

MODELING THE DETERMINANTS OF INDUSTRY POLITICAL POWER:
INDUSTRY WINNERS IN THE ECONOMIC RECOVERY TAX ACT OF 1981

A Dissertation

by

AMY LOUISE KARDELL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2004

Major Subject: Sociology

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May 2004

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ABSTRACT

Modeling the Determinants of Industry Political Power:

Industry Winners in the Economic Recovery Tax Act of 1981. (May 2004)

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This study uses qualitative comparative analysis (QCA) to examine the basis of industry political power by assessing conditions of economic interdependence and political action associated with the passage of the Economic Recovery Tax Act of 1981 (ERTA), and the significant reduction in effective tax rates for eight of eighteen U.S. industries. Past research has focused on the simple passage of “pro-business” legislation, failing to provide adequate evidence as to who benefits or how they benefit from the legislation. The Boolean analysis used in this study indicates that a distinct combination of both political action and economic factors present a clear pattern of causal conditions associated with both tax winners and losers. Using three separate analyses, the theoretically exclusive explanations offered by both class dominance and structural theories fail to provide any clear explanations. Tax policy is associated with a set of conditions that are conjunctural in nature, supporting a combined model. Strong PAC contributions, number of registered lobbyists, and outside lobby firms in association with a strong federal relationship, and either total economic strength or strong inter-industry relations produced the specific conjunctural patterns associated with “winning” industries. Lack of significant PAC contributions to the House Ways and Means and Senate Finance Committees insured an industries failure to benefit from the legislative change. The results from this study

indicate that a new theoretical model is needed that incorporates the complexity of the interdependent-relationships of political and economic conditions. Evolving from the mutually exclusive theoretical explanations of the past, class segmentation, political dominance, and structural economic explanations are brought back together in a manner that exposes the complexity of the relationships resulted in tangible benefits from the passage of ERTA.

DEDICATION

In loving memory of my mother - Ramona Kardell. Thanks for the stubborn streak.

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Anyone who has survived this process knows the challenges that come with it. Completing my doctoral program, and writing this dissertation would have been impossible were it not for many individuals that supported, defended, challenged, and protected me. I am grateful for having the opportunity to work with such a wonderful committee: Dr. Alex McIntosh, Dr. Sam Cohn, Dr. Mary Zey, and Dr. John Robertson. My chair, Dr. Alex McIntosh is the model of academic dedication, integrity and compassion. If I can positively affect as many students as he has, then I will know true success. I thank Dr. Mary Zey, my long-time mentor whose confidence in my capacity often exceeded my own. Dr. Zey has shown me the importance of staying true to myself both academically and personally. I am thankful for the many intelligent, coffee house discussions I have had with Dr. John Robertson. I could not imagine having gone through all of this without your support and guidance. I am especially grateful to Dr. Sam Cohn. How could I have ever produced this dissertation without your counsel? You challenged me in a way that no one else dared. Through it all, each of you has stood by me, and for that, I will be forever indebted.

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TABLE OF CONTENTS

	Page
ABSTRACT	iii
DEDICATION	v
ACKNOWLEDGEMENTS	vi
TABLE OF CONTENTS	viii
LIST OF TABLES	x
LIST OF FIGURES	xi
CHAPTER	
I INTRODUCTION	1
Overview	1
Research Problem.....	3
An Alternative Approach: Method and Theory	5
Summary	6
II REVIEW OF LITERATURE	8
Overview	8
Class Dominance and Political Power	11
Structuralist State Theory.....	17
An Alternative Approach	23
Summary	26
III DATA AND METHODS	30
Overview	30
Methodological Approach: QCA	34
Dependent Variable: Change in Industry Effective Tax Rate	37
Seven Independent Variables	42
Sample and Unit of Analysis.....	59

CHAPTER	Page
IV RESEARCH FINDINGS	64
Overview	64
Three Models of the Dependent Variable	64
Correlation Analysis.....	66
Qualitative Comparative Analysis: Results.....	69
Three Separate Analysis: Economic, Political, and Combined.....	71
The Economic Recovery Act of 1981	83
Summary	84
V CONCLUSIONS.....	87
Overview	87
Implications for Future Theory and Analysis	94
Limitations of the Study.....	96
Recommendations for Future Research	92
Conclusions.....	93
REFERENCES	95
APPENDIX A	104
APPENDIX B	105
APPENDIX C	122
APPENDIX D	123
APPENDIX E	125
VITA	127

LIST OF TABLES

	Page
Table 3-1 Description of Independent Variables	42
Table 3-2 Industry Segment Descriptions.....	62
Table 4-1 Correlation Table: Independent Variables for Each of Three Dependent Variables.....	67
Table 4-2 Raw Data Truth Table	70
Table 4-3 Truth Table: Economic Causal Conditions for Three Models.....	74
Table 4-4 Truth Table: Political Causal Conditions for Three Models.....	77
Table 4-5 Truth Table: Combined Causal Conditions for Three Models	79

LIST OF FIGURES

	Page
Figure 3-1 Industry Effective Tax Rates and Percent Change in Industry Effective Tax Rates.....	40
Figure 3-2 Percentage Change in Industry Effective Tax Rates from 1979-81 to 1982-84.....	41
Figure 3-3 Average Firm PAC Contributions to the House Ways and Means And Senate Finance Committees per Industry	45
Figure 3-4 Total Number of PACs per Industry.....	46
Figure 3-5 Industry Ratio of Registered Lobbyists per Firm	48
Figure 3-6 Total Number of Washington Offices per Industry.....	50
Figure 3-7 Ratio of Outside Lobbying Firms per Industry.....	51
Figure 3-8 Total Number of Inter-Industry Connections	55
Figure 3-9 Industry Production as Percentage of Total Economic Production.....	56
Figure 3-10 Percentage of Industry Production Purchased by Federal Government	57
Figure 3-11 Average Number of Employees per Industry	58

CHAPTER I

INTRODUCTION

Overview

Why is there no consistent measure of corporate political power? News accounts detail corporate power as endemic, abusive, and corrupt. Yet, no consistent measure or measures exist that can capture the seemingly obvious connection between corporate power and legislative favor. In this study, I address the power relationships that exist among industries through an examination of the economic interdependency and political behaviors associated with legislative change and change in industry effective tax rates. Current theories hold that either structural economic position or political strength leads to state response and favorable policy outcomes. Both theoretical perspectives, although conflict based, fail to address the degree to which political and economic factors coexist and work in conjunction with each other. The existing class structure is segmented in such a way that it benefits some industries more than other industries. This study focuses on what, when, and how U.S. industries are able to extract tax advantage from the Federal government, using the Economic Recovery Tax Act of 1981 as the policy framework. This Act serves as an excellent universal business policy from which to examine the dynamic relationships that exist between industry and the state.

The impetus for this study resulted from an annual Citizens for Tax Justice report on corporate freeloaders (McIntyre and Wilhelm 1985) that chronicled a pattern of increasing corporate tax avoidance for the two previous decades. While it was not surprising to find that many of the largest U.S. corporations (based on total assets) pay little if anything in Federal taxes, the surprise was the enormous tax disparities that exist between industries.

This dissertation follows the style and format of the *American Sociological Review*.

According to Federal law, from 1979-1984, U.S. corporations were subject to a Federal tax rate of 46 percent, however for the sample industries used for this study the average industry effective tax rate was 21.64% from 1979-1981 and 17.75% from 1982-1984. During this period, the 386 firms, comprising the 18 industries in the sample, experienced a rise in net income of over \$7 billion and their overall assets increased by over \$345 billion. Even with huge increases in income and assets, the taxes paid by the firms in the sample decreased by almost \$11 billion. Contrary to the projected increase in Federal revenues projected by supply-side economists, as both industry profits and assets increased, corporate Federal taxes decreased. The types of tax exemptions and exceptions provided in this legislation (for a brief description of the major tax changes in the new law see Appendix A) such as the use of accelerated depreciation schedules, safe-harbor leasing, and other tax provisions resulted in a significant decrease in total Federal revenue(Tempalski 1998).

Only a select few industries were able to take advantage of the new tax law; the new tax law did not significantly benefit all industries. Thus to claim that all corporations and all industries benefit uniformly from state actions would be misleading. The eight industries that benefited the most from the 1981 Economic Recovery Tax Act (ERTA) experienced an average effective tax rate of 12% from 1982-1984 compared to the other ten industries that paid on average over 21% for the same period. Significant differences between industry effective tax rates found in my sample ranged from an extreme low average of -21% to a high of 36.9% for the years 1982-1984. Vast differences in industry tax rates, suggests that the largest corporate representatives of U.S. industries do not benefit as a single class interest, but rather that state (Federal) policies benefit some at vastly different levels.

Soaring inflation, sagging productivity, and increased foreign competition provided fertile ground for political change. Legislators were desperate to stabilize the economy, and U.S.

business leaders brought with them promises that a supply-side tax cut would be the solution to halt the crisis. Viewed as a cure for the ailing political-economic environment of the late 1970's and early 1980's, the 1981 Economic Recovery Act was a milestone victory for conservative business interests intent on restructuring the overall landscape of the political and economic environment. The Economic Recovery Tax Act of 1981 was the culmination of a long battle to secure an accelerated depreciation schedule, reduce windfall oil taxes, and provide outlets for maximizing tax benefit for investments that exceeded current tax benefit levels through a safe-harbor leasing provision. Industries claimed that these provisions would stimulate economic growth. Ironically in 1981, the same year in which the Economic Recovery Tax Act was passed, the Council of State Planning Agencies reported that the corporate tax incentives (primarily given to big business) had cost state governments millions, and were ineffective at stimulating economic growth through either increased investment or new hires (Chell 1981). It was not surprising that in the same way, the National economic picture did not improve because of corporate tax breaks. In fact, it is estimated that the cost to the nation was almost \$176 billion in lost Federal revenue (Tempalski 1998). In addition, the percentage of Federal revenue generated from corporate income tax decreased from 3.2% in 1971 to less than half that in 1982.

Research Problem

This study addresses the central question of why certain industries receive greater benefits from the state than other industries. A critical component in this analysis is the development of new measures of economic interdependence in conjunction with a complete set of directed political actions that yield a model of industry political power that extends beyond existing research

This new model of economic and political interdependence differs from previous work in two major manners. First, for too long, research has focused on the capacity of U.S. business

to organize resources for political influence, but has failed to adequately address the impact of policy beyond the passage or failure of a bill. If an industry cannot benefit from a particular action, it would be foolish to claim it as a political victory. Clearly differentiated from studies that conclude with the passage or failure of a particular legislative act, this study extends the analysis of industry power from the constrained limited use of the passage or failure of legislation to that of the successful implementation of policy. My research finally addresses the question of *who wins* by examining the associated economic conditions and political actions taken by “winning” industries. Industries win when they are able to benefit from the change in policy, as is strongly apparent through the examination of industry effective tax rates.

Second, this study directly addresses the methodological problems of past research with model development using qualitative comparative analysis (QCA)(Ragin 1987). The result is a series of strategic causal conditions that provide a more complete assessment of the conditions of industry power. A large segment of literature on state theory consists of either case studies or historical comparative analyses, both of which often fail to address the complexity of overall conditions and subsequently arrive at findings that support a particular theoretical perspective but which often fail to address contradictory findings as significant. In this study, a data driven qualitative methodology is used that systematically and empirically examines 18 industry cases, thus moving beyond historical description, and providing a foundation for analysis unparalleled in other qualitative research.

Further, quantitative studies on tax policy have also met with little consensus as to the relevance of either structural or political variables. The limitations found in these studies consist of confounding levels of analysis and inconsistent or misspecified variable measurement. My approach addresses past limitations through the examination of variable relationships that make up causal sets associated with the passage of the 1981 ERTA. The analysis incorporates multiple

political strategies (four political variables) and economic conditions (three economic variables of industry-state interdependence), for which past research has failed to uncover consistent findings. Overcoming these methodological limitations results in the development of more complete strategic models that allow for evaluation of dynamic and complex causal conditions. This form of qualitative inquiry allows for the deconstruction of the dependent variable as well as a move away from measures that lack social action (assets/market concentration).

In summary, this is the first qualitative comparative analysis study to address the distinct strategic political and economic mechanisms of power that lead to successful corporate tax avoidance. In previous studies of effective tax rates both methodological and measurement limitations stifled the comprehensive understanding of how political behavior and economic conditions benefit select industries. This study demonstrates the utility of qualitative comparative analysis (QCA) to effectively address complex related events that are omitted or confounded when using traditional regression techniques, as well as developing findings that are more generalizable than traditional qualitative findings.

An Alternative Approach to Method and Theory

The new methodological approach and improved measures used in this study strengthen our understanding of the relationship between conditions of industry strength (economic condition and political action) and state response through policy outcomes. Political behavior is no longer restricted to a single measure (e.g. campaign contributions). In this study a series of political behaviors (which in regression analysis would suffer from problems of multicollinearity) provide a more complete assessment of directed political action than has been demonstrated previously.

An important contribution made by this research is the introduction of a series of new variables that have not been a part of tax policy analysis in the past. The new economic

measures (industry interdependence, total economic dependence, industry-Federal dependency, and employment strength) directly link theoretical concepts of economic strength to state favor. These new economic measures replace ineffective measures such as rate of unemployment and rate of investment. The derivation of the new economic measures came from an industry production input-output matrix, developed for this project. The use of these variables provides greater insight into the impact of political behavior and structural relationships, and thus adds to our understanding of the complex causal conditions that are involved in the state-class struggle. The explanatory causal conditions that emerge from this research contribute to our understanding of the nature of industry power and overcome many limitations in a field that has been rife with theoretical and methodological problems.

Summary

In summary, moving beyond the theoretically exclusive state theory models of class dominance and structural Marxism, my research supports a blended theoretical model. The 'theoretical exclusivity' of these two theoretical models has contributed to the lack of a clear or consistent set of explanations in policy formation (Glasberg and Skidmore 1997). The failure of past work has been its failure to address the most vital research question posed by theories by failing to assess *who* benefits and *how*. The tax code is not a policy vehicle that yields uniform tax status. In fact, the tax code purposefully benefits certain industries over others at vastly different rates (Pechman 1987). National aggregate tax data indicates that change in tax rate is an incremental function that is rarely altered in any dramatic fashion since its inception. Thus the Economic Recovery Tax Act of 1981 which had an enormous fiscal impact, dramatically altering tax payments and shifting the tax burden through a pattern of tax redistribution, is a highly significant event (Campbell 1993).

My research evaluates the tangible outcome of tax policy by measuring change in effective tax rates between industries and assessing effective tax rate as they relate to political behaviors and structural economic conditions. Tax winners take several forms. Not only were some industries able to significantly reduce their effective tax rates (due to changes in tax policy), certain industries have benefited from tax law for a long time. Tax loses are also identified and examined by economic condition and political actions for those industries that are unsuccessful in achieving significant changes in their effective tax rates. My research demonstrates that a precise, albeit complex, picture of the political and economic relationships that are causally linked to tax policy outcome; and that above all supports a segmented intra-capitalist class theory based on industry conflict.

