INTEREST GROUPS AND TRADE POLICY

GENE M. GROSSMAN
ELHANAN HELPMAN

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Gene M. Grossman
and
Elhanan Helpman

Princeton University Press
Princeton and Oxford

Published by
Princeton University Press
41 William Street, Princeton
New Jersey 08540

In the United Kingdom:
Princeton University Press
3 Market Place,
Woodstock, Oxfordshire OX20 1SY

Full-Service Production:
NOVA Graphic Services, Ft. Washington, PA

Library of Congress Cataloging-in-Publication Data

Interest groups and trade policy / Gene M. Grossman and Elhanan Helpman
p. cm.
Includes bibliographical references and index.
ISBN 0-691-09596-5 (alk. paper)—ISBN 0-691-09597-3 (pbk. alk. paper)
1. Commercial policy. 2. Pressure groups. 3. United States—Commercial policy. 4. Pressure group—United States. I. Grossman, Gene M. II. Helpman, Elhanan.

HF1411 .I414 2002
382'.3'0973—dc21 2001055190

British Library Cataloging-in-Publication Data is available

This book has been composed in New Baskerville

Printed on acid-free paper. ∞

www.puppress.princeton.edu

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

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Introduction

Interest groups play a prominent political role in all democratic societies. Their activities are many and varied. They lobby politicians. They educate the public about issues and candidates. They participate in demonstrations. They contribute to campaigns. And they encourage participation in elections, especially by their members and others sympathetic to their cause. By these means and more, the groups seek to influence the political process in ways that further the interests of their members. Sometimes their actions also serve the general public. Other times, they do not.

By all indications, the participation of interest groups in the policy process has been growing by leaps and bounds in the United States and elsewhere. The number of organizations that engage representatives in Washington, Brussels, and other capital cities has exploded in recent years. So too has the number of registered lobbyists. Spending on lobbying has grown precipitously in the United States, as has the total amount of campaign contributions by Political Action Committees (PACs). Political advertising appears to be on the rise. And the media report ever more frequently on the alleged influence of special interest groups and on the need for campaign reform. It seems critical that economists and political scientists come to understand better the role that interest groups play in the policy-making process. This has been the main focus of our research for several years, as it has been for many others.

This book collects eight of our previously published papers. We are reprinting these papers to provide a companion to our recently published treatise, *Special Interest Politics* (MIT Press, 2001). Whereas *Special Interest Politics* considers the various mechanisms by which interest groups influence policy decisions, this collection mostly contains applications of the theory to an important policy area. More specifically, five of the articles investigate how trade policies are determined in response to competing political pressures, and how private and public actors behave in the light of political realities. We envision the two books together providing complementary material for graduate-level courses in political science and political economics, while this collection of articles can also serve as supplementary reading in graduate courses on international trade theory.

We have three objectives in the remainder of this introductory chapter. First, we aim to provide an overview of the contents of *Special Interest Politics* and to explain how the current collection of articles relates to the material in the monograph. Second, we will describe the questions that are addressed in the articles reprinted here and preview some of the main findings. Finally, we will describe some recent empirical studies that make use of our approaches and argue that the abstract theories we have developed find support in the conduct of trade policy.

1 Special Interest Politics

As noted above, our monograph *Special Interest Politics* examines the various mechanisms by which interest groups affect policy outcomes. We focus on three distinct roles that interest groups and their members play in the political process. Groups act as voters, as purveyors of information, and as contributors to political campaigns. These various roles define the three parts of our book.

After an introductory chapter that provides data on the activities of special interest groups and that previews the book's content, we begin the substantive analysis in *Special Interest Politics* with a discussion of voting and elections. We start with a selective review of the voting literature, much of which ascribes little or no role to special interests. There are three reasons why certain groups of like-minded voters—even ones who are not organized and thus take no collective action—may fare especially well in representative democracies. First, groups differ in their participation rates in elections. We argue that voter turnout is best explained as a group social norm, and discuss the reasons why such a norm may be more effective in promoting participation in certain groups of voters than in others. Second, members of different interest groups have access to different amounts of information about the candidates in an election and the policy issues to be resolved. We show that in some settings, the policies implemented by elected candidates will favor better-informed groups of voters, while in other settings they may not. Finally, interest groups differ in their partisanship. A partisan voter is one who has a strong allegiance to a particular political party based on its ideological or fixed positions, and who is likely to vote for that party unless its rival promises a much more favorable platform on the new and pliable issues being contested in the election. Groups with few partisan voters fare especially well in electoral contests, because the parties either concede or take for granted the votes from groups with many partisan members while they compete vigorously for support among groups with large fractions of swing voters.

