruments of the US wheat program (target prices, support prices, diversion requirement, and diversion payments), along with the empirically estimated economic structure are used to estimate the power of the various interests. Based on the estimated political governance structure, flexible policy rules tied to market conditions are shown to improve economic welfare. Specifically, it is shown that flexible policy rules outperform historic policy instrument settings (determined once every four years) across a wide spectrum of economic conditions.

Each of the estimated power coefficients presented in Chapters 20 through 22 are measured at the political economic equilibrium as point estimates. In Chapter 23, we present a methodology for generating the sampling standard errors for each of the estimated power coefficients. The statistical bootstrapping methodology presented here allows conventional tests of hypotheses regarding the significance of individual power coefficients. This empirical methodology is applied to public policy in Japan, particularly governmental interventions in the rice commodity system.

In Chapter 24, we empirically revisit the question of the joint determination of redistributive (PESTs) and public good policies (PERTs). Instead of estimating the power coefficients in a political preference function, this chapter examines the policy reaction functions for both types of policies. We also examine the relationship between the setting of such policies and various institutional measures, including political and civil freedoms. As in the work of Persson and Tabellini (2003), we focus on the direct or

reduced form link between these institutions and measures of redistributive and public good policies. This examination is based on time series data across 37 countries.

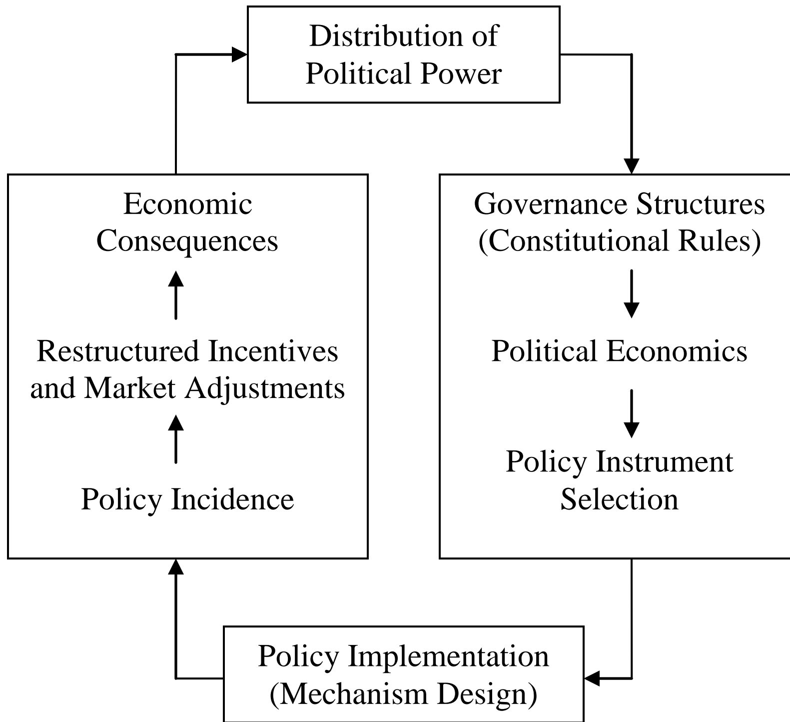

Figure 1.1: The Policy-making Process and Economic Consequences