CHAPTER II

REVIEW OF LITERATURE

Overview

The power of business (capital) has been a topic of interest to sociologists for over a century and a half. Significant theoretical and empirical questions have emerged in response to questions of capacity for unified class action and degrees of state autonomy. Emerging from early debates between pluralist (Dahl 1958; 1961; Polsby 1959; 1963) and elite theorists (Hunter 1952; Mills 1956), contemporary policy research focuses on the conditions of business unity (Akard 1992; Domhoff 1990; Mizruchi 1989a; Quadagno 1984) and the nature of the state. The state has been generally referred to as a captured, semi-autonomous (Offe 1974; 1984; Poulantzas 1978a), or autonomous agent (Skocpol 1980; Skocpol and Finegold 1982). The result has been research agendas focused on state structures and policies that fail to examine political outcomes or policy impact (Glasberg and Skidmore 1997; McCammon 1994). So, while research on political power should examine the question of who benefits or who wins and who loses after laws are passed (Domhoff 1983), the reality is that it rarely does.

Little research has been conducted on tax policy. No definitive conclusions exist regarding the causal mechanisms affecting tax policy formation or implementation. Both qualitative and quantitative findings support a mixed set of causal relationships. Problems with model development, methodology, and variable construction led to a confusing and incomplete picture of tax policy. Integrating concepts from structural dependency and class dominance provide the basis for a new theoretical perspective that can address the complex political and economic relationships that develop.

Three broad theoretical frameworks guide much of the class-state power research: (1) class dominance (elite, power resource and business dominance), (2) state-centered, and (3) structural Marxism. Theories positing class dominance focus on the capacity of business (elite interests) to coordinate, unify and thus dominate society (Domhoff 1990; Mills 1956; Useem 1984). Structuralism rejects the claims of instrumental Marxist and elite theories that a unified elite/capitalist/upper class exists, instead positing inter-industry and class competition, the existence of a relatively autonomous state, and the structural design of the capitalist state are the guiding mechanisms of power (Block 1977; Gold, Lo, and Wright 1975; Poulantzas 1978a). In contrast, the state-centered theory (Evans, Rueschemeyer, and Skocpol 1985; Hooks 1990; Skocpol and Finegold 1982) posits that the state, with potential for autonomy, has “mechanisms that allow the state to operate independent of outside forces”(Glasberg and Skidmore 1997).

While each of these frameworks distinctly posits where and with who power resides, they each fail to examine whether the groups advocating for change actually benefit from a shift in policy. This research deficit is a result of both theoretical and methodological limitations. In response to existing theoretical limitations, there has been a call for the development of an integrated state theory that addresses the contingent and varying nature of power relations (Glasberg and Skidmore 1997; Hooks 1993; Quadagno 1992a; Vogel 1989; Zey 1993). The call for a synthesis theory comes from the limitations of existing theories (Hooks 1993) strongly advocating the development of more mid-ranged theoretical models that accommodate historically contingent conditions. The result is a framework that addresses state policy by systematically examining the structure of the state, institutional inertia of historical trends and settings; the interaction between state and class interests; and ultimately who benefits from

changes in policy (Glasberg and Skidmore 1997). It is from this third perspective that I approach the multi-dimensional dynamic of class influence in Federal tax policy.¹

Theories of the state question whether capitalists, class interests, or the system of capitalism dominates the state policy. The theoretical debate has evolved from demonstrating the mechanisms necessary for class identification to the examination of how and when class interests are effective.² The intense interest in social welfare policy has provided clear examples of when class interests other than business achieve state response (Quadagno 1984). This changed the debate from whether capitalists *always* achieve their objectives, to *when* capitalists achieve their objectives. However, as will be discussed later, very little research has examined tangible outputs of political power, especially on tax policy. While a significant part of sociological work still focuses on the process of policy formation, the challenge will be to develop a model that expresses the conditions of success not only addressing historically contingent factors, but also which addresses different contextual levels of political success. If the analysis of class influence (power) stops with the passage of a bill or creation of an agency, it fails to address the objective of power --- to gain favorable outcomes. The guiding definition of power used in this study is:

Power: the extent to which the outcomes of the population's interaction with other populations favor its interests over those of others; acquisition of power is an increase in the favorability of such outcomes, loss of power a decline in their favorability; political power refers to the *outcomes of interactions* with governments (Tilly 1978: 55).

¹ The word approach is important. Glasberg and Skidmore (1997) present a thorough explanation of the emergence of an approach that they label "accommodationist." This approach lacks the formal boundaries that are typically associated with a formalized theory.

² State-centered theory will not be addressed in this paper due to the fact that it fails to recognize the potentiality of varying degrees of state autonomy or condition.

While common interests, shared views and information, and organizational capacity are identifiable criteria for political action the analysis would be incomplete if it did not include an analysis of tangible success (Tilly 1978). This chapter will cover the relevant sociological and interest group literature with primary attention given to the lack of significant work on the “causal conditions” associated with political success (Ragin 1987).

Class Dominance and Political Power

Sociological theory directly challenges pluralist claims that the capitalist class lacks the capacity to organize effectively. Class dominance research (power structure, business dominance, class-wide rationality) however, has clearly demonstrated the existence of an interconnected economic and political elite within the capitalist-upper class (Akard 1992; Domhoff 1983; 1990; 1996; Mills 1956; Useem 1982; 1983; Zeitlin 1980; Zey 1993). Left unanswered is not whether class interests exist, or even if they have the capacity to organize, but rather whether this results in dominance or undue advantage within the broader population. Rooted in historical accounts, these studies present a case for business unity by demonstrating the existence of key policy making organizations and groups that serve to coordinate positions and proactive agendas. This body of work claims that the existence of a cohesive class serves as a proxy measure of power, leaving open the possibility that even though the class is cohesive, it could remain inert.

Class dominance research centers on the exertion of class interests in two primary ways. First, a substantial number of historical accounts detail the cohesiveness of the business community integrated into the state apparatus. Second, quantitative studies have focused on factors of political unity. Unified behavior, defined as similarities in behavior, is most often measured through patterns of political action committee campaign contributions on behalf of class interests and/or the presence of interlocking directorates (Burriss 1987; Clawson, Neustadt,

and Bearden 1986; Epstein 1986; Grier, Munger, and Roberts 1994; Masters and Keim 1985; Mintz and Schwartz 1985; Mizruchi 1989a; Mizruchi 1989b; Mizruchi and Koenig 1986). While this research establishes patterns of interaction and even similarity in patterns of giving, neither of these two approaches demonstrates a consistent causal link between political behavior and state action or policy outcome. In fact, the literature simply fails to measure tangible policy outcomes beyond the passage of a bill or creation of a new state agency. Few have even attempted to substantiate the claim that when a favorable business policy is passed that it results in tangible outcomes. My argument is that corporate power is the *ability to* engage in the political system in combination with the *capacity to achieve* desired goals over the demands and desires of others (Domhoff 1983) results in *desired outcomes* for those who have power.

Extensive historical research exists detailing corporate political interaction with the state. Research supporting class dominance demonstrates that even in cases in which other class interests are addressed by state action (labor, agriculture, welfare) the capitalist class had a distinct influence in the development, direction and final policy (McCammon 1994). Domhoff (1996) revisited several historical cases (New Deal Agricultural policy, National Recovery Administration, welfare policy, and the growth of the military) in which state-centered theorists had claimed a level of state autonomy and concluded that state agencies are often “captured” by capitalist associations and not autonomous of class actors. These historical accounts lend support to class dominance hypothesis regarding involvement in the political process, but they fail to address the consequences of the action.

Political action committees (PACs) and lobbying efforts are often attributed as effective and sufficient measures of corporate power. Research conducted by Clawson, Neustadtl and Scott (1992) provide an extensive look at the inner workings of corporate PACs. Through interviews with PAC directors, legislative staff, and members of Congress, they build a case that

PACs, in particular corporate PACs, have excessive power over the political system relating to the development of legislation as well as agenda setting. While it is not discernable as to whether PAC involvement directly affects congressional votes, evidence supports the premise that PAC activity is a necessary mechanism associated with access.

Evidence abounds that links organizations associated with corporate PACs to candidate relationships. These relationships result in the influencing of legislative committees, including but not limited to inclusion of language in bills, providing expert witnesses, and affecting the tone of legislation that is not directly pro-business. Their findings are compelling, not because they reinforce an already strong belief that corporate PACs have influence, but because these findings highlight the role PAC organizations play in a more complex set of political activities. This is supported by other research findings (Clawson and Clawson 1987) and is extremely relevant in the time period in which my research is conducted. Clawson and Clawson (1987) reported that the genesis of corporate political activism was really a phenomenon of the early 1970's; and was mobilized in the areas of policy formation, public opinion and campaign financing. In 1974 there were twice as many labor PACs as corporate PACs, but by 1980 corporate PACs outnumbered labor PACS, 4 to 1 (Clawson and Clawson 1987) with the greatest concentration of PACs found within the largest 100 manufacturing firms.³

Class dominance theory posits that vast economic resources available to corporations enable them to engage in political realms often restrictive for other populations. The ability and likelihood of PAC and lobbying efforts are facilitated by greater organizational resources (Boies 1989; Burris 1987; Clawson, Neustadtl, and Bearden 1989; Masters and Keim 1985; Neustadtl and Clawson 1988). It is argued that greater access to resources allows large corporations to

³ Size of corporation is based on total assets.

participate in the legislative process on many levels including, but not limited to, campaign contributions, lobbying efforts, grassroots efforts, public-relations campaigns and also providing expert testimony (Vogel 1989). Establishing a causal link for class dominance has proven difficult if not illusionary. Unified business political action has long been the standard for measure of class capacity to dominate state action. This work concentrates on corporate capacity to influence policy measured through assets, industry concentration, material interest (Boies 1989; Epstein 1986); and their ability to coordinate resources often measured through network ties, interlocking directorates, and patterns of giving (political contributions) (Clawson and Neustadt 1989; Clawson et al. 1986; Clawson et al. 1992; Mizuchi 1989a).

Quantitative studies on the impact of corporate PACs on policy have been inconsistent. Overall, the weak relationship between campaign contributions and roll call votes could easily lead one to believe that PACs are not a significant or influential tool for affecting legislative decisions (Smith 1995).⁴ However, when contextual specificity (issue specificity) is taken into account Neustadt (1990) found a weak negative effect associated with corporate PAC contributions and pro-business votes. While this could lead one to assume that corporate PAC influence was inconsequential, it is just as likely that PAC's make campaign contributions as a part of a more complex political strategy. Neustadt (1990) notes that it is likely that labor pursues a strategy of rewarding members for votes; business strategies are often different with focus on working to gain votes they might not have already secured. Once again, PAC behavior is an important but not complete measure of political influence.

⁴ A significant part of this research area deals with labor, consumer, and special interests such as environment in addition to corporate interests.

Clawson, Neustadt and Scott(1992) conducted a careful qualitative examination of the role of PACs and the effect of PACs (with their leadership and associations) to direct, or target policy. They examined the manner in which PACs are formed, the way they raise money, to whom and why they give (including the seating of an ideologically positioned Congress), the degree to which business PACs are unified. Generally, they asked how much power business has in the political system and whether that power relates to economic position, pointing out the assumed legitimacy with which businesses operate within the policy arena. Legislators and business leaders alike have no problem justifying pro-business legislation because it is often implied or assumed that if it is good for business it is good for Americans. In the case of the Savings and Loan bailout, there was relatively little opposition to legislation that called for a bailout of over \$500 billion as compared to the controversial and highly debated legislation surrounding unpaid parental leave benefits(Clawson et al. 1992). They go on to state that it is important that we accept the fact that PACs are a vital part of corporate power and constitute business hegemony. Their description of hegemony is valuable, especially their observation that business power is so pervasive that it is virtually unrecognizable similar to white treatment of blacks in 1959, business denies their power to dominate, but most who feel the impact would argue it otherwise. A key finding is that businesses do seem to win in the policy making game, but it is because of a great deal of vigilance.

In a longitudinal study, Jacobs (1988) investigated the relationship between manufacturing tax rates and aggregate concentration of assets.⁵ Using national aggregate data for all manufacturing firms, he found that asset concentration had a negative effect on effective

⁵ This study covered the time period of 1947-1978 and uses Holland and Meyers 1980 tax measure (Holland and Meyers 1980).

tax rates, while investment, unemployment, and profit had no effect.⁶ He makes the primary assumption that asset concentration is an adequate measure of political activity and thus a suitable proxy for political power. However, in the manner in which he used asset concentration, it is questionable as to whether it is an appropriate measure of political power. His measure of asset concentration may or may not be measuring political power of industry so much as it might simply be measuring the concentration of financial strength for the top 100 manufacturing firms. An interesting finding that Jacobs (1988) fails to examine is the question of why profits are not associated with taxes. Higher profits should yield higher taxes. He finds no relationship between profit and tax. It is worth noting however that the issue of asset concentration (or any measure of resource concentration) is a questionable measure of class dominance, if what is measured is not the benefit of resource concentration.

A more direct measure of corporate political behavior is that of PAC membership or PAC contributions. While the research on PACs has also met with mixed results, the percentage of corporate PACs to total PACs seems to have more predictive strength as well as reflecting actual political engagement rather than depending on the perceived capacity to act as measured by asset concentration. Quinn and Shapiro (1991a: 866) found that the greater number of associated corporate PACs had a negative effect on corporate effective tax rates and either no effect or a slightly negative effect (depending on the model) for asset concentration. They concluded that this supported previous research findings that PAC behavior that was similar but not formally organized was significant (see Mizruchi 1989a). This finding is in and of itself an interesting effect since PAC data is not available for years prior to 1974, which means that in their study data points prior to 1974 had a score of zero for PAC and yet it had an impact on the

⁶ Asset concentration measured as the assets from the top 100 manufacturing firms to total manufacturing assets.

overall model. No support was found for lobbying, asset concentration or for any other class organization variable other than PACs. The lack of consistent support for corporate political behaviors other than PACs may be related to measurement and methodology problems.

Structuralist State Theory

What if capitalist is but one of many competing class interests in society? Rejecting the idealistic, and unrealistic, diffused power claims of pluralism, the neo-Marxist literature recognizes the impact of both capitalism and capitalists on state action. Integrating the structural dependence of the state on capitalism and the interactive role of capitalism as it involves the continued accumulation of capital (Akard 1992; Block 1977; Lindblom 1977; Offe 1984; Poulantzas 1978b). However, a divide exists that centers on the issue of a unified capitalist class. Structural theories of capitalism claim that the state serves to reproduce the accumulation process and thus in essence appear to support the domination of capitalist interests. In an analysis of labor law, McCammon (1994) describes how “state selectivity” results in the support of policies that are important for the maintenance of employers and deny labor requests that could threaten the stability of the system of capital accumulation. The role of the state is to intervene in matters of the economic and not the political; strikes over wages and benefits are permitted but power struggles that would undermine the ability of capital to control the work place is prohibited (McCammon 1994).

The structural foundations of capitalism determine the power relations of the state to society (Poulantzas 1978a) and as a result the capitalist state will favor long-term capitalist interests over short term capitalists demands. Failure to sustain and promote growth in the economic system results in crises of legitimacy and threatens the state capacity to maintain control. Left unchecked, these crises could lead to the removal of state actors. Dominance of

capitalism, not necessarily capitalists, provides flexibility in this theory in explaining the existence of social policy and economic policies that are not pro-business. In theory, the state acts on behalf of long-term capital even when such actions threaten economic hegemony.

Unlike class dominance theories, structuralism contends that policies are reflections of capitalist state structure as bound to the capitalist economy (Glasberg and Skidmore 1997; Jessop 1990; O'Connor 1973; Wright 1978) rather than domination by a class of individual actors. A commonality between class dominance, elite and structuralist theories seems to be the recognition of capitalist hegemony. Structuralists recognize the hegemonic nature of the capitalist class but ground it to the concept of system reproduction. State action cannot be simply reduced to a political engagement, except to the degree that political influence is congruent with long-term economic requirements of capitalism (Poulantzas 1969).