Part II of *Special Interest Politics* focuses on the use of information by organized special interest groups. There are at least two reasons why organized groups may be well placed to deal in information. First, the members of an interest group are likely to gain expertise about many of the policy matters that concern them in the course of their everyday participation in an industry, profession, or hobby. For example, doctors and hospital administrators are bound to know more about the details of the issues to do with health care reform than do most politicians, let alone the typical members of the voting public. Second, interest group members can pool their resources to gather information that bears on their collective interests. Since information has the properties of a public good—once collected, it can be used by many without diminishing its value—there are good reasons for members of organized groups to share the fixed costs of gathering it.

Interest groups provide information to both politicians and voters, so we examine educational activities aimed at each of these audiences. In a chapter on "lobbying" we study the attempts by one or more knowledgeable groups to educate a less well-informed politician about the policy environment. The setting for this analysis is one in which the interests of the groups and the politician are imperfectly aligned. We model the act of lobbying as "cheap talk." That is, the lobbyists can convey information costlessly to a politician who has no independent means to verify their claims. A sophisticated politician will discount what she hears in such circumstances unless the self-interested lobbyists can offer persuasive arguments. We evaluate the persuasiveness of a lobbyist's arguments by considering the incentives he has to speak honestly when he expects his words to be taken at face value. With cheap talk, a lobbyist representing a single interest group can communicate some information about the policy environment, but the communication is bound to contain less detail than what the interest group actually knows. With several lobbying groups competing for the politician's favor, there is the possibility that the policy maker can use each group as a foil for the others. Surprisingly, a lobby group may fare better when there is another with opposing views to discipline its remarks than when its claims to the politician go unchallenged.

A second chapter in Part II of *Special Interest Politics* investigates situations in which lobbying is costly. Lobbying may be costly either because groups incur unavoidable expenses when gathering and presenting information, or because the groups choose to bear avoidable costs as a way to lend credibility to their arguments. The economic literature on "signaling" provides valuable insights that shed light on costly lobbying. Lobbying is more effective when it is costly than when talk is cheap, because the groups use their willingness to bear the cost as an indication that the conditions truly warrant a significant policy response. And with freedom to vary the size of a lobbying campaign, a group is able to convey much more information to the politician than is possible when the cost of lobbying is fixed. We also examine the idea that politicians may impose access fees (in the form of campaign contributions) as an additional cost of lobbying. Politicians may charge for access for one of three reasons. They may need resources to run their election campaigns and be willing to sacrifice some valuable information in order to obtain these funds. Or they may view their time as a scarce resource and wish to limit visits from groups that have relatively little valuable information to share. Or they may use the access charges as a way to screen lobbyists in situations in which they are unsure about the biases and preferences of the various represented groups.

In Part II of *Special Interest Politics,* we also examine the efforts by interest groups to educate voters. Interest groups attempt to inform the public in order to win greater sympathy for their policy views. They also seek to educate their members, so that these members will be better able to cast their ballots in support of the group's common cause. But, as with lobbying, the statements from an interest group cannot be taken by voters at face value. Before the candidates have announced their positions, the interest groups have an incentive to exaggerate in order to induce voters to believe that the group's own preferred policies are socially desirable ones. If they are successful in doing so, the competition for votes between candidates will lead them to adopt positions more to the group's liking. Even after the candidates have staked their positions, a group has reason to exaggerate its claims, because at this stage it wants to maximize the prospect of victory for the candidate or party whose position is more favorable to its cause. An organized interest group typically will face a credibility problem even in its efforts to communicate with its own members, because the organization will want to convince as many of these individuals as possible to vote for the candidate whose platform best serves the average member, whereas some of the members may have partisan preferences that incline them to vote differently.

The third part of *Special Interest Politics* deals with campaign giving by special interest groups. In addition to buying access, groups may use their contributions as a means to influence policy makers' decisions and to improve the electoral prospects for their favorite candidates and parties. We consider the incentives that interest groups have to purchase influence and to invest in their preferred candidates in a variety of political settings. We also investigate what happens when several or many interest groups vie for influence and favors.

We begin with influence seeking by a single interest group. Such a group may be able to communicate to a policy maker its willingness to pay for different policy options. A potential contributor confronts the politician with a menu of offers. These offers, which need not be explicit, associate different sizes of contribution with different policy alternatives. Politicians value contributions for their potential usefulness in financing campaigns, but many also wish to enact policies that benefit the public in order to improve their popularity among the well informed or to fulfill their sense of social responsibility. How should the interest group structure its offers? How does the politician trade off the desire for contributions against the desire to do good? What policies result from an optimal schedule of offers by the interest group and an optimal response by the politician? These are the questions that are the subject of our analysis.