Rejecting the contention that a single unified upper/capitalist class dominates, structuralism supports a segmented class theory, has resulted in the label of “elite-pluralist.” Schumpeter ([1918] 1954) proposed that society was dominated by capitalist elites and that democracy was maintained by the competition (conflict) that arose between capitalist interests irrespective of any direct political organization (Block 1977; Poulantzas 1969). The state’s role is to intervene on behalf of long-term capitalists interests rather than the short-term demands of a single firm or industry or class. The dependent relationship between capital and the state insures that the state will most often act in concert with the demands of dominant sectors of capital when it is able to do so.⁷ In other words, if the demands articulated by a segment of capital are consistent with the reproduction and growth of capital then state action will be congruent. This forces a

⁷ This study focuses only on inter-industry variations and does not include analysis of other capital interests such as labor. Clearly, this is an area for future consideration.

reciprocating relationship between the state and capital. Capital depends on the state for fiscal maintenance (structural-long term stability), and the state depends on the well-being of capital to maintain legitimacy (Jessop 1982; Poulantzas 1969).

Structural dependency theory contends that a dependent relationship exists between capitalists and the state. A basic structural mechanism of the state is the need to generate revenue. The argument is that economic instability (recession, unemployment, drop in consumer demand) threatens the viability of the state, resulting from declining rates of corporate investment. This decline in investment is a central component to the concept of business confidence. The system is part of an exchange between state actors, capitalists and workers, and state action is limited by “intersection of two factors – the intensity of class struggle and the level of economic activity”(Block 1987: 67). The system described is one of dependence. The “incentive structure” is the key tool business uses to gain desired outcomes through the state (Quinn and Shapiro 1991a) rather than political behavior. Investment maintenance and capital accumulation are the central concern of state actors. Competing capital interests, mediated by the state, achieve policies that reflect growth and maintenance in order to maintain the existing political/economic order (Quadagno 1992a; 1988)

Unlike class dominance theory, the structural theories recognize the presence of competing class interests. The concept of segmented political hegemony clearly separates it from the class dominance perspective, even though both theoretical camps recognize the historically powerful position that corporations hold in the United States. Sabato (1984) found that while the overall disagreement between capitalist interests may hinder any real class-wide agreement let alone class-wide rationality, it allows for the possibility for industry sector hegemony and power block hegemony. Poulantzas (1969), Vogel (1989), Block (1977), Lindblom (1977) and Offe (1984) all claim that ‘no overt mechanism’ is necessary for capitalist

power to be exerted: rather the state acts as responsive to electoral demands as the overall well-being of capital (Quinn and Shapiro 1991b). Therefore, if structural explanations prevail, fiscal or geopolitical crises will explain state action, with no significant effect resulting from political organization. The crisis of legitimacy (Lindblom 1977: 187) occurs when the demands of capital/business are not met, and will result in recession or economic stagnation through a process of disinvestment. However, a serious limitation of this theoretical perspective is that it is difficult to measure direct effects.

A pure structuralist argument lays claim that state action is taken without direct intervention from a capitalist class (Block 1987). Yet, in the wake of global competition the decline of several U.S. markets, the oil crises, and staggering inflation of 1970's, such assumptions have become increasingly contested. Historical accounts demonstrate that U.S. capitalist interests engaged in class-wide organization aimed at coordinating policy and shifting political ideology to support its demands(Akard 1992; Prechel 2000).

The centerpiece of structural theories rest on the premise that the state responds to the overarching demands of capital accumulation. The belief is that the state is able to extract greater tax during period of geopolitical conflict.⁸ Structuralists argue that state actors are able to raise taxes during war (taking advantage of war-time spending) or economic crises (depression, not recession) because the threat of disinvestment is no longer an issue (Block 1987 as found in Campbell and Allen (1994)). During stable periods, the threat of disinvestment is the tool used by business to maintain low tax rates. The general state of the economy is another critical component in the maintenance of the capitalist state. During periods of expansion the state is hypothesized to have the ability to increase tax rates, while in times of economic

⁸ John Campbell (1993) provides an excellent summary of the literature of fiscal sociology.

contraction the state must decrease taxes in order to maintain business confidence (Block 1987; Lindblom 1977).

Evidence for the capacity of the state to tax during periods of expansion and contraction is mixed. Salamon & Siegfried (1977a) in their study of 110 U.S. industries found higher profits resulted in higher taxes indicating that state actors can raise taxes during periods of economic expansion. Jacobs (1988), on the other hand, found that a decline in profits or investment did not lead to lower taxes, although his findings have been questioned due to the fact that the time frame in covered was from 1948-78, thus missing major economic events (Campbell 1993). Prior to the late 1970's, the dominant economic policy followed Keynesian principles that required state spending to stimulate economic growth while decreasing taxes (Block 1987), thus averting rising rates of unemployment and increasing investment.⁹ This era was marked by an active state role in both spending and tax policy. Much of the same rationale can be made for states to increase taxes when faced with budget deficits (Campbell and Allen 1994). Block (1987) asserts that in times of extreme economic crisis, the state can raise taxes because the threat of disinvestment has already taken place. This makes investment rate a weak measure because, depending upon the circumstance, the researcher could interpret an increase or decrease as evidence of state action supporting structural theory.

Reversing the causal relationship, Williams and Collins (1997) posited that state action is in anticipation of future investment, rather than reacting to disinvestment. This comes in the form of what they term an 'equilibrium theory of corporate taxation'(Williams and Collins 1997

⁹ It is interesting to note that Keynes feared unemployment as a factor of political instability if left unchecked could lead to radical movements (totalitarian, communist, fascist). Thus the policy initiatives followed during from the 1940's through the 1970's, directed at controlling the rate of unemployment, lead to massive expansion of the state structure.

211). They argue that the scale and scope required to coordinate all business interests is impossible and that at best industries or small segments of firms might act on behalf of purposeful political goals. Their model reverses the causal order of tax on political-economic variables testing the exogeneity of micro-economic factors (political involvement and investment) to macro-economic factors of effective corporate tax rates. The primary argument is that future expectations drive state policy rather than a reaction to business political strength or levels of investment, and the findings support their claims. The fact that effective tax rates were found to be exogenous to both the number of PACs and rates of investment, Williams and Collins (1997) do not reject the idea that industries, firms, or particular interests have political strength, but rather they contend that a single business class is not a causal force affecting effective tax rate. Their model indicated that when there is a shock to effective tax rate, investment decreases and the number of PACs increase. Often the state uses offsetting practices to maintain a relatively stable revenue rate over time. Granting tax benefits, without program reduction or elimination, results in a shift in tax burden onto another segment of the population.¹⁰

The work of Williams and Collins (1997) is directly countered by the class dominance and historical literature that details a response of the business community to economic threats from national and international sources. Albeit contrary to the class dominance literature, it does pose an interesting matter for consideration. If the variables of PACs, investment, and real income are exogenous to macro-policy then current models are flawed.

¹⁰ See Campbell and Allen (1994) for discussion of individual income tax increases distributed among mass population.

An Alternative Approach

Researchers from both the structuralist and class dominance theoretical camps are quick to point out the limitations of each other's theories. Critics of structuralist theories point to the limitations in developing measurable concepts, the inability of the theory to question whether or not capitalists interests dominate, the fact that the structuralist measure of the capitalist hegemonic control of the state is the persistence of capitalism (thus tautological), and the overstated existence of class conflict (Domhoff 1967; Domhoff 1983). Structuralists argue that class dominance is incorrectly specified because it does not examine class conflict, inappropriately assigns class consciousness, and the fact that business interests benefit more from a reactive rather than a proactive agenda (Hooks 1993: 38). It is commonly recognized that the debate in state theory suffers from a theoretical stalemate based on "theoretical mutual exclusivity" (Glasberg and Skidmore 1997: 11).

Alford (1975) recommended the integration of the three paradigms of pluralism, elite theory, and class theory; in order to address state functions (consensus, domination, and reproduction) and forces that shaped the state and state action (as discussed in Kourvetaris and Dobratz 1982).¹¹ Addressing the theoretical debate with a middle-range approach provides a basis for examining the contradictory findings, recognized as a strategy in advancing political analysis.¹² Most historical accounts make an implicit, indirect argument for a synthesized theoretical approach with findings that indicate state response is often in conjunction with both direct capitalist demands and the relative importance of the structural position with which they

¹¹ Several works are discussed in this article that demonstrate the theoretical integration found throughout the literature.

¹² Clearly middle-range theory is a concept developed by Robert Merton. Also see (Glasberg and Skidmore 1997) for a summary of work calling for a synthesized perspective includes (Campbell 1993; Gilbert and Howe 1991; Hooks 1993; Jenkins and Brents 1989; McCammon 1994; Prechel 1990; Quadagno 1992b).

occupy in the broader economy. The structural role that business holds in the U.S. society reflects “potential power” (Anker, Seybold, and Schwartz 1987: 98) that cannot be matched by other groups in society. Therefore, a more complete theoretical model would incorporate both the economic structural relationship between industries, the state, and society as well as the particular political efforts in which industries engage to change their environment. The model should be dynamic enough to allow for varying conditions of political power, economic strength, and state autonomy. This will provide a model able to better address the complexities of interactions and power relations that exist between the state and business.

This research demonstrates the limitations of past models to adequately address the complex conditions and the institutional constraints that ultimately affect the success or failure of a business political agenda. Theoretical models and research must account for the context of business-state politics. *Who wins*, and *how they win*, can vary with the particular case, not simply in terms of historical conditions (e.g., in a period of crisis), but also in contextual context (type of legal action). It is likely that industry political participation will vary with regard to particular areas of interest such as tax, labor, contract, and regulatory matters. Advancing a perspective that demands the reduction of theoretical barriers, Glasberg and Skidmore (1997) propose an alternative “accommodationist” approach, rooted in contingency theory. This perspective is guided by three major premises:

First, political mobilization is contingent, requiring both a perceived threat to that class’s or class segment’s interests and the organizational resources with which to advocate a political position. Second, state agencies and policies interact with class-based political organizations in a dynamic process that modifies both the state and the political organizations. And third, the specific relation between state agencies and class-based political organizations is historically contingent (1997: 11).

Although not focused specifically on tax policy, contingency theory addresses structural relationships, institutional inertia of historical trends, and the dynamic relationship between the

state and outside class forces (Glasberg and Skidmore 1997:142-43). However, this approach requires expansion and clarification.

Jessop's contingency theory and Offe's concepts of political authority and crises management (Jessop 1982), recognize the importance of the *when* component of class domination of policy formation as well as the dynamic exchange between capital and state actors. Yet, for the theory to be effective, it must address whether a business entity is responding defensively to a perceived threat to capital accumulation (Prechel 2000; Zey and Swenson 1998), or offensively because of its economic and/or political strength. Using perceived threat as a defining element of action lacks predictive clarity. A universal business principle is that of capital accumulation. A universal demand of business is increased capital flow. Whether threatened or not, business interests might engage in political activity. The scope of the theory is limited by claiming that action is simply the result of perceived threat. An advancement of this theoretical line would claim that political mobilization occurs when it is advantageous and necessary. Conditions of necessity might then be different from conditions of advantage.

Consistent with the "accommodationist" approach, Campbell's (1993) conceptual model of taxation addresses major policy shifts (rather than incremental changes) and effects on both tax levels and the structure of the tax system. His model incorporates various levels of analysis addressing the mediating factors that surround tax policy. In this model, change results from economic, geopolitical, or fiscal crises. Corporate political organization and economic conditions provide stimulus for State response. This response comes in the forms of change in tax rates, tax burdens and redistribution policies. The demands of class and social groups affect State action, while the system of political representation mediates class and social groups. This model provides a framework for studying the determination of tax policy; incorporating historically contingent relationships and setting conditions under which to expect state action,

yet it fails to specify mechanism of success. The utility of this perspective lies in the recognition that varying conditions affect political response. In addition, this perspective directs research in a direction that requires the comparison of class segments. Recognizing that the State is not instrumentally responsive to a single class interest, a contingent or accommodationist approach demands that research focus on context and ultimately the outcome of policy.

Summary

Political theorists have long been interested in the relationship between economic strength and state action (Quadagno 1984). In a democratic nation, the principle of power is often idealized as being equally distributed amongst the populace, vested in individual authority as promoted by pluralists. Class dominance, Marxist, and neo-Marxist theories challenge the democratic ideal of pluralism, positing instead the disproportionate advantage that business interests (firms and industries) have in comparison to other segments of society. Two basic sets of causal conditions serve as the basis of corporate political advantage over the State: (1) the ability of business to dominate the political process as a result of their resources, and (2) the structural constraints on the state to maintain economic order and capital growth. The primary issue of contention between existing theories of the state and capitalist power is whether the capitalist class actively dominates the state, or whether the State is a semi-autonomous agent on behalf of the capitalist system.

Class dominance theory posits that through control of the largest corporations and the associated resources of capitalist organizations, business interests are able to organize political and ideological campaigns that result in domination the state. Like neo-Marxist structuralist theory, class dominance theory recognizes the existence of competing business interests exist but

maintains that competing interests do not translate into public political battles (Domhoff 1978; 1980; 1983; Useem 1984 ; Zeitlin 1980 as examples).

Structuralists contend that society is dominated by political elites and democracy maintained through competition (conflict) between capitalist interests absent or without regard to any direct political organization (Block 1977; Block 1987; Poulantzas 1969; 1978a ; 1978b as examples). State dependency on economic growth and stability ensure that the state will consistently work on behalf of dominant sectors of capital. Declining market conditions serves as a major motivating factor for both class organization and state action.

My model draws from the “accommodationist” or contingency approach, positing power relationships as both reciprocating and embedded in the institutional arrangement. The model developed in this research includes multiple measures of industry political power focused on the mechanisms affecting tax policy implementation. Through the examination of conditions of political influence, micro-political behavior and macro-economic structural conditions, this study examines *who* benefits and *how*. Three new measures of economic strength and a more comprehensive model of political behavior are incorporated using qualitative comparative analysis. This dissertation represents the first stage of a multi-stage research agenda directed at uncovering the mechanisms of industry political power. Integrating both class dominance and structural Marxist variables, within a contingent or accommodationist approach, certain conditions and assumptions are made in this study:

- Power relationships are contingent historical events.
- Any examination of “winners” must take into consideration categories of beneficiaries. The concept of winner must be clearly defined.

- Power relationships exist within specific context. Power models must be content specific and not generalize without evidence. Conditions of success in tax policy may vary from a successful outcome in environmental policy.
- A model of power must be able to address the existence of competing class interests and measure the degree to which some benefit over others, or the degree to which benefits coalesce between industries.
- The question of who wins shifts to *who benefits* and *how*.
- The relationship between industry and State is governed by both political and economic variables. It is through distinct patterns of economic strength and political action that yield success in tax policy implementation.

The following analysis follows addresses deficiencies of past research (in terms of measurement, methodology and theoretical concepts). Failure to address varying conditions of capitalist unity, and the failure to address circumstances in which state actors respond with “relative-autonomy” leave analysis of class power pointing to the mechanisms of control without the ability to causally link these to policy outcomes. In addition, the “class-wide” rationality fails to address the variation in benefactors within the capitalist class dismissing conflict as if it is of little or no consequence

The empirical model developed in this research integrates a variety of causal conditions that exist within a complex set of dynamic interactions between state and industries. Resisting the exclusivity of the original theoretical models, the synthesis of both state and class theories incorporates the effect of political influence and structural economic strength on tax policy outcomes. These two primary “mechanisms” of political power are the dominant measures that appear in the extant literature. The method used in this research will not address the statistical

relevance of the hypothesis, but will instead present a more exacting model of political influence than has existed in the past.

CHAPTER III

DATA AND METHODS

Overview

The primary aim of this study is to examine the effects of industrial political behavior and structural economic conditions on industrial tax policy outcomes. The specific policy outcome analyzed is the change in industry effective tax rate, resulting from changes in the U.S. tax code made with the passage of the Economic Recovery Tax Act of 1981 (referred to as ERTA81). This 18-industry segment analysis examines change in industry effective tax rates from 1979-1981 to 1982-1984, as the direct result of tax code changes included in ERTA81. The 1981 Economic Recovery Tax Act was the legislative vehicle for a tax revolution aimed at eliminating corporate taxes. The universal nature of tax policy as an issue of interest to all businesses in conjunction with the significant increase in coordinated political activity make it an appropriate case for the study of corporate power. The inability of past research to clarify the causal mechanisms of political power relating to tax benefits, make it a significant topic for research.

Case Selection

The selection of both the timeframe and type of legislation was critical. During the late 1970's corporate political activity escalated while the business community publicly blamed the Federal government for cost infringements from union protections (in the form of minimum wage, health care, and worksite protection), environmental regulations, and, significant to this study, high tax rates. Otto Eckstein, president of Data Resources Inc. in 1979, claimed that industrial hardships resulted from demand side economic plans (including high corporate and individual marginal tax rates), fuel shortages (due to a tough winter and the Iranian oil embargo), and union strikes (Business Week 1979b). It is beyond the scope of this paper to discuss labor issues or

international oil reserves, however, tax policy, vital to the United States business community is the focus of the research.

The selection of this particular tax act centers on the fact that during this period organized business political behavior, although relatively recent, was increasing at an extraordinary rate. Described as “the largest corporate tax reduction in over 50 years,” this measure also represents a legislative issue of universal importance to all corporations (Tempalski 1998).¹³ The Economic Recovery Tax Act of 1981 was a tremendous victory for the business community, for it reduced the overall tax burden. However, some industries benefited at rates far greater than other industries, and certain industries suffered a tax increase. This paper addresses the political and economic mechanisms that affected legislative development and ultimately policy implementation. The universalistic property of tax policy makes it ideal for comparing economic power and political effort between and among industries, accompanied by a rich history that chronicles the “winners” and “losers” of the tax battle. Winners, for example, benefited from special considerations, provisions appear in the tax code to accommodate windfall profits, energy rates, real-estate transactions, research and development and other such items that allow a certain industries to benefit from particular transactions and economic engagements.

As documented by the U.S. Treasury, ERTA81 was the largest tax reduction package in the history of the United States (Tempalski 1998). Previous changes to the tax code occurred in 1978 (effective in fiscal year 1979) with a reduction in the top corporate marginal tax rate from 52% to 46%. The next major tax act to follow ERTA81 was the 1984 Deficit Reduction Act

¹³ Tax legislation under the administration of George W. Bush has yet to be fully evaluated with regard to total economic impact, but could possibly exceed the 1981 ERTA.

(effective January 1, 1985). While certain technical corrections to ERTA81 were included in the Tax Equity and Fiscal Responsibility Act of 1982, the only significant change was the repeal of safe-harbor leasing (effective in fiscal year 1984). Industry demands for tax reductions had been percolating in the Congress and the White House since the Kennedy Administration. The growing role of international capital and a decline in American corporate hegemony marked a shift of corporate political behavior and attitude (Clawson and Clawson 1987) that called for governmental solutions to business crises and rejected programs that directed monies toward governmental social spending, taxation, and regulation. The timeframe for this study covers the years 1979 thru 1984, examining industry political and economic variables as they affect effective tax rates from 1979-1981 and then from 1982-1984.

During the 1970's, corporate leaders claimed that they had to shift practices and engage in a figurative "fight for our (their) lives" (202).¹⁴ In the midst of a severe recession (a decline in GDP for two consecutive quarters) at the end of the 1970's, corporate America was not only demanding legislative action on tax reform, they had convinced the American people that corporate downturn was a result of governmental encroachment and excessive taxes. Many average Americans suffered from a tax code that was non-responsive to inflationary income increases. Although technically making higher wages, taxpayers were unhappy with the jump in tax brackets when their standard of living had not improved. This made the average Americans keenly aware of tax inequity, and as anti-tax sentiment grew strong throughout the country, key U.S. business interests benefited.

The tax sensitive political climate provided fodder for the rising number of corporate political entities in Washington D.C. The dramatic increase in organized corporate political

¹⁴ See (Silk and Vogel 1976) for an in depth examination of corporate attitudes.

behavior resulted from a revision of the campaign financing laws in an attempt to lessen the impact a single large donor could have on an administration in addition to SUN-PAC decision that allowed corporations to solicit from stockholders and employees (Clawson et al. 1992) from 1971-1975.¹⁵ The irony was the proliferation of corporate organizational PACs that effectively coordinated single donor contributions on behalf of business and increased the influence that corporate entities would have over legislators. A dramatic increase in the number of corporate PACs is by the 1726 percent increase in the corporate PACS from 1977 (89 corporate PACs) to 1983 (1,536 corporate PACs) (Sabato 1984: 11)

Policy formation, guided with a significant increase in financial support from corporate donors, emerged from both moderate and conservative think tanks. Supply-side economics gained support from the business community because it recommended drastically reduced tax rates, the need to drastically reduce labor costs, and the elimination of most regulatory restrictions. The paradigm shift in economics occurred as Keynesian (demand-side) economics became the governmental scapegoat, blamed for exacerbating productivity and contributing to market slowdowns. The business press made sure that these themes were well established (Business Week 1979a). While it is unclear as to whether governmental policies have ever been strictly Keynesian, did not matter. The conservative revolution targeted for elimination everything and anything that stood in the way of capital accumulation.

Research Design

This study examines the relationship between economic condition and political action variables on an industry level on change in industry effective tax rates. The sample is from the *Fortune*

¹⁵ See (Clawson et al. 1992) for a complete discussion of the corporate PAC law and policy shifts during this period.

500 Industrial and *300 Service* company lists for 1981. The 18 major industry segments (categories) used, represent the industries associated with the firms in the 1981 *Fortune* listings (see Appendix B). The independent variables were derived in two primary manners. First, corporate data from the 1981 *Fortune* lists was aggregated by industry for the following variables: Effective Tax Rate (TAXCHANGE), PAC campaign funding to the House Ways and Means and Senate Finance Committees (PACFUND), number of PACs (NUMPAC), number of Washington Offices (WASHOFF), number of registered lobbyists (REGLOBBY), number of hired political consultants (HIREDGUN), and number of employees (EMPLOYEE). The second set of independent variables were developed using national aggregate industry data.(Young and Planting 1983) in order to construct an industry-economic input-output matrix for the independent variables: total industry economic contribution (TOTALECO), number of inter-industry connections (INTERDEP), and level of Federal-industry economic interaction (DEPFED). These variables represent the economic position of an industry, and are the type of data considered by legislators and used by lobbyists to defend the importance of their particular position or decision on industry issues.

Methodological Approach: QCA

The methodology used in this study is a key issue. Methodological problems of past research, have failed to uncover a consistent model of business class political power. As discussed in the review of literature, contradictory and inconclusive findings, result from inappropriate measurement as well as the lack of attention given to policy outcomes. Measurements used in the past have fallen short and stagnated the development of more complex explanations of corporate tax avoidance behaviors.

The intricate nature of political power emerges from the existence of multiple paths to successful tax policy outcome. Complex political strategies and economic motives surround legislative events. Qualitative comparative analysis (QCA) is a bridge method between qualitative and quantitative studies (Ragin 1987; Ragin 1994) that enables the analysis of multiple causal sets that lead to the same outcome. This approach allows the researcher to systematically examine complex comparative cases, regardless of sample size. However, it is exceptionally useful for small-N samples that are large enough to be hampered by in-depth historical comparative or case studies and too small to allow for the application of multivariate statistical procedures. This is why qualitative historical studies have provided compelling accounts of events that support both class dominance and structural semi-autonomous models, but which cannot be quantitatively demonstrated.

Qualitative comparative analysis allows for an “assessment of complex patterns of multiple and conjunctural causation” (Ragin 1987: 71). Macro social events face challenges of both limited number of actors and events (e.g., industries, countries, revolutions, and strikes) making statistical analysis difficult if not impossible. QCA is more effective at addressing the complexity of comparative macrosocial units of analysis that are typically plagued with the small-N problem. My sample is comprised of 18 industries compared between two periods; far too few data points for a quantitative methodological approach to yield a test of statistical significance, and far too complex a situation to assess using a conventional case study. Resolving the problem of methodology required an approach capable of managing data without the limitations of regression analysis.

For the purpose of this evaluation, regression techniques were unworkable because of the small sample. In addition, regression analysis requires the elimination of measures that lack statistical power, in an attempt to reduce the chance of making a Type-II error. Conditions that

occur less frequently often fail the test of significance, and often macro-social events do not consist of enough data points to establish causality. A considerable strength of QCA, a qualitative approach, is that it provides flexibility when using events that occur only occasionally. QCA allows for the consideration of each causal set regardless of whether one or 1000 occurrences took place. Each positive outcome remains a valid explanation of events thus rejecting traditional statistical tendencies to discount an infrequent causal set for another that occurs with greater frequency. For this analysis, qualitative comparative analysis, is the methodological approach that provides a framework for evaluating numerous cases and the ability to address and evaluate “casual complexity”(Ragin 1987: 168) and “holistic comparison” (Ragin, E.Mayer, and Drass 1984: 228).

Boolean logic provides the opportunity to develop a model(s) capable of adapting and accounting for changing (varying) conditions over time, because it addresses the unique relationships between causal conditions. To use this method successfully, the researcher must abandon (at least temporarily) the constraints of statistical inference and test of significance, replacing the importance of a single variable with a set(s) of causal conditions. This method places primary importance on the manner in which variables come together, considered as a total set of conditions, that together result in a particular outcome. Boolean algebra, combines sets of causal conditions (variables) with associated outcomes. The number of independent variables (binary outcomes) determines the number of possible outcomes for any given set. In this case, there are 2^7 (128) possible outcomes. A causal set is represented by each row of the truth table. Like causal sets (rows) are combined and then minimized to produce the simplest number of expressions necessary to cover all possible causal explanations (Ragin 1987).

The use of QCA requires special preparation of the data. All variables (dependent and independent) must be nominal-level measures and are coded a “1” (presence/high) or “0”

(absence/low) value for each measure. In my study, data thresholds reflect high and low values, rather than presence or absence of a condition. While theory serves as the primary basis for measurement development, in this study the theory broadly predicts winners and losers, but does not dictate a cutoff for high and low categories. Both “high-1” and “low-0” categories are developed for each item according to variable averages or in some cases apparent breaks in the data. Although somewhat arbitrary, this approach to data classification has proven to be quite robust and often aligns with variable means (Ragin et al. 1984).¹⁶

After assigning each measure a “1” or “0” value, a truth table (a visual expression of the observable data) was constructed (detailed in Chapter IV). The goal of the truth table is to obtain causal formulas of prime implicants, identifying (if possible) *necessary* and *sufficient* causal conditions. For a condition to be *necessary*, it must be present in all cases with a particular outcome (1 or 0) and not in any of the cases with the opposite outcome. For an outcome to be *sufficient*, it must be the only causal condition associated with an outcome. While a complete truth table would be comprised of all possible logical combinations of events, in practice the number of causal sets does not exceed the number of observed cases.¹⁷

Dependent Variable: Change in Industry Effective Tax Rate

The dependent variable is change in average industry effective tax rate (TAXCHANGE) between the three years before (1979-1981) and three years after (1982-1984) after the passage

¹⁶ The approach used in this research assigns high and low values to all measures. It is would have been possible to incorporate an “don’t care” or “unsure” classification for those values that fall between the extreme values, but I did not use this option.

¹⁷ The total number of possible causal sets for this study would be 128 or 2⁷.

of the Economic Recovery Tax Act of 1981.¹⁸ Domhoff (1967) recognized that taxes are reflective of the power structure and went so far as to claim that tax levels could be used as a measure of power. The reason taxes or tax rates can be used to measure power is based on the dependent relationship between revenue generation by industry and the states need for revenue (Alford and Friedland 1975). The effective tax rate is a reflection of the efficiency of the corporation and/or industry to use the special or particular tax provisions within the tax code to their advantage. Special tax code provisions most often result from special interest groups affecting economic policy decisions (Siegfried 1974) to their advantage.

Although there is some debate within the economic and tax literature as to the appropriate measure of effective tax rate, the most appropriate measure for this study is simply calculated as actual taxes paid divided by pre-Federal tax net income.¹⁹ Effective tax rates were constructed from firm level data, aggregated by industry. Tax and financial data were gathered using *Compustat*, a *Standard & Poor's* database (Standard & Poor's 1999). This database provides financial information with a primary audience of corporations and institutional investors. Corporate financial statements are recorded and standardized making items comparable that might require tremendous recalculation if taken directly from a financial statement. *Compustat* does not provide a specific measure of effective tax rate, therefore the construction of this variable (see Equation 3-1) includes two *Compustat* items: Item 63 (Federal

¹⁸ Variables used in this study follow a notation style of capital letters connoting a strong or high score on the measure, while lowercase letters represent the absence or low score on a particular measure.

¹⁹ The debate within the tax literature stems mostly from a corporate concern in inconsistent reporting rather than a interpretation of policy. Various methods are used some based on assets rather than net income, some that adjust for future taxes, or recalculate past years given current year deductions, etc. See Spooner (1984) for a complete review of measure limitations.

Income Tax – current) and Item 172 (Net Income) averaged for the years 1979-1981 and 1982-1984.

Equation 3-1. Formula for Calculating Effective Tax Rate

$\frac{\text{Federal Income Tax Paid by Industry}}{\text{Net Domestic Pretax Profits before Federal Income Tax}} = \text{Effective Tax Rate}$

The denominator is profit minus state and local taxes (or net income + Federal taxes) and the numerator is simply current Federal taxes due (see Equation 3-1). This is a conservative measure of effective tax rate. Many studies attempting to illustrate the abuse of corporate power over the State often chose a total income amount based on “profit”. Failure to account for state and local taxes serves to inflate the profit figure. If an inflated profit figure is used then the effective tax rate will also be artificially lower.