We proceed to examine competition between interest groups. The form of such competition resembles an economic problem of "common agency." In a principal–agent relationship, the principal must design incentives for the agent to induce her to take actions that reflect the principal's interests. In a situation of common agency, an act by an agent affects the well-being of several principals simultaneously. Then they each must offer incentives, and the agent must balance the benefit from weighing the interest of some more heavily than others. Similarly, in pressure politics, the politician takes policy actions that will affect several interest groups, as well as the general public. The groups offer contributions as a way to induce the politician to favor their interests relative to those of the others. An equilibrium in a game of common agency is a set of incentive schedules, one for each principal, with the property that each schedule is best for the principal that offers it, given the schedules of the others and the anticipated optimal response by the agent. An equilibrium in our contribution game also takes this form. Each group designs an optimal response to the anticipated offers of other groups, recognizing that the politician ultimately will choose the policy that maximizes her own political welfare.

The quest for influence becomes more complicated when decisions are taken by the members of a legislative body who are not subject to strong party discipline. In Part III of *Special Interest Politics,* we extend the common agency approach to allow for situations in which there is no unified party in power. After describing some alternatives, we model a legislature that will choose by majority rule either a policy proposed by an agenda setter or a given status quo. The agenda setter is a member of the body who has the authority to propose legislation. For example, the members of the Senate Finance Committee have such authority in the U.S. Senate for policy areas that fall under its jurisdiction. The competition for influence involves bids by the interest groups for consideration by the agenda setter, and further bids by these groups for the votes of the elected representatives on the floor of the chamber. By the time a bill has been proposed, some groups may wish to see it passed and will offer contributions to those who are willing to vote in favor, while others prefer the status quo and seek the bill's defeat. But those on the side that ultimately will win do not wish to pay for more votes than are needed to ensure their political victory. And those who ultimately will lose do not wish to buy votes that will do them no good. So the game has an interesting structure in which it often will be necessary for the interest groups to randomize their strategies. This randomization makes uncertain the prospects of passage for any given bill. The agenda setter will need to factor in this uncertainty when deciding what bill to propose, and the interest groups will need to consider it when deciding how they might choose to influence the agenda setter.

The final chapter of *Special Interest Politics* investigates the incentives for interest group giving during an election campaign. The interest groups may give to the parties in order to influence their policy positions. They may also contribute to a party without strings attached to further its electoral prospects. The parties choose their platforms to woo the well-informed voters. But they also take into account the contribution offers, because the funds can be used for campaign spending that can attract impressionable voters. An equilibrium in this case is a set of contribution schedules that are best responses for the interest groups to the offers of the others, and a pair of platforms for each party that maximizes its chance of being elected in view of the contribution offers it faces and the platform it anticipates from its rival. We derive a number of predictions about the pattern of giving by interest groups to the two political parties, about how unlikely it is that groups will perceive an electoral motive for giving, and about the possibility of a bandwagon in which many groups give generously to a certain party because they expect that others will do likewise.

2 Articles in this Collection

The articles reprinted here fall into one of two categories. The first part of the book contains papers that show how interest groups can use certain tools at their disposal to influence and shape the policy process. These are papers that formed the basis for some of the modeling in *Special Interest Politics* and, in some cases, provide more detail than it was possible to include in the monograph. The second part of the book contains applications of the theory to issues of international economic policy. These papers show how the tools described in Part I and in *Special Interest Politics* can be put to productive use. Of course, the results in these articles are of substantive interest in their own right, inasmuch as they offer predictions about the structure of trade protection, the outcome of trade negotiations, and the response of trade flows and direct foreign investment to politically motivated trade policies.

2.1 Part I: Methodology

In "Common Agency and Coordination: General Theory and Application to Government Policy Making" (Chapter 1), we collaborated with Avinash Dixit to extend the theory of common agency under complete information to settings with nontransferable utilities. As we noted above, the theory of common agency provides a useful tool for examining the competition between interest groups for political influence. The theory—as developed by Bernheim and Whinston (1986)—assumes that monetary transfers enter additively into the utility functions of the agent and all principals. In other words, the players all have constant marginal utilities of income. This assumption is quite reasonable for many of the industrial organization applications that Bernheim and Whinston had in mind. However, it is a problematic one for key issues in redistributive politics. Such politics involves the determination of taxes and transfers that are bound to have general equilibrium implications that may change the marginal utilities of income in non-negligible ways.