The tax measure used in this study is *net income + federal tax/federal tax*, generated from the *Compustat* industrial annual data files. The total net income and total taxes paid for each industry for the three years prior (1979, 1980, and 1981) to the Economic Recovery Tax Act of 1981 and the three years (1982, 1983, and 1984) after the tax change were used to compute the average effective industry tax rate. Using this measure adjusts for state and local taxes in order to get a more accurate measure of Federal tax.²⁰

During this time, the published highest marginal tax rate, by definition the tax rate paid on the last dollar earned, was 46 percent. In many cases, industry effective tax rates were far below the marginal rate for both 1979-1981 and 1982-1984 (see Figure 3-1). During 1979-1981

²⁰ State and local taxes vary significantly between states and cities. If the dependent variable of effective tax was taken prior to adjusting for state and local taxes, it would dramatically inflate the profit levels and thus artificially reduce the level of tax.

effective tax rates ranged from 10.86% to 55.18% compared to 1982-1984 when the effective tax rates ranged from -21.50% to 36.99%. The average for all industries from 1979-1981 was 24.45% and from 1982-1984, it was 15.76% with an average change of 8.69%. Three industries (automobile, diversified financial, and general manufacturing) secured extremely large reductions in effective tax rate. After adjusting for these three industries, the average change in

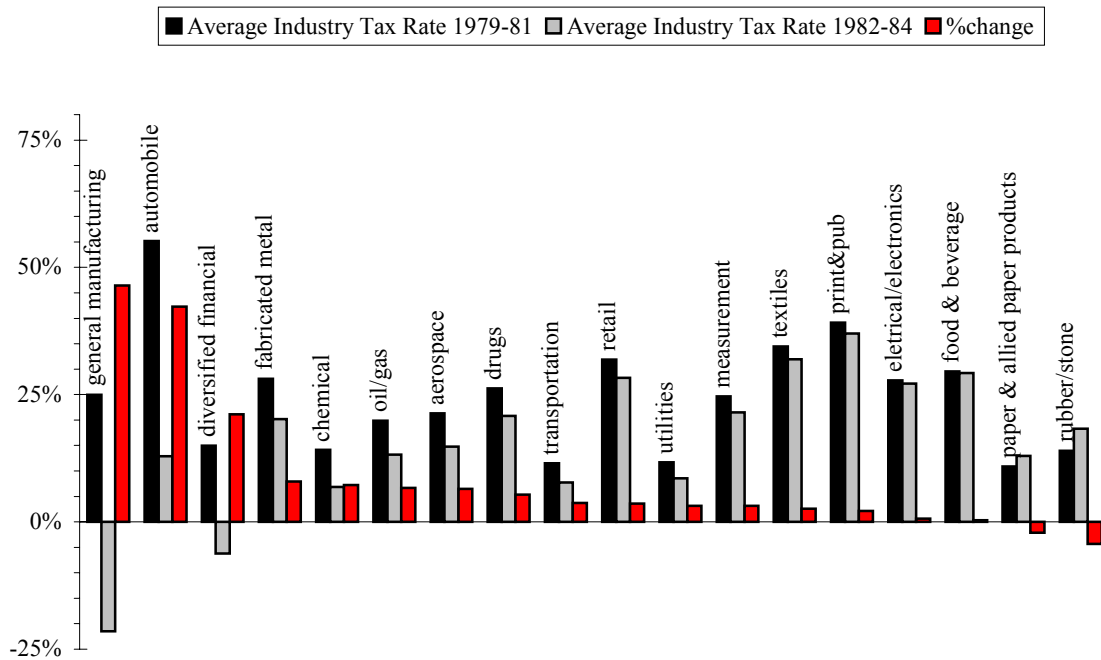


Figure 3-1. Industry Effective Tax Rates and Percent Change in Industry Effective Tax Rates

industry average effective tax rate is 4.23%. Establishing the threshold for the dependent variable at five percent meets the confidence level at a 95 percent level (see Appendix C for descriptive statistics). Therefore, if an industry reduced their effective tax rate five percent or more from t to $t+1$, that industry was coded a score of 1. All industries with an effective tax rate change of less than five percent were coded a score of 0.

Effective tax rates are also subject to historical trends. Seven of the 18 industries had an effective tax rate below 20% for both periods (see Figure 3-2). This means that for the six years

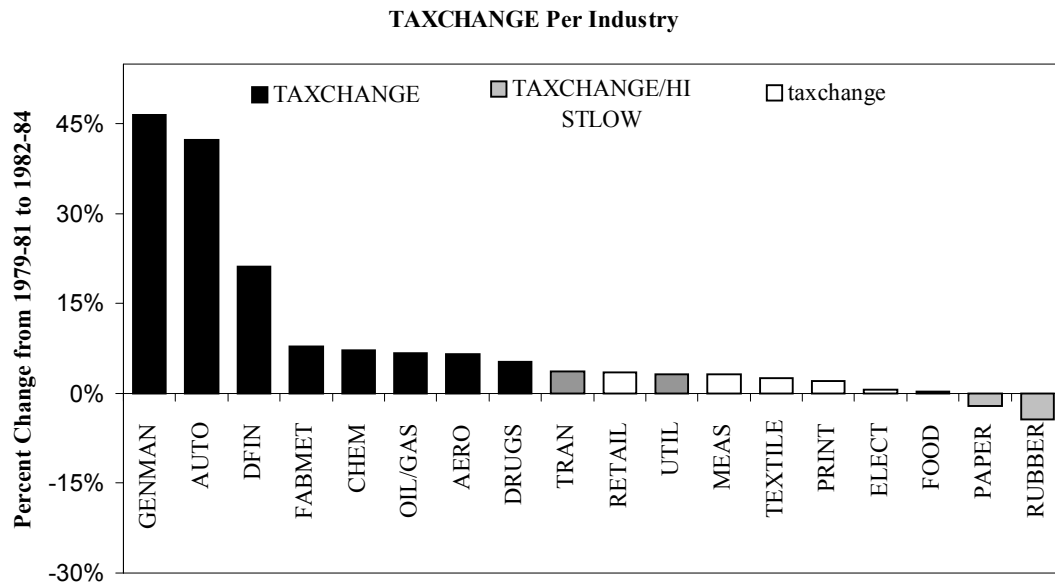


Figure 3-2. Percentage Change in Industry Effective Tax Rates from 1979-81 to 1982-84

examined in this study, these particular industries avoided the marginal tax rate by over 26%, paying less than half the marginal rate. Three industries (Chemical, Oil/Gas and Diversified Financials) were able to secure both the five percent reduction in effective tax rate, while maintaining a historically low effective tax rate below 20%. While the dependent variable used in this study reflects the change in effective tax levels, the issue of historically low tax levels also has an impact on the causal sets. Three models are developed and presented to address this issue. The first model consists of all 18 industries. The second model combines historically low and tax change industries. The third model removes those industries that had historically low tax rates, but that were unable to achieve the 5% or greater change in effective tax rate. Evaluation of each of the variable sets (economic and political) included three models. The final analysis was of the complete variable set across all three models.

Seven Independent Variables

In total, seven independent variables are included in the final analysis (see Table 3-1). These variables are a combination of economic conditions and political behaviors relevant to the 18 industries studied. QCA requires that all measures be transformed into dichotomous values. The construction of each of the measures, in addition to the establishment of appropriate threshold values, is discussed below.

Table 3 -1. Description of Independent Variables

Independent Variable Acronyms Used For Variables	Variable Description	Variable Thresholds (high scores = 1 and low scores = 0)
PACFUND	Campaign contributions to members of the House Ways and Means and Senate Finance Committees	≥ \$3663.00 per firm average within industry
REGLOBBY	Number of registered lobbyists on behalf of firms in industry	≥ 1:1 ratio
HIREDGUN	Ratio of hired lobbyists or lobby firms per industry	≥ 0.4: 1 ratio
PACNUM	Number of PACs per industry	≥ 15 per industry
DEPFED	Percentage of per industry goods purchased by the Federal Government	≥ 3% Federal purchases per industry total production
TOTALECO	Percentage each industry makes up of the total production economy.	≥ 3.5 % industry/total production
INTERDEP	Number of industry connections at 2%	≥ 10 industry to industry connections at 2 percent

Note: Variables listed above are those included in the final analysis.

Political Resources

A key question in the area of corporate power is how organizations pursue needs through the establishment of an agenda and the use of political action. Knoke (1990) points to various forms

of public action that can be taken by an organization including: lawsuits, letter writing campaigns, comments on proposed regulations, meeting with members of congress and/or staff, testifying at hearings, coalitions, contributing to campaign efforts, fund-raising, and other resource deployment tactics. These are forms of “direct participation” (Heath, Douglas, and Russell 1995) that require corporate actors to engage in certain activities. A great deal of research has centered on PAC donations, yet as a single measure it is ineffective. Industries employ a number of political strategies, of which PAC involvement is but one option.²¹ Placing importance on a single political strategy is a limitation of past quantitative studies. Often when faced with multiple political measures, problems of multicollinearity demanded the elimination of key variables. Using QCA, it was possible to create a more inclusive measure of political participation that includes a series of political strategies: committee directed PAC contributions, total number of PACs per industry, the number of registered lobbyists in each industry, the number of Washington D.C. offices per industry, and the number of outside lobby firms hired by each industry.

Political Action Committees

A number of qualitative studies support the relationship between PACs and legislative outcomes. The competitive drive between business organizations requires some form of political participation (Keim 1988). Measures of political activity are often reduced to PAC membership or financing. Often PAC measures are aggregated across all congressional elections, these

²¹ In an early examination of the PAC data it is clear that election considerations are key, but not the only indicator of influence. PAC contributions are carefully given out to those members in election cycles and when not in an election cycle, PAC contributions are virtually nonexistent for a candidate. Therefore in this analysis only some of the Senate members were up for re-election and therefore their PAC dollars will be quite limited. If my analysis centered only on PAC contributions, it would miss the other forms of influence that take place even in non-election years.

figures lack specificity of intention. For example, if a contribution is given to a member of a committee for which an industry has a regular relationship, it might have a different impact than a contribution to a new congressional member, or even a member that has been opposed to pro-business legislation in the past. Even less “connected” to outcome is the measure of asset concentration as a proxy for political power. As discussed in Chapter II, asset concentration assumes political engagement.²² Industry political activity takes on several forms and together comprises a strategy set. The array of political strategies must also be associated with a purposive action (means-end) rather than general action when attempting to establish a link between policy outcome and political activity. In a recent Bureau of Economic Analysis study, PAC contributions were significantly associated with member seniority, committee assignments and legislative reputation (Kroszner and Stratmann 2000). Building on this finding, the measure of industry PAC contributions used in this study concentrates on two primary congressional committees: House Ways and Means and Senate Finance. Since these two committees are responsible for the development of tax legislation, campaign contributions to members of either committee expresses a desire to influence the direction, content, and outcome of particular legislation. The members of these two committees are responsible for the development of tax legislation and are the most likely to successfully impact the final language of the bill.

Grenzke (1989) recognized the need to examine many PACs as it relates to legislative outcomes. While she found that a single PAC is not able to affect policy outcomes, she advocated that PAC effect should be tested as to whether “combined contributions from many PACs may influence members’ votes” (Grenzke 1989:18). Measuring political behavior with

²² I found no significant relationship between asset concentration and tax policy outcome (correlation = 0.25, and $r^2 = 0.05$) in the sample used for this study.

respect to industries is a departure from past work that focused on individual firm or a broad manufacturing classification.

Corporate PAC contributions were collected from the *Federal Election Commission Candidate Index of Supporting Documents* for the 2-election cycles, 1977-78 and 1979-80, for all members of the House Ways and Means and Senate Finance Committees (see Appendix D

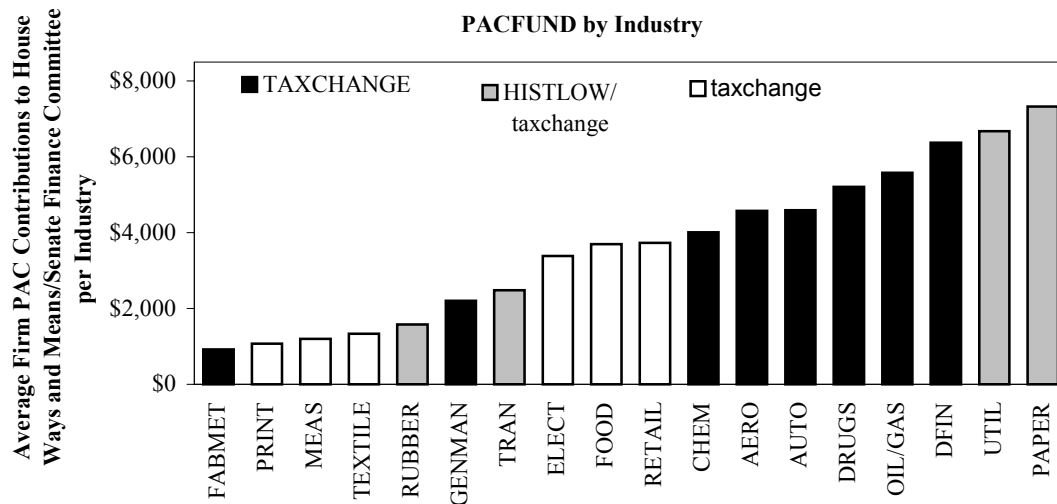


Figure 3-3. Average Firm PAC Contributions to the House Ways and Means and Senate Finance Committees per Industry

for a complete list of members) that were involved in an election or re-election campaign during this period. Only the contributions made by the sample corporations are included in this measure. No industry association or party resources are included. Each industry is compared to the overall firm average for PAC contributions. The overall (total sample) firm average PAC contribution is \$3,663 (386/1.4 million). The first break in the data above the \$3,663 amount is found at the level of \$4,000 per firm average (within each industry). In order to achieve a confidence level of 95 percent the threshold would have to be set at \$4,610. For the purpose of

this study, the threshold score for those industries with strong or high PAC contributions is set at \$4,000. Industries with an average per firm contribution of \$4,000 or greater are coded a “1” score, and those industries that had less than \$4,000 per firm contributions are coded a “0” score (see Figure 3-3).

Number of PACs Per Industry

The total number of affiliated PACs per industry (NUMPAC) captures the general influence of industry PACs across Congress. PAC data associated with the 1981 *Fortune* sample firms were collected using the Federal Election Commission PACRONYM list, and double checked against *The PAC Directory: A Complete Guide to Political Action Committees* (Weinberger and Greevy 1982) from 1979-1981. As before, only PACs directly associated with the sample firms are

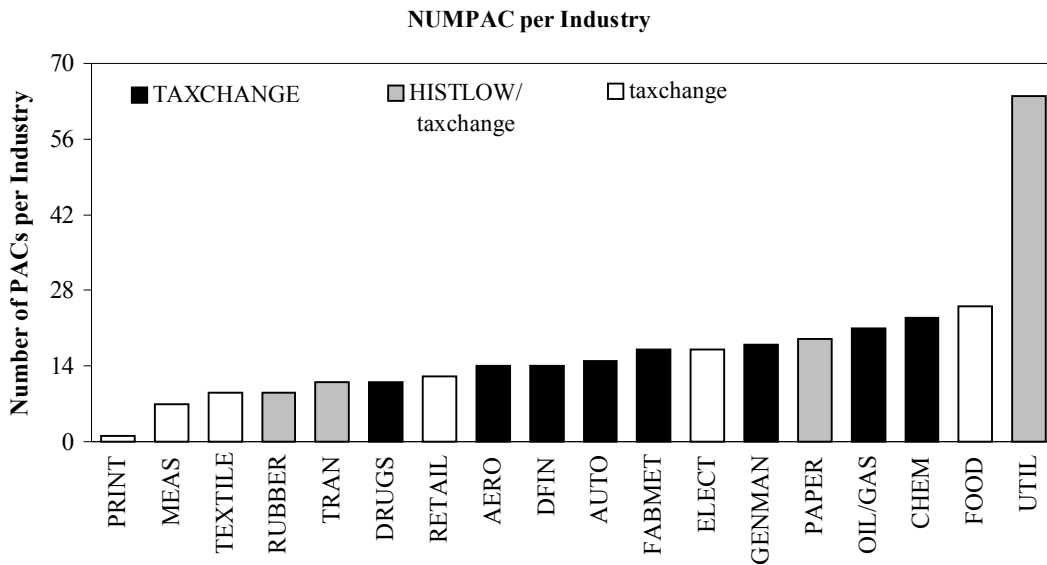


Figure 3-4. Total Number of PACs per Industry

included in this measure, no industry representative PACs (such as the National Association of Manufacturers, the American Chemical Association, etc.) are included. The 1971 Federal

Election Campaign Act (FECA) requires contribution disclosure for all candidates, political parties and political action committees. In 1974, the Federal Election Committee (FEC) was established to oversee the campaign contribution process. In 1976 PAC data became readily available and has been a primary measure of political influence ever since. The average number of PACs per industry (excluding utilities) was 14.29 and the median (including utilities) found in the sample is 14.5 therefore, industries with 15 or more PACs are coded a high score of *1*, while those industries with 14 or less PACs are coded a low score of *0* (see Figure 3-4).