Our extension of the theory retains much of the flavor of the Bernheim-Whinston analysis. Specifically, we imagine a setting of perfect information in which an agent must take some actions that will bear on the welfare of several principals. Each principal designs a payment schedule to induce the agent to act on his behalf. The schedules indicate non-negative transfers that the principals will pay to the agent for each action the agent might take. An equilibrium is a set of payment schedules that are mutual best responses when the principals expect the agent to take her utility maximizing action in response to all the offers. We depart from Bernheim and

Whinston only in assuming that the utility functions of the principals and the agent are general, nonlinear functions of the actions and the transfers.

In this setting, we are able to establish many of the same results as Bernheim and Whinston. Our characterization of equilibrium is similar to theirs. Also, we can show that a principal's best response set contains a payment schedule that is "truthful" in the sense that Bernheim and Whinston used the term, and that we have designated as "compensating" in *Special Interest Politics*. When all principals employ incentive schedules that are compensating, the resulting equilibrium is efficient from the point of view of the set of principals and the agent taken together.

The application to government policy making comes from assuming that the principal is a politician whose welfare depends on her policy actions and on the contributions she receives, and the principals are interest groups whose welfare depends on the policies and their pay-outs. This specification forms the basis for our analysis in Chapters 7 and 8 of *Special Interest Politics*. In the article with Dixit, we derived an important result for the case in which the politician's welfare depends on the policies only through their effects on the welfare of the members of the polity. As long as the politician's welfare increases with the utility of every individual in the society, a truthful (or compensating) equilibrium of the contribution game must be efficient for society as a whole. In other words, there is no other set of campaign contributions and policies different from those in a truthful equilibrium that would make the politician or some member of the public better off than in the equilibrium, without making another worse off. An immediate implication is that if the government can effect income redistribution with lump-sum transfers, it will not be induced to use distorting instruments such as production subsidies, consumption taxes, or trade policies in a political equilibrium. When the government does use these instruments, it means either that lump-sum transfers are infeasible or that the political rules have set to eliminate such transfers as a policy option.

Our paper on "Electoral Competition and Special Interest Politics" (Chapter 2) presents the original ideas that were subsequently modified and refined in Chapter 10 in *Special Interest Politics*. In the paper, we develop a model of the interactions between voters, interest groups, and political parties. The interest groups offer contributions to the parties in order to influence their policy positions and perhaps to help their preferred party to gain more votes. The parties set their positions on a set of pliable policy issues with an eye to attracting contributions from the interest groups and to capturing the votes of informed voters. In this paper, we assume that their goal is to maximize their vote tally. Finally, there are informed voters who cast their ballots to maximize their expected utility, and impressionable voters who respond to campaign spending by the parties.

In the model, the interest groups confront the political parties with contribution schedules, each one linking the choices of platforms on the pliable issues to potential campaign gifts. In other words, we treat the relationship between the parties and the interest groups as one of common agency. The organizations represent groups of voters who share common preferences over the pliable policy issues but may have differing opinions about another set of fixed policies. If, in equilibrium, the interest group contributes to a party exactly what is needed to induce it to choose a particular platform, we say that the group has exercised only an "influence motive" for campaign giving. If, instead, it contributes something more than this minimum, we say that it has also exercised an "electoral motive" for giving. One of the main concerns of the paper is to understand when each of these motives is operative.

This first attempt to model the complete set of interactions between interest groups, political parties, and voters yields some interesting conclusions. First, we derive conditions under which the parties behave in equilibrium as if they were maximizing an objective function that includes the total amount of campaign contributions and the aggregate welfare of society as additive arguments. This justifies the reduced-form welfare function for the politician that we have used in many of our papers (and in the monograph) in cases where we do not formally model the voters and the election. Second, we identify the determinants of the relative weights that the politicians give to campaign contributions and aggregate welfare in their political objective functions. The weight that a party places on contributions is greater, the greater is the fraction of impressionable voters, the more effective is campaign spending in attracting these voters, the more diverse are the opinions of the informed voters about the relative desirability of the parties' fixed positions, and the more popular is a party's set of fixed positions relative to those of its rival.

When many interest groups compete for influence, there is little incentive for them to exercise an electoral motive for giving. In fact, at most one interest group that prefers a given party will have an incentive to give to it more than what is needed to influence its platform. In the equilibrium, most groups exercise only an influence motive and give to both political parties. The groups give more to the party that they expect to win a majority of the votes. But since the groups cannot coordinate their campaign giving, it is possible that their collective actions will make a winner of the party that is the ex ante underdog. Then their independent decisions to target their most generous giving to the expected majority winner become a self-fulfilling prophecy.

In "Competing for Endorsements" (Chapter 3), we consider the use of information by an interest group as a tool for political influence. We imagine a two-party election in which the parties announce policy positions but the voters do not understand the pliable issue well enough to know for sure which of the positions would provide them with greater welfare. A subset of the voters are members of an interest group, and the organization of the group knows how the members' common interest in the pliable policy would be served by the different policy options. To convey information to its members, the interest group can "endorse" one of the parties as its favorite in the election.