Registered Lobbyist

Neustadt (1990) defines political activities engaged in by corporations as an attempt to go further than gaining access to political leaders. It is also to help shape the process by influencing the development of legislation. Lobbyists must register with both the House and the Senate if they intend to influence specific legislation. The 1946 Federal Regulation of Lobbying Act requires that individuals paid to lobby on behalf of an organization must register quarterly financial reports with the clerk of the House and the secretary of the Senate. Individuals that spend their own money are not required to register nor are individuals that are acting in an educational capacity rather than an advocacy position. Grassroots lobbying (letter writing and phone calls) activities do not require registration.²³ A registered lobbyist is someone who is paid to lobby on behalf of an organization that intends to have direct contact with members of congress in order to secure something of value.

²³ This will be discussed in the Chapter IV. A large grassroots lobbying campaign was launched by the National Association of Manufacturers, the Business Industry PAC, the Chamber of Commerce, and the Business Round Table. However, this data is not included in my sample.

The construction of this measure is a count of the number of lobby registrants that appeared in the *Congressional Quarterly Almanac 1979-1981 (CQA)*. Registrations are included if they were specific to a firm within the sample, and if specifically mentioning either tax issues

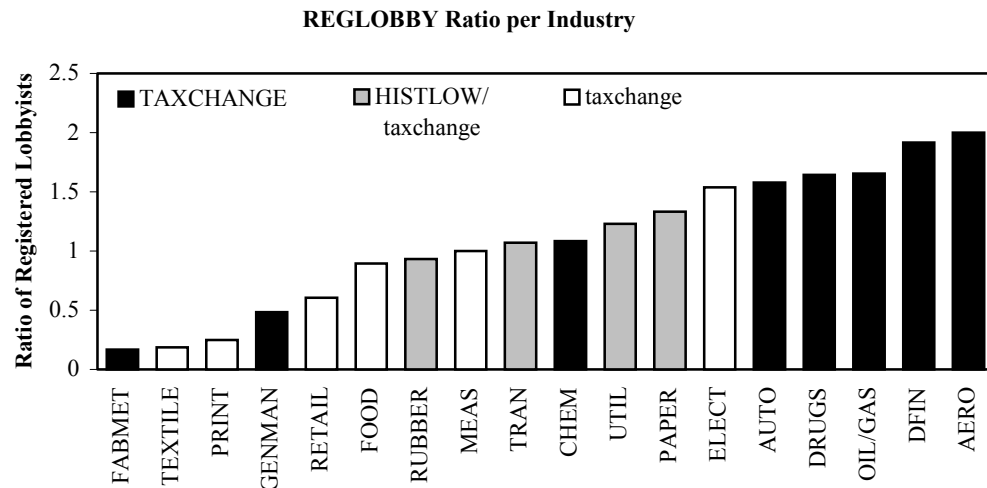


Figure 3-5. Industry Ratio of Registered Lobbyists per Firm

or general firm representation (Congressional Quarterly 1979; Congressional Quarterly 1980).²⁴ The measure for registered lobbyists (REGLOBBY) is the number of registration appearances that occur in the *CQA* from January 1, 1979 through August 1981. A threshold ratio of 1:1 marks the data breakpoint. Therefore, any industry that has a ratio of registered lobbyists to number of firms per industry greater than or equal to 1:1 is coded a high score of 1, and any industry that falls below the 1:1 ratio is coded a low score of 0 (Figure 3-5).

²⁴ A few instances occurred when a firm was listed but other issues were identified as the purpose of the lobbyist. Those cases were not included in this measure.

Washington Public Affairs Office

The emergence of the public affairs office grew in response to 1960's social reform legislation. It became increasingly clear to corporations that they needed to have access to political players as well as have an inside track into political affairs that would enable them to be more effective in promoting and stalling legislative efforts. Vogel (1989: 197) reported that from 1968 to 1978 the number of firms with public affairs offices in Washington increased from 100 to 500. The overall increase of corporate presence in Washington D.C. was significant during this period. The business community recognized that in order to monitor and affect legislative events on a daily basis that a formal commitment to permanent Washington staff was critical. The number of range of representation included:

All told, as of 1980 there were in Washington 12,000 lawyers representing business before Federal regulatory agencies and the Federal courts, 9000 business lobbyists, 50,000 trade-association personnel, 8,000 public relations specialists, 1300 public-affairs consultants, and 12,000 specialized journalists reporting to particular industries on government developments affecting them (Vogel 1989: 197-98).²⁵

Clearly, it had become an important component of corporate political strategy to have a presence on Capital Hill. Data for this measure are from *The National Directory of Corporate Public Affairs* (Close 1983), simply recorded as the presence or absence of a Washington based office (WASHOFF). Those firms with public affairs offices outside Washington, D.C. are not included in this measure. It should be noted that this measure does not take into account the size, budget, or number of personnel in each office, but rather is simply a count of the number of industry firms that committed to a D.C. based office. A clear break in the data occurs between the industries of Drugs (a score of 7) and General Manufacturing (a score of 10). On average,

²⁵ See Vogel (1989) for a intense look at the increase of business political behavior.

industries have 8.5 Washington D.C. offices during this period. Any industry with nine or more Washington D.C. offices is coded a high score of 1 and those falling below nine per industry are coded a low score of 0 (see Figure 3-6).²⁶

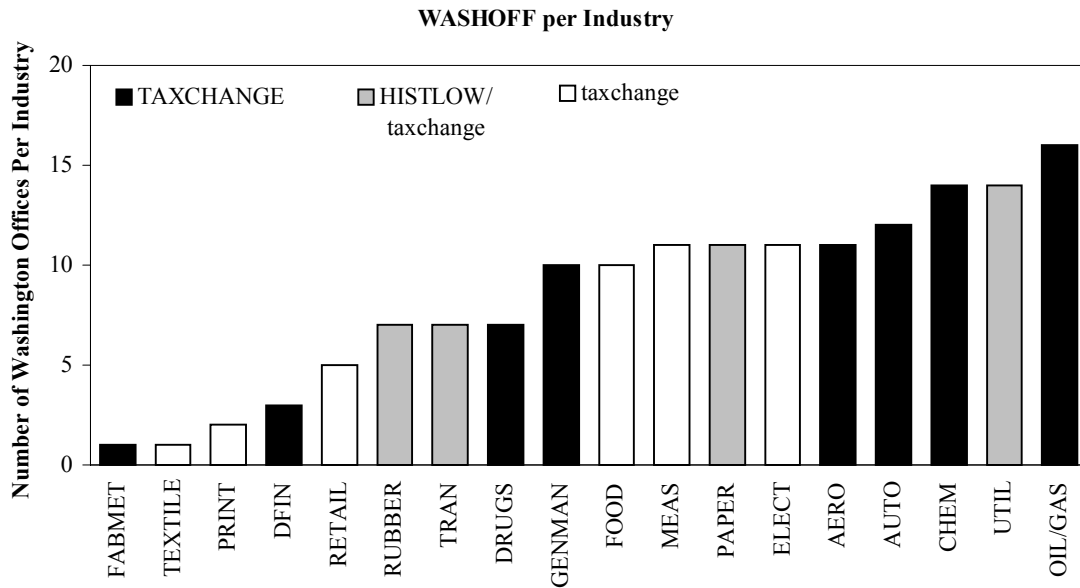


Figure 3-6. Total Number of Washington Offices per Industry

Hired Gun

The last political variable for consideration is the number of outside lobbyists hired by an industry (HIREDGUN). A hired gun is an individual or firm separate from the corporation that acts on behalf of the firm or industry. This measure is different from corporate registered lobbyists, who work solely within and for the corporation, because the commitment to hire an outside firm requires a strong desire to affect a particular piece of legislation beyond that goes beyond the skill or capacity of in-house advocates. Rarely are outside firms hired to simply

²⁶ This measure was not included in the final model.

monitor legislative issues. A hired gun is a special kind of counsel that requires a significant investment in the political process and is not necessarily a regular or typical business activity. Data for this measure was gathered using the *Congressional Quarterly Almanac* (CQ 1979, 1980, and 1981). Hired lobbyist registrations appear as the lobby firm on behalf of the corporate organization and are separate from in-house lobbyists. The ratio of hired guns per firm for the total set is 40% (see Figure 3-7). Comparing each industry to the total, if an industry has a *hiredgun* to firm ratio of 40% or greater it is coded a high score of 1, and those industries falling below 40% are coded a low score of 0.

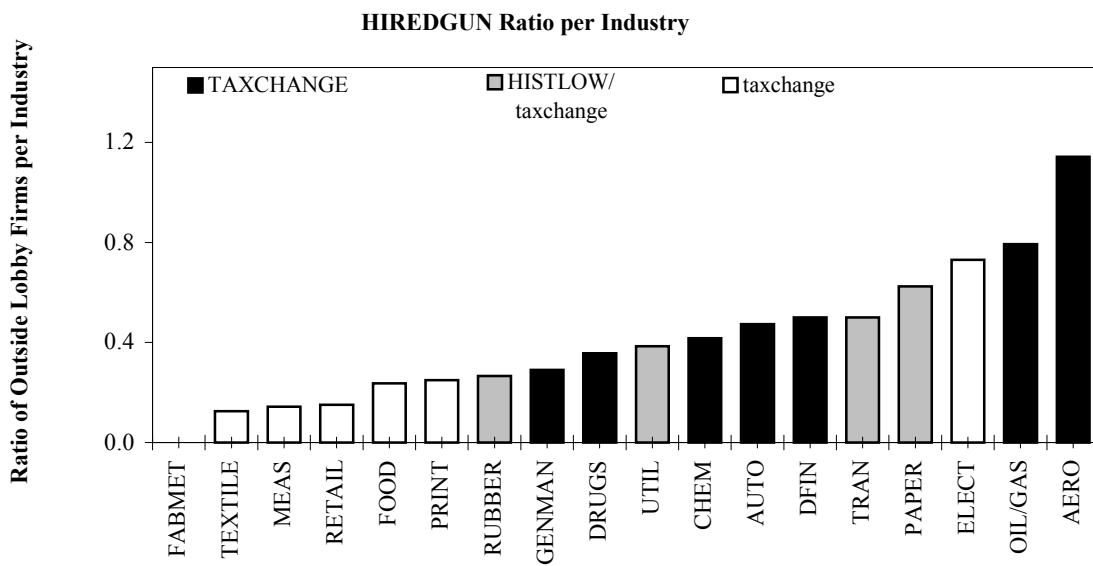


Figure 3-7. Ratio of Outside Lobby Firms per Industry

Structural Economic Factors

The measures used to assess structural economic factors represent a serious departure from traditional measures. Previously structural models posited industry rates of investment and industry levels of unemployment as key to policy change. Neither measure reflects the

theoretical implication that the state acts on behalf of industry interests to support increased levels of capital accumulation and sustain political legitimacy. More accurately, to adequately measure and assess the importance or strength of an industry within the overall economic system a number of measures must be included. In this way, four measures of economic position were developed. Three of these measures are new variable constructs. Taking into consideration the various ways industry position could affect the overall economic system, similar to the manner in which Perrone (Perrone, Wright, and Griffin 1984) discusses strike capacity to disrupt economic production. With this in mind the measures included address the relationship of an industry to the state and the overall economy: 1) Federal Government-Industry Dependence (FEDEP); 2) Industry contribution to the overall production economy (TOTALECO); and 3) Inter-industry dependence (INTERDEP), are highly interconnected, and/or that are major providers to the Federal Government. The economic variables are all constructed using national level data, in order to represent the industry from which the firms belong. This is different from the political data, which was collected at the firm level and then aggregated by industry. Using the data in this manner was purposeful. The intent was to assess the significance of a particular industry within the broader economy in relationship to their particular political behavior. Since the largest firms are the most active politically, it is likely that even with the different levels of data, the sample represents the political strength of the entire industry as well as their economic position. When lobbying, an organization will present their case in terms of the broader group for which they are associated. For example, manufacturing firms advocate the position of the manufacturing industry and the impact that the industry has on the nation's economic health, even if the provisions that they seek are of specific benefit to them personally.

Industry Input-Output Matrix

It was necessary to develop a measurement tool for examining the dynamic economic relationships within and between industries. Building on the concept of economic disruption used to measure union-strike threats (Perrone et al. 1984), I developed an industry production matrix from which three conceptually unique measures of economic performance in order to capture the structural interdependence among industries and the state. The source for the aggregate industry level data was the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), which publishes inter-industry production, summarizing the use of commodities by industries (Young and Planting 1983).

Using the 1979 Bureau of Economic Analysis (BEA) industry/commodity tables, the value of commodity exchange between 77 industries, the state, Federal government and various miscellaneous commerce units (totaling 85 economic units) an input-output matrix was constructed (see Appendix E). Each of the 77 industry segments are matched with the 18 industry segments according to the corresponding 2-digit SIC (standardized industrial code) industry segments that are found in the original 1981 *Fortune* sample. The 1981 *Fortune* 500 and *Fortune* 300 lists does not consist of the same number of the industry segments as found in the BEA industry list; the input-output matrix maintained the BEA industry-use categories in order to minimize any data loss. The matrix table is read both across each row and down each column. The row data represents the value (in millions) of goods sold to the corresponding columnar industries. The row total is the total commodity output for the industry. The column (input) total is the total output consumed by the column industry. This matrix was developed and used to measure inter-industry dependency, economic strength, and Federal–industry relationship variables.

While rate of investment is a common measure used throughout the literature as the independent variable for state-structural response, there is reason to believe that investment and tax breaks are not associated in a meaningful manner. In the mid-1970's many industry associations "manufactured" economic reports that claimed tax breaks and investment incentives were necessary to stimulate growth (Chell 1981). Stock market fluctuations and rates of investment are closely linked to interest rates, not tax rates.