We assume that the political parties anticipate the organization's actions when setting their platforms. In some circumstances, an endorsement by the interest group would win votes for the named party. Then the parties will cater to the interest group in the hopes of winning its endorsement. By inducing competition for the endorsement, an interest group sometimes can tilt the political process in favor of its members.

Endorsements are not always effective as a tool for influence. If, for example, the average ideal policy in the voting population of interest group members and non-members is independent of the unknown (to the voters) state of the world, then the parties' platforms with endorsements will be the same as when endorsements are not possible. In such circumstances, a party that caters to the interest group by choosing a position more to its liking indeed will be successful in capturing the group's endorsement. The endorsement will lead members of the group to realize that the party's position is closer to their ideal, and so some of them will shift their votes to the party that has catered. But, the voters who are not members of the interest group will recognize that what is good for the group members is not on average good for them. So an endorsement by the interest group would cause a loss of votes among those who are not group members. In the benchmark case under discussion, an endorsement has no effect on the total vote count. Then there is no reason for the parties to compete for the endorsement.

Much of our paper focuses on a case in which the ideal pliable policy for a typical voter who is not a member of the interest group is statistically independent of the group's ideal policy. In this case, the members of an interest group do benefit from the ability of their organization to issue an endorsement, as the political parties cater to the group in an effort to win its verbal support. For a range of values of the underlying random variable that describes the voters' uncertainty, the parties both announce the interest group's ideal pliable policy as their position on this issue, and interest group members are able to surmise in equilibrium exactly what policy is best for them. If the organization's information indicates an extreme policy option as the one that is best for the members of the interest group, the parties will not offer the members their ideal policy. Still, the policy outcome will be better for the group members (and worse for the average voter who is not a member of the interest group) than the one that would result if the organization had no chance to issue an endorsement.

The endorsement is but one example of an interest group using its superior information to further its political ends. In Chapter 6 of *Special Interest Politics* we study a whole range of messages that an interest group might send to its members and to other voters. These messages might contain more detail than a simple "vote for *A*" or "vote for *B*," if for example they are conveyed via issue advertising or by more lengthy reports in newsletters and trade publications. In the monograph, we consider both situations in which the group can issue its report before the parties have announced their positions and situations—as with an endorsement—in which the message comes after the parties' positions are known. Surprisingly, the most information that can be credibly communicated by an interest group after the parties' positions have been announced is equivalent to what could be conveyed by its choosing one of two one-word messages. Thus, an endorsement does as well as a much lengthier report in educating voters, once the credibility constraints are taken into account.

2.2 Part II: Applications to Trade Policy

In the papers reprinted in Part I, and especially in our monograph *Special Interest Politics*, we have developed a set of tools that can be used for analyzing the political influence of special interest groups. Of course, the value of these tools can only be judged from their usefulness in specific applications. In Part II, we have collected five papers that address issues regarding the formation of foreign economic policy. Here, the models yield specific predictions that can be subjected to empirical scrutiny.

"Protection for Sale" (Chapter 4) was our first foray into political economics. We were motivated to write this paper by our observation that so many of the prescriptions of normative trade theory bear little resemblance to what governments actually do in practice. While we were hardly the first to make this observation, we were dissatisfied with the modeling of those who preceded us, which typically treated the political process as a "black box." Our approach was to posit the existence of politicians who value both campaign contributions and aggregate welfare and to investigate their interaction in a common agency relationship with groups representing industry interests.

The application of a political model to trade policy (or any other specific issue) requires a detailed specification of the economic environment. Chapter 4 considers a small open economy with many industries and many factors. In one sector, output is produced from labor alone, with constant returns to scale. In all other industries, output is produced by labor and a sector-specific input. A set of organized groups represent the special interests of the owners of some (perhaps all) of these specific factors. Each group offers a contribution schedule to the policy maker in an effort to influence her choice of import tariffs and export subsidies.

Our model yields several testable predictions about the cross-sectional structure of trade protection. The political equilibrium is characterized by positive rates of protection for all industries that are represented by organized groups and negative protection for those that have no political representation. Rates of protection are higher for organized industries the greater is the value placed by the policy maker on political contributions and the smaller is the fraction of the population that is represented by some organized group or another. Protection will be particularly high in those industries with a high ratio of domestic output to trade volume and in those in which trade flows are relatively unresponsive to the domestic price. This pattern of protection reflects the policy maker's effort to obtain a given amount of campaign financing at the least social cost.

Although all organized industries succeed in buying protection, it does not follow that all interest groups must benefit from their pursuit of political influence. A case in point is the situation that arises when every individual belongs to an organized group. Then the resource allocation in the political equilibrium mirrors that under free trade. But the groups achieve this political stalemate only by making costly contributions to the policy maker, which means that every individual (except the politician) is worse off in equilibrium than he or she would be if contributions were impossible. The organized groups pay tribute to the policy maker to induce a set of neutral trade policies, because the outcome would be still worse for them if they were to refrain from such giving.

In "Trade Wars and Trade Talks" (Chapter 5) we extend the analysis to a setting with two large countries. Here, domestic politics interact with foreign relations. In each country, the policy maker receives offers of contributions from domestic special interests. These offers interact with her concern for aggregate welfare to induce preferences over vectors of tariffs and export subsidies. In a "trade war," the policy makers set their nations' trade policies noncooperatively, each maximizing a political objective function while taking as given the anticipated behavior of the other. When there are "trade talks," the policies are chosen cooperatively so as to be jointly efficient for the pair of politicians. We assume that the interest groups know whether policies will be set noncooperatively or cooperatively, and design their contribution schedules accordingly.

In a noncooperative policy equilibrium, the formula for the trade policy that applies to a given industry has two components. One component is the same as in Chapter 4; it reflects a balancing of the political benefits and economic costs perceived by the policy maker when she extends protection to a particular industry, given the international price of the industry's output. The other component is the inverse of the elasticity of the foreign country's import demand or export supply. This term is well known from the normative theory of trade, as it represents the "optimal tariff" for a large country with a benevolent government. The model predicts a rate of protection for each industry that is simply the sum of the protection that would result with fixed terms of trade from political competition in the country and the policy that optimally exploits the country's monopoly power in the world market. We predict larger tariffs and smaller export taxes in politically organized industries than would result from a trade war between welfare-maximizing governments.

Our analysis suggests a "political" explanation for trade negotiations. Typically, multilateral negotiations are seen as a response to the economic inefficiencies that result when countries exploit their monopoly power in world trade. But in our model, the politicians who conduct trade talks are only partly concerned with aggregate welfare. They are keen to negotiate nonetheless, because the noncooperative equilibrium is politically inefficient for them; that is, it is possible to find alternative trade policies to the ones that result from a trade war with the property that they yield higher political welfare to at least one policy maker while causing no harm to the other. When the policy makers enter a negotiation with preferences that have been shaped by domestic interest groups, the outcome in each sector reflects the relative political power of the industry groups in the two countries. An interest group is powerful in our sense if it could achieve a high level of protection in the political equilibrium of a small economy.

"Politics and Trade Policy" (Chapter 6) presents a comparison of five alternative approaches to modeling tariff formation. The alternatives include our own model of common agency, along with Mayer's (1984) model of policy formation by direct democracy, Hillman's (1982) specification of a "political support function," Findlay and Wellisz's (1982) specification of a "tariff-formation function," and Magee, Brock, and Young's (1989) model of electorally motivated campaign contributions. To effect a meaningful comparison, the various formulations of the political process have been grafted to a common specification of the economy. The economic model is the same as the one we used in Chapter 4; it posits a small country with many industries, all but one of which produce output with labor and an industry-specific factor of production.

In a direct democracy, policies are determined by the preferences of the median voter. The voting equilibrium affords positive protection to all industries with median holdings of the specific input in excess of the average holding and negative protection to industries where the opposite is true. With many sectors and concentrated factor ownership, this will imply negative protection for most if not all industries. Hillman's political support function (based on Stigler [1971], and Peltzman [1976]) is a reduced form for the policy maker's political well-being. It includes the profits of some or all industries and aggregate welfare as arguments. In maximizing such a function, the politician trades off the extra profits that can be awarded to a supportive industry via protectionist policies against the loss of aggregate welfare that results from the price distortion. The model predicts a positive level of protection for all industries that receive a positive weight in the politician's political support function, and a zero rate of protection for all industries that receive no weight in this function.

The tariff-formation approach posits a reduced-form relationship between the protection afforded to an industry and the resources that are used in lobbying for and against protection. The lobbying expenditures in turn are the solution to a noncooperative game between interest groups that favor and oppose protection. A positive rate of protection is provided in equilibrium to industries in which the marginal rate of substitution between the spending of pro- and anti-protection forces in the tariff-formation function exceeds one. In our model with industry-specific factors, this means positive protection for all organized industries and negative protection for those that are not organized.