Inter-Industry Dependency

In contrast to rate of investment, a traditional explanatory variable used in structural arguments, I propose that a more effective measure of economic importance is the number of inter-industry connections (INTERDEP) (see Figure 3-8). Inter-industry connectedness is the degree to which one industry interacts with other industries. The connection is important because if an industry fails, it can affect disrupt other industries both in terms of supplying and receiving goods. The goal of this measure is to examine the broadest level of meaningful number of inter-industry connections. Using the row total (total output per industry, see Appendix E), percentage output values are calculated for the 2%, 3%, 4%, and 5% levels; counting the total number of industry connections at each of these levels. For example, the aerospace industry has a total output of just over \$16 billion. The corresponding figures for the 2-5% levels were \$320 million, \$480 million, \$640 million and \$800 million, respectively²⁷. Aerospace has three inter-industry connections at each of the percentage thresholds. Although aerospace is an industry with only a few meaningful connections, the few connections it has are very strong. Compare this to general manufacturing, with 14 inter-industry connections at the 2%, but only seven inter-industry

²⁷ All economic variables are expressed in millions.

connections at the 5% level. This pattern of inter-industry connectivity was consistent throughout the sample. The number of inter-industry connections dramatically drops at the 3% level and is virtually nonexistent at the 4% and 5% levels. Because the goal of this measure is to capture the broadest number of inter-industry connections, the 2% level proved most effective. At this level, a clear differentiation is made between industries while maximizing the total number of inter-industry connections. After setting the connection level, the threshold had to be

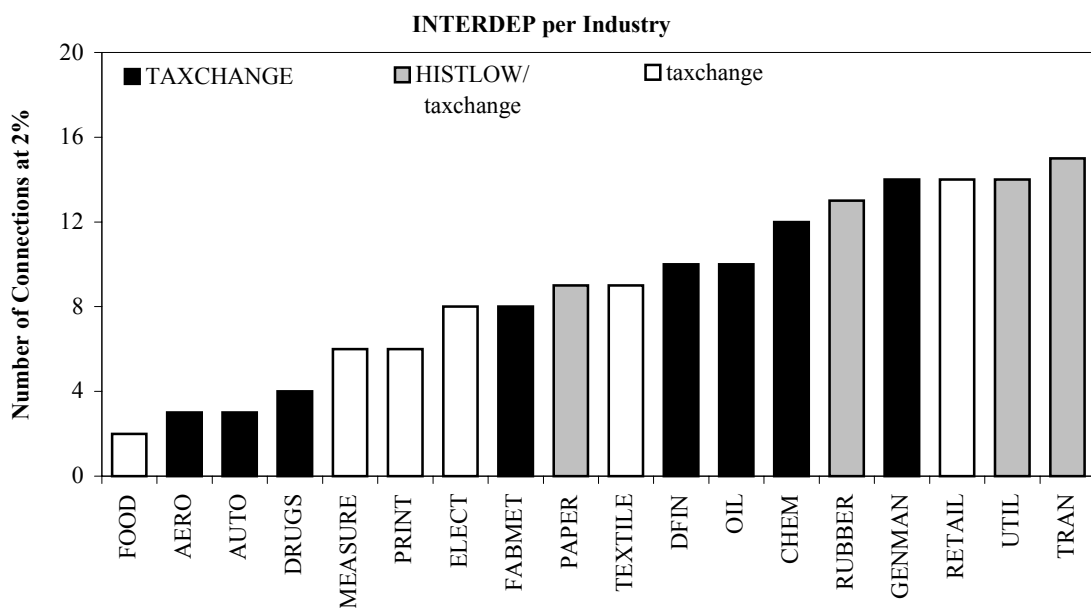


Figure 3-8. Total Number of Inter-industry Connections

established. The average number of inter-industry connections per industry is 8.84. A break in the data occurs at the 10 inter-industry connection level, and because this is consistent with a 95 percent confidence level, the threshold was set at 10 or greater inter-industry connections. Those industries with 10 or more inter-industry connections are coded a high score of *1*, and those industries with nine or less inter-connections are coded a low score of *0* on INTERDEP.

Economic Structural Strength

While an industry’s total contribution to the overall economy, posited by both class dominance and structuralist theory as vital for gaining state favor and policy consideration, structuralist theory holds that economic position alone should be positively related to policy outcome. A measure of total economic worth for each industry was constructed from the input-output matrix (Appendix E). The measure used for total economic strength (TOTALECO) is the industry percentage of total industry output (the row total divided by total economic production for each industry). The average economic production level is 3.5% for the 18 industries identified in the sample. With a 95 percent confidence-level, the threshold would be set at 4.2% industry-to-total economic production. However, an apparent break in the data occurs at the mean. Using the mean as the threshold encompassed a more representative set of industries. Thus, industries that make up 3.5% or more of the total economy are coded a high score of 1, and those industries falling below 3.5% are coded a low score of 0 score (see Figure 3-9).

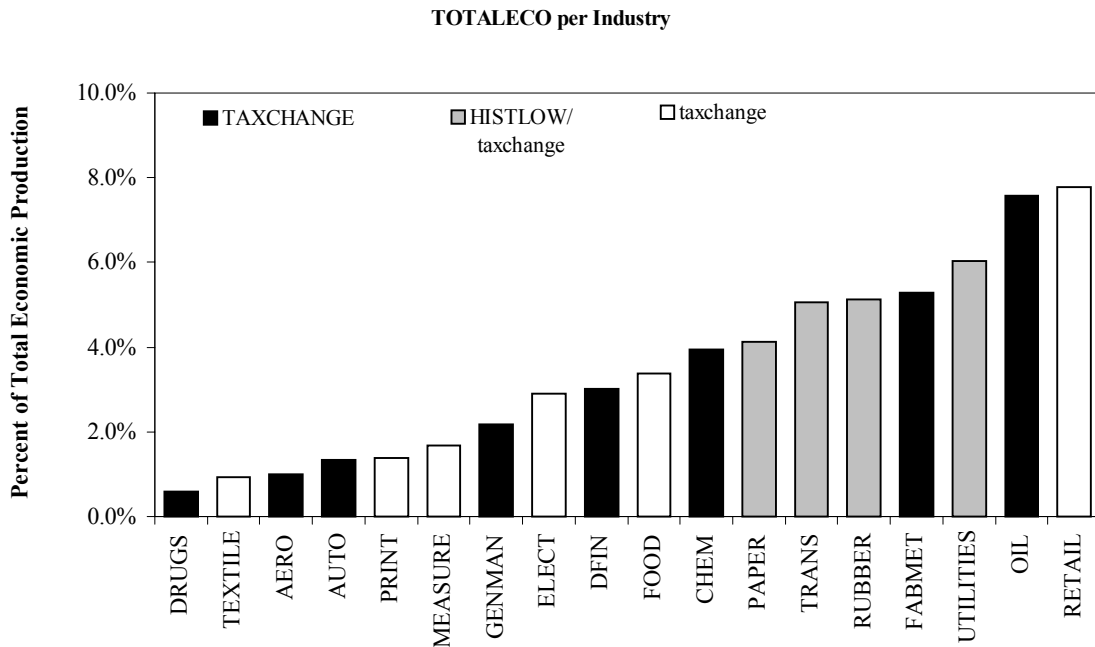


Figure 3-9. Industry Production as Percentage of Total Economic Production

Federal–Industry Relationship

The last measure derived from the input-output matrix examines the relationship between the Federal government and a single industry (DEPFED). Industries that rely on the Federal government as special consumer of their goods are more likely to have a strong relationship with the state. For example, the aerospace industry supplies over 82% of its production to the

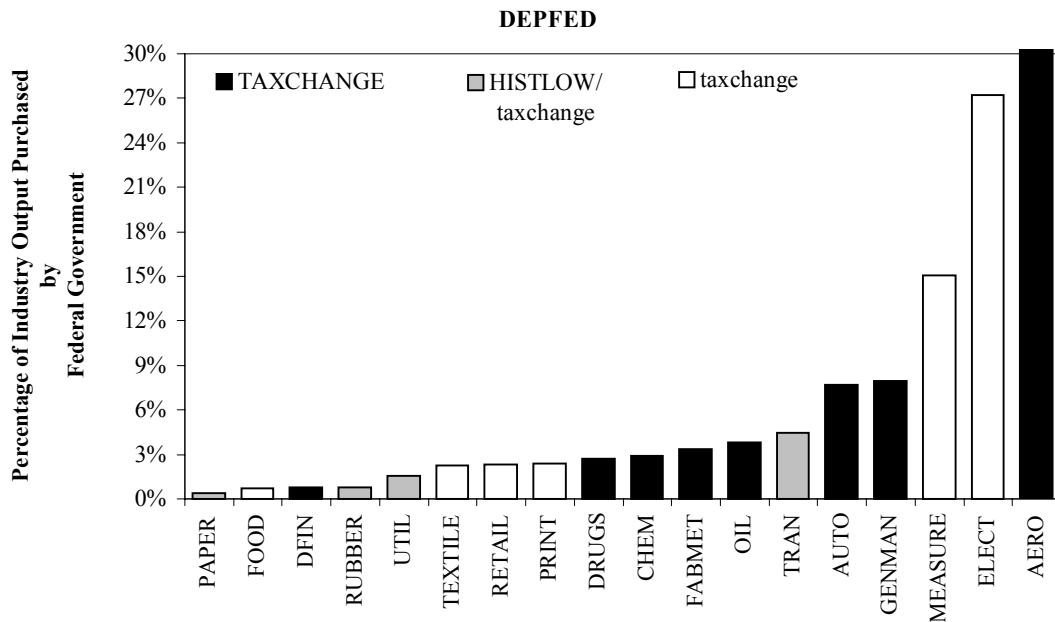


Figure 3-10. Percentage of Industry Production Purchased by Federal Government²⁸

Federal government. This makes the aerospace industry highly dependent on the Federal government, and vice versa. The goods purchased from the aerospace industry cannot be found elsewhere in the economy. Any industry for which the (see Figure 3-10) Federal Government

²⁸ Aerospace (AERO) had a value of 82%, which exceeded the graph scale.

purchased over 3% of their total goods is coded a high score of *1*, and each industry with less than 3% Federal purchase is coded low score of *0*.

Employment

In addition to economic stability, the state is motivated to support high levels of employment.

Rather than focusing on unemployment levels, a more accurate measure of employment strength

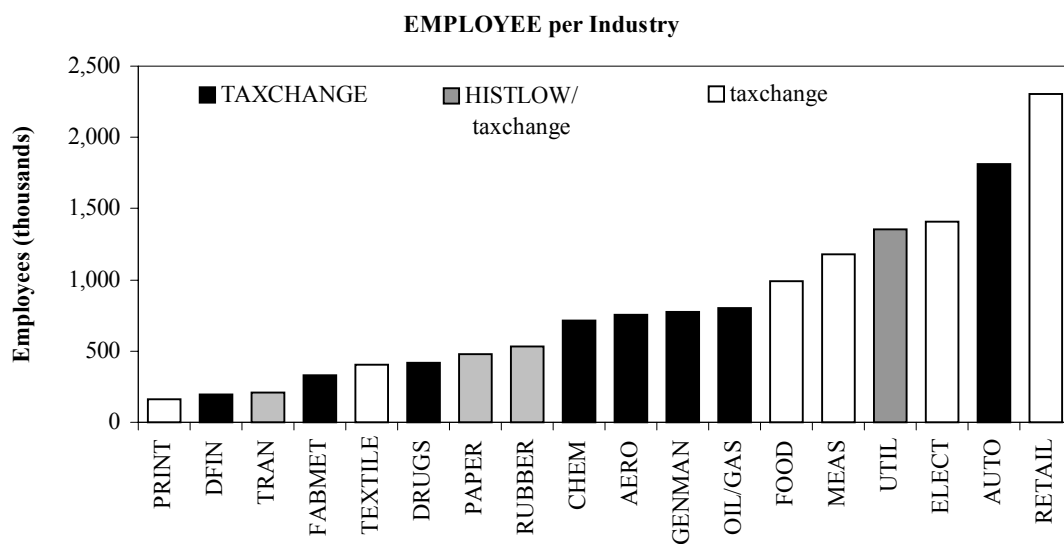


Figure 3-11. Average Number of Employees per Industry

is dictated by structural theory. Therefore, employment rather than unemployment would be an industry characteristic that would predict state favor. If structural theory is supported, the industries with the greatest number of workers should have lower effective tax levels. While the average number of employees per industry is over 800,000, the data has a more natural break at the between 550,000 and 700,000 employees (see Figure 3-11). Industries with an average of more than 600,000 workers per year are coded a score high of *1*, and industries with less than 599,000 or less are coded a low score of *0*.

Sample and Unit of Analysis

The unit of analysis is industry. The initial sample is comprised of the largest corporations (in terms of assets) identified in the *Fortune Industrial 500* and *Fortune Service 300* lists for 1981, aggregated by industry. Each firm was aggregated according to the standard industrial code (SIC code discussed below) that corresponds to the primary industry segment within which the corporation operates. This was the basis of the sample construction.

The privileged economic position of these corporate organizations serves as the basis for group participation (Caporaso and Levine 1992).²⁹ Previous research (Galaskiewicz 1985; 1987; Mizruchi 1989a; 1989b; Useem 1984; Whitt 1982) found that corporate leaders align their political behavior with similar corporations. Thus the likelihood that corporations within similar industries will act in similar manner is great, as demonstrated by Mizruchi's (1989a; 1989b) work on similarity of PAC involvement. Industries are often subject to similarities in plant, employee, technology` demands, and market conditions.³⁰

In the case of tax policy, the tax code itself has special provisions for particular industries such as oil and gas, real estate, and financial institutions. It was reported in *Business Week* that the industries slated to "win from the pending (1981) tax legislation would be steel, utilities, cement, and railroads as well as petroleum refining" (1979a: 116). Even in light of what are viewed as general business lobbies such as the Business Round Table, the National Association of Manufacturers, or the Chamber of Commerce, individual industries were also engaged in political behavior aimed at getting tax breaks that would suit their particular needs.

²⁹ Selective incentives and coercion are also listed by Caporaso and Levine (1992) as motivations for group participation.

³⁰ Free-riders (Olson 1965) are not a concern addressed in this study. I assume that corporations are unified on by interest and industry structure. Membership in the industry is determined by economic similarity of industry structure.

The selection of industry as the unit of analysis provides a basis for evaluating differences between economic segments. Industries vary by degree of economic strength, coordination and similarity. This research explores the causal conditions in which industries are able to effect policy change and take advantage of the subsequent advantages in the outcome of that policy as well as the conditions under which industries engage in political activities to achieve their goal or maintain their status. Salamon and Siegfried (1977b) stressed the importance of developing empirical tests of economic structure and political influence. They posited that, “whatever relationship exists between economic structure and political influence in general should be evident in variations *among* industries in securing public policies favorable to them” (Salamon and Siegfried 1977b) (emphasis added).

Classwide unity is not the underlying assumption. The models tested utilize industry as the unit of analysis because industries are comprised of firms with similar organizational constraints and demands from the broad political-economic environment. This approach provides a basis for comparison that reaches beyond firm level analysis or broad national industry classifications. Firm level data lacks a solid basis for comparison and national industry aggregated data fails to differentiate types or levels of organization. If all industries behavior in a similar manner or have similar outcomes regardless of their political behavior or economic position, then the conclusion would be that industry classification is not useful. However, industry differences are apparent from the onset. Failure to differentiate industries segments obfuscates the different patterns of economic and political behavior that are associated with tax policy outcomes. Salamon and Siegfried (1977b) observed that if industry behavior is not taken into account, some outcomes might be inappropriately attributed to all industries. Business as a single unit of interest limits the understanding of the inner dynamics of business. Moving

beyond the notion of business as simply a monolithic interest provides opportunities for analysis that can address more complex issues than simply business versus labor.³¹

In 1981, the determination of industry classification reflected the primary area of business within which they operated as well as specific types of product lines; every firm has an assigned Standard Industrial Classification (SIC) code.³² The SIC code distinguishes firms by industry segment or major group (2-digit) and product line (3 and 4-digit) classifications. Using industry segment as the unit of analysis meant that the most appropriate SIC classification would be the 2-digit SIC code for primary industry segment. This reflects the major or broad industry segment in which the corporation operates. The initial 1981 *Fortune* sample had 35 distinct industry segments, ultimately collapsed into 18 industry categories.