The Magee et al. model of electoral competition fits less easily into the common framework of the others. In their model, two parties vie for election. They assume that one party is aligned with an interest group that favors an import tariff, while the other is aligned with a group that prefers an export subsidy. The parties first commit to policy positions, then the interest groups can contribute to their political partner to alter the election odds. The probability of election for a party increases with the amount of contributions it collects relative to the amount amassed by its rival. This model generates some counterfactual predictions, which are discussed in Chapter 6.

The political viability of bilateral trade treaties is the subject of "The Politics of Free Trade Agreements" (Chapter 7). We consider agreements that would conform to Article XXIV of the General Agreement on Tariffs and Trade, which allows preferential policies only in cases in which the participants eliminate substantially all barriers to their bilateral trade. A free trade agreement (FTA) presumably would be favored by some industry interest groups and opposed by others. We ask, Will two small countries be able to conclude such an agreement, if the agreement must be acceptable to the policy maker in each country and if the policy makers are subject to political pressures from their organized interest groups?

We begin by considering the viability of an FTA with no excluded sectors. If the agreement comes to pass, the countries will allow duty-free access to their markets for all goods emanating from their FTA partner that satisfy rules of origin. Meanwhile, they continue to levy their status quo tariffs on imports from outside the bloc. The alternative to the agreement is continued application of the status quo tariffs on a most-favored-nation (MFN) basis.

The distinctive feature of this political environment is the binary nature of the policy choice. Either the policy maker takes a stance in favor of the agreement, or else she opposes it. We define a pressured stance as one that a policy maker adopts in response to offers of campaign contributions. If a policy maker expects the other country's government to oppose the agreement, then she will take whatever position maximizes her contributions, because her own stance will not alter the fate of the proposal. In these circumstances, the interest groups would be foolish to offer any positive contributions. The more interesting case arises when a policy maker expects the other government to support an agreement. Then an equilibrium exists in which the policy maker takes a pressured stance in favor of the FTA if and only if a weighted sum of aggregate welfare and the welfare of all industry interest groups (including those in favor of the agreement and those opposed to it) would be higher under an FTA than in the status quo.

Next we examine how the properties of the status quo trade equilibrium affect the likelihood that both policy makers would support an agreement in political equilibrium. First we show that if one of the potential parties to the FTA has uniformly higher tariff rates than the other, the proposed agreement stands no chance of being approved. In the high tariff country, an FTA would cause a loss of tariff revenue without creating any offsetting benefit to domestic interest groups. Then the policy maker would surely oppose the proposal, since it would produce an aggregate welfare loss and there would be no pressures for it.

When each country has lower tariffs in some industries and higher tariffs in others, there is some chance that an FTA could be successfully negotiated. The organized groups representing low tariff industries would support the proposal, because an FTA would allow them to export within the bloc under preferential terms. Since internal prices initially are higher in the FTA partner country than at home, the agreement actually would enhance protection for these producers. We find that a bilateral agreement can be viable if and only if the status quo trade between the potential partners is sufficiently "balanced." The acceptability of an FTA to both policy makers requires a sufficient volume of trade diversion, which means that agreements are most likely to be viable when they are socially harmful.

In the last section of Chapter 7, we examine the prospects for an agreement that excludes a small number of industries. Such exclusions exist in many bilateral agreements, and similar effects are achieved by long phase-in periods for certain industries. We show that exclusions can make an agreement politically viable that otherwise would not be. The common agency approach also yields predictions about which sectors will be excluded from a bilateral free trade agreement, the details of which are given in the chapter.

The last paper, "Foreign Investment with Endogenous Protection" (Chapter 8), deals with multinational investment that may take place in anticipation of protectionist policies. Bhagwati (1987) coined the term "quid pro quo foreign investment" for this sort of activity and has used it to describe the motivation for much of the direct foreign investment by Japanese firms in the United States and Europe during the 1980s. Our paper develops a formal model of this phenomenon to understand when it might occur and what effect it has on aggregate welfare.

In our model, foreign firms can locate production facilities in the home market or serve the market by exporting. To operate in the home market, they must bear an extra fixed cost as well as some extra production costs. But it may nonetheless prove profitable for them to do so if the home government decides to protect the home market. The foreign firms make their separate location decisions based on their forecasts of the policies of the home government. The policy maker in turn chooses a policy response to contribution offers from domestic interest groups, taking into account, of course, her concern for domestic welfare. Since domestic welfare varies with the number of foreign firms operating in the home market, the policy decision varies with the investment choices of the foreign firms. In equilibrium, the foreign investment behavior must be optimal, given rational expectations of the home government's policy response, and the tariffs must be optimal for the home policy maker given the contributions that are offered by the domestic interest groups.

We suppose to begin that a group representing the domestic industry is the only one to offer contributions in order to influence trade policy decisions. Then there are several different types of equilibria that may arise, including equilibria in which foreign firms are indifferent about the location of their production and a fraction of these firms decide to invest abroad while the remainder produce at home. In these equilibria, the extent of multinational activity depends inter alia on the policy maker's taste for campaign contributions. When the policy maker places a high value on contributions, the foreign firms expect that tariffs will be high unless relatively many of them choose to operate in the home country. In this case, anticipatory foreign investment flourishes. But then the equilibrium tariff rate may not be so high when the policy maker's taste for contributions is great, because the preemptive foreign investment serves to moderate the protectionist demands by domestic producers.

In this setting, foreign investment may raise domestic welfare by a mechanism that is not often recognized in the literature. The potential benefit of such activity derives from the equilibrium response of the domestic government. To the extent that quid pro quo investment wards off high tariffs, it generates consumer gains that have little to do with the usual reasons why home production by foreign firms may be good for domestic residents.

The last part of the paper deals with the case in which both domestic shareholders and workers with industry-specific skills are organized as interest groups. The two groups share similar interests as far as the tariff rate is concerned. But they have opposing interests concerning restrictions on direct foreign investment. We describe the trade-offs and show how the political pressures play out under these more complex conditions.

3 Empirical Validation

Our models of political economy yield precise predictions about the pattern of trade protection and other aspects of trade policy. It should be possible, therefore, to evaluate the theoretical tools by examining the extent to which these predictions are borne out in the actual practice of trade policy. A number of recent studies have attempted to do just that. Here we provide a brief introduction to these papers.[1]

The starting point for much of this work has been our model of the determination of the structure of protection in a small economy (Chapter 4). Our analysis yields a formula relating the tariff rate in industry i to the ratio of output to imports in industry i, the elasticity of import demand in industry i, and a dummy variable indicating whether the owners of specific factors employed in industry i are politically organized or not. The parameters in the formula reflect the weight that the policy maker attaches to campaign contributions in her political objective function and the share of the population that belongs to an organized interest group.

Goldberg and Maggi (1999) were the first to estimate an empirical model based on this formula, using U.S. data for 1983. Since U.S. tariffs have been set in the course of several rounds of multilateral trade negotiations, they used the coverage ratio of non-tariff barriers (the fraction of sub-categories within a trade category for which a non-tariff barrier is in place) as a proxy for the discretionary protection afforded to an industry.

[1] See Gawande and Krishna (2002) for a recent survey of empirical research on the political economy of trade policy, which covers in greater detail the studies described below.

Goldberg and Maggi regressed the product of this variable and the import demand elasticity on the ratio of output to imports in the industry and on this same variable interacted with a dummy variable indicating whether the industry was politically organized or not in 1983. A politically organized industry was defined as one with Political Action Committees that spent more than a threshold fraction of industry revenues on campaign contributions. The model predicts a positive sign in this regression for the coefficient on the product of the dummy variable and the ratio of sales to imports, a negative sign for the coefficient on the ratio variable alone, and a positive sign for the sum of these two coefficients. Goldberg and Maggi found this pattern to be borne out in the data. Moreover, when they added additional regressors chosen from among those that are often included in empirical models of the structure of U.S. protection, they found that these additional regressors lack any explanatory power. Importantly, they note that previous findings of a positive relationship between protection and the import penetration ratio (the ratio of imports to domestic production plus imports) are misleading. The model in Chapter 4 suggests that this relationship ought to be different in industries that are politically organized than in industries that are not. The regressions of Goldberg and Maggi confirm this prediction. Previous empirical researchers have not made any such distinction, however. This means that their estimated relationship is misspecified and difficult to interpret.

The regression coefficients estimated by Goldberg and Maggi allowed them to compute estimates of the structural parameters of the model—specifically, the weight placed by the policy maker on campaign contributions and the fraction of the population that is represented by an interest group. They estimate that the policy maker attaches between 50 and 70 times as much weight on aggregate welfare as on contributions and that between 84 and 88 percent of the population is represented by an interest group. These findings are troubling, because the figures seem implausibly high.

A closely related study was conducted by Gawande and Bandyopadhyay (2000). They, too, used the coverage ratio for non-tariff barriers as a proxy for industry protection, but they identified politically organized industries somewhat differently. They considered as organized those industries in which there has been a positive relationship between PAC contributions and trade flows.

There are two major differences between the Gawande-Bandyopadhyay study and the Goldberg-Maggi study. First, Gawande and Bandyopadhyay extended the model of tariff formation to allow for conflict between importers of intermediate inputs and producers of these goods. Second, they used the model to estimate not only the determinants of trade protection but also the determinants of industry contributions.