The 1981 *Fortune Industrial 500* and *Service 300 (Fortune 1982)* firms were included in the study if they met three basic criteria. First, the firm had to be on the *Fortune 1981* lists of largest U.S. corporations. Second, a minimum of 10 firms from each industry had to remain in the sample (if less than 10 firms were present then an effort was made to incorporate them into a related area) for the industry to be included in the final analysis. The political data did not restrict the sample. Since Compustat was used to supply the dependent variable, data was limited to those firms with complete tax and income data for each of the years included in the study.

The third and final criteria for inclusion in the final sample, was the industry had to show a net profit for the three years prior to passage of the 1981 Economic Recovery Tax Act

³¹ Variability also exists within labor and therefore should be treated as unique segments of the economic sector. Union sectors versus nonunion sectors may benefit differently from different labor initiatives. To claim labor as a universal condition is also limiting.

³² Today the SIC classification has been replaced with the North American Industry Classification System (NAICS). While there is some similarities, the NAICS classifications are more specific.

Table 3-2. Industry Segment Descriptions

Industry	Segment Description
Aerospace (AERO)	Aircraft and parts.
Automotive (AUTO)	Motor vehicles and equipment; other transportation equipment.
Chemical (CHEM)	Chemicals and selected chemical products, paints and allied products.
Diversified Financial (DFIN)	Finance and insurance.
Drugs, Hospital Supply, and Leisure (DRUGS)	Drugs, cleaning and toilet preparations.
Electrical and Electronics (ELEC)	Electrical transmission and distribution equipment and industrial apparatus; household appliances, electrical lighting and wiring equipment, radio, television, and communication equipment, electronic components and accessories; and miscellaneous equipment and supplies.
Fabricated Metal Products, except machinery and transportation equipment (FABMETAL);	Heating, plumbing, and fabricated structural metal products, screw machine products and stampings, other fabricated metal products.
Food, Beverage and Tobacco (FOOD)	Food and kindred products, tobacco manufacturers.
Rubber, Plastics, Stone and Glass (RUBBER)	Rubber and miscellaneous plastic products, plastics and synthetic materials.
Measuring, Analyzing and Controlling Instruments: photographic, medical, watches, clocks and computers (MEAS)	Office, computing, and accounting machines, service industry machines.
Oil, Gas, Mining and Pipelines (OIL&GAS)	Crude petroleum and natural gas, petroleum refining and related industries.
Paper and Allied Products (PAPER)	Paper and allied products, except containers and boxes, paperboard containers and boxes.
Printing and Publishing (PRINT)	Printing and publishing.
Retail and Service Trade (RETAIL)	Wholesale and retail trade.
Textiles (TEXTILE)	Broad and narrow fabrics, yarn and thread mills, Miscellaneous textile goods and floor coverings, apparel, miscellaneous fabricated textile products.
Transportation (TRANS)	Transportation and warehousing.
Utilities (UTIL)	Electric, gas, water and sanitary services, communication other than radio and television.

(Source: Bureau of Economic Analysis: Summary Input-Output Tables of the U.S. Economy: 1976, 1978, and 1979.)

(1979-1981) and the three years after the passage of the bill (1982-1984). While the first two criteria are concerned with the validity of the study, the third criteria addresses tax computation. It is impossible to calculate an outcome for effective tax rate if each component of the equation is a negative value. The result of this calculation would be a positive effective tax rate (negative/negative), and therefore an illogical outcome. It is for this reason that the industry, primary metal was eliminated from the sample. The three eliminated industries, in addition to other cases wherein the financial data was unavailable or incomplete, reduced the final sample size to 368 firms that were represented by 18 industries (Table 3-2). In the 18 industries included in the sample, 16 industries experienced less than 50% loss of firms per industry. However, two industries, transportation and diversified financials, however, respectively lost 72% and 76% of their original industry sample.

CHAPTER IV

RESEARCH FINDINGS

Overview

Corporate demand, public sentiment and legislative response to anemic economic growth, rising inflation and national industrial crises set the stage for the passage of the Economic Recovery Tax Act of 1981 (ERTA81). In this chapter, I will present the findings from a qualitative comparative analysis of the outcome variable, tax change, in relationship to both structural economic and political behavior variables for each of 18 industries using three models of the dependent variable across three types of analysis (economic, political and combined political-economic). Separate analyses of both the political and economic variables as well as a separate analysis combining the variables allowed for the examination of the utility of the exclusive variable analysis versus the combined analysis. The combined analysis demonstrates that the interaction between both the political and economic variables provides a more thorough explanation than the separate models. The utility of the exclusive political and economic analyses are limited due to the excessive number of contradictory rows (discussed below), while the combined analysis was free of any contradictions and provides a more precise explanation of the causal conditions related to reduction of effective tax rates.

Three Models of the Dependent Variable

Each analysis (economic, political and combined) was conducted using three models of the dependent variable. The three dependent variable models result from an examination of industry tax status. The raw data clearly indicates that there are several forms that tax status could take:

- 1) Eight industries were able to achieve the desired 5% or greater reduction in effective tax rate;
- 2) Seven industries had tax rates for both periods that fell below 20%; and 3) Six industries

failed to either reduce their tax 5% or greater, or have historically low tax rates. This led three separate models of the dependent variable. Each variable is discussed using the variable acronym and a particular model of the dependent variable (Models 1, 2 and 3). The capitalization of an item (i.e., *TOTALECO* or *TAXCHANGE*) indicates the high score for each of these particular measures. If an item appears in lowercase letters, (i.e., *taxchange*) it represents a weak or low score on that particular measure. The first model (Model 1) compares 18 industries on their ability to achieve the desired 5% or greater reduction in effective taxes (*TAXCHANGE*).³³ The second model (Model 2) combines industries that achieve the desired tax change (*TAXCHANGE*) with four industries that have historically low effective tax rates but did not achieve the desired tax change (*HISTLOW/taxchange*). The dependent variable for Model 2 is noted as: *TAXCHANGE/HISTLOW*. The third model of the dependent variable (Model 3) removes the four *HISTLOW/taxchange* industries, and compares only those industries that are *TAXCHANGE* and *taxchange/histlow*. The use of these three models provides insight on matters concerning change in tax rates and the conditions that are associated with tax change rather than tax change and historically low status. The data clearly indicate that the *HISTLOW/taxchange* industries create conflicts and reduce the ability to clearly analyze the relationship between economic and political variables and tax change. For example, utilities is an industry with a historical effective tax rate that is very low year in and year out; it was an industry that participated heavily in the political process as well as having strong economic ties that were not based solely on a relationship with the Federal government. Examining the contradictions for

³³ Please note that any discussion of variables wherein an acronym is used a term in ALL CAPS is the high or strong value on the measure, and all-lower-case term represents a low score for that measure.

both the economic and political analyses describes those industries not clearly differentiated by an exclusive variable approach (discussed later in this chapter).

Correlation Analysis

Table 4-1 presents the correlation statistics for industry structural economic position and political behaviors associated with the dependent variable change in average industry effective tax rate ($TAXCHANGE =$ greater than 5% change in effective tax rate). All variables were coded “1” or “0” for each measure, including the dependent variable. Note that correlations for both the number of employees and the presence of a Washington D.C. office are weak in all three models. In fact, the number of employees has a weak negative relationship to the dependent variable in Models 2 and 3. This is contrary to what is expected.

Total economic worth ($TOTALECO$) presented a weak negative relationship to the dependent variable in Model 1 (-0.13), but responds positively to the recoding of the dependent variable in Model 2. Removing industries with historically low tax rates but not tax change (Model 3) weakened the correlation between $TOTALECO$ and $TAXCHANGE$. This supports the idea that $TOTALECO$ has more in common with the *HISTLOW/taxchange* industries than either the $TAXCHANGE$ or *taxchange* only industries.

The level of Federal-industry interaction ($DEPFED$) declines from Model 1 to Model 2 and then increases again in Model 3. This result is due to the fact the eight $TAXCHANGE$ industries had strong relationships with the Federal government, while the four industries included in Model 2 (*HISTLOW/taxchange*) had weaker associations with $DEPFED$ than did $TAXCHANGE$ industries. Overall, the level of Federal purchases within an industry had a relatively strong correlation with a positive tax policy outcome. The correlations for all four political behavior variables increases in Models 2 and 3; the strongest correlation is associated

with directed political campaign contributions in Model 3 (.75). The other directed political strongest correlations are associated with Federal-industry relations and directed political campaign funds (DEPFED 0.58, and PACFUND 0.55). In Model 2, the DEPFED correlation

Table 4-1. Correlation Table: Independent Variables for Each of Three Dependent Variables

Independent Variable	Dependent Variable Model 1 N=18	Dependent Variable Model 2 N=18	Dependent Variable Model 3 N=14
DEPFED r^2	0.58 (0.33)	0.32 (0.10)	0.56 (0.31)
TOTALECO r^2	-0.13 (0.02)	0.40 (0.16)	0.23 (0.05)
INTERDEP r^2	0.10 (0.01)	0.40 (0.16)	0.34 (0.12)
PACFUND r^2	0.55 (0.30)	0.63 (0.40)	0.75 (0.56)
REGLOBBY r^2	0.25 (0.06)	0.40 (0.16)	0.42 (0.17)
HIREDGUN r^2	0.35 0.12	0.55 0.31	0.58 0.33
NUMPAC r^2	0.22 (0.05)	0.24 (0.06)	0.29 (0.08)
Independent Variables Removed from the Analysis			
EMPLOYEE r^2	0.13 (0.02)	-0.16 (0.03)	-0.04 (0.00)
WASHOFF r^2	0.13 (0.02)	0.08 (0.01)	0.13 (0.02)
<p>Model 1: Dependent Variable: <i>TAXCHANGE</i>. All industries that achieved a reduction in average effective tax rate of 5% or greater were coded "1". If an industry fell below 5%, it was coded "0".</p> <p>Model 2: Dependent Variable: <i>TAXCHANGE/HISTLOW</i>. If an industry has a historically low tax rate (20% or lower for both periods) and has and/or has achieved the desired reduction in effective tax rate of 5% or greater it was coded "1" and if it was only taxchange it was coded "0".</p> <p>Model 3: Dependent Variable = <i>TAXCHANGE</i>. If an industry achieved a reduction in average effective tax rate of more than 5%. The four taxchange/HISTLOW industries those that were historically low but did not achieve the 5% or greater change in effective tax rate, were removed from the sample. Otherwise, coding was the same as Model 1.</p>			

activity is associated with the hiring of outside representation. This measure also has a moderate association with the dependent variable. In Model 1, the declines when three of the four historically low industries added to the “winner” category do not receive high scores on DEPFED. However, the correlations for all remaining variables increase (TOTALECO, INTERDEP, PACFUND, REGLOBBY, HIREDGUN, and NUMPAC) were moderately positive scores. In Model 3, the three strongest correlations are: PACFUND (.0.75), HIREDGUN (0.58), and DEPFED (0.56). Correlations associated with total economic strength (TOTALECO) and number of inter-industry connections (INTERDEP) declines from Model 2 to Model 3, while the level of Federal-industry dependence (DEPFED) returns to a similar correlation level as found in Model 1. Most of the correlations are not extremely strong throughout each of the models, and small sample size renders statistical significance difficult to obtain, resulting in very low statistical power. However, the variables included in the final analysis have at least a moderate correlation with the dependent variable and merit examination.

In an attempt to establish an empirical basis from which to construct the independent variables, use of correlation analysis provided basis for variable inclusion. A correlation of 0.29 or higher was set as the threshold for variable inclusion. These two variables, EMPLOYEE and WASHINGTON OFFICE, fail to meet the inclusion criteria and therefore were removed from the final qualitative comparative analysis. The fact that employment is not significant this is especially surprising. The largest industry employers did not consistently benefit from the change in tax law; in fact, it was associated with a weak negative effect. In a similar manner, the presence of an office in Washington D.C. did not even remotely affect the likelihood of reducing industry effective tax rates. The seven independent variables (PACFUND, REGLOBBY,

HIREDGUN, NUMPAC, DEPFED, TOTALECO, and INTERDEP) were used to assess the causal conditions associated with tax winners.³⁴

Separating the dependent variable into three distinct measures (labeled Models 1, 2, and 3) insures that the complexity of the dependent variable relating to historical trends and historical winners is accounted for separate from the ability to significantly reduce effective tax rates through a legislative vehicle. Because the intent of this study is to examine change in industry effective tax rates, using Models 1 and 3, controls for those industries that are “winners” historically, but significantly change their status during this period. The final discussion centers on Model 3, since it separates the analysis to just winners and non-winners.

Qualitative Comparative Analysis: Results

Although not required by qualitative comparative analysis, the correlation analysis shed light on the relative value of each independent variable. One of the primary goals of this study is to examine the complex economic and political relationships associated with tax policy and tax policy outcomes using Boolean techniques facilitated with qualitative comparative analysis (QCA). It is not necessary to use correlation analysis when conducting a Boolean analysis. In fact, when using a correlation measure to assess the relationship between variables, one might directed to drop many of the variables due to their limited association with the dependent variable.

Because the capacity of QCA is to assess complex, varied causal conditions, the limitations of standard statistical analysis need not apply. However, as a tool, the correlation

³⁴ As discussed earlier, it is difficult to classify the industry samples as “losing” since none of them paid the maximum level of tax, and only one industry paid above 35%. Comparably they did “less well.”

Table 4-2. Raw Data Truth Table

INDUSTRY CASES	Independent Variables							MODEL 1 TAXCHANGE N=18	MODEL 2 TAXCHANGE+HISTLOW N=18	MODEL 3 TAXCHANGE (HISTLOW REMOVED) N=14
	DEPFED	TOTALECO	INTERDEP	PACFUND	REGLOBBY	HIREDGUN	NUMPAC			
GENMAN	1	0	1	0	0	0	1	1	1	1
AUTO	1	0	0	1	1	1	1	1	1	1
DFIN	0	0	1	1	1	1	0	1	1	1
FABMET	1	1	0	0	0	0	1	1	1	1
CHEM	1	1	1	1	1	1	1	1	1	1
OIL&GAS	1	1	1	1	1	1	1	1	1	1
AERO	1	0	0	1	1	1	0	1	1	1
DRUG	1	0	0	1	1	1	0	1	1	1
TRANS	1	1	1	0	1	1	0	0	1	OMIT
RETAIL	0	1	1	0	0	0	0	0	0	0
UTIL	0	1	1	1	1	1	1	0	0	OMIT
MEAS	1	0	0	0	1	0	0	0	0	0
TEXTILE	0	0	0	0	0	0	0	0	0	0
PRINT	0	0	0	0	0	0	0	0	0	0
ELEC	1	0	0	0	1	1	1	0	0	0
FOOD	0	1	0	0	0	0	1	0	0	0
PAPER	0	1	0	1	1	1	1	0	1	OMIT
RUBBER	0	1	1	0	0	0	0	0	1	OMIT

analysis provides some idea of how strong the correlate relationships are between the independent and dependent variable. Because a number of the measures that I have developed and incorporated into my analysis are new, and since it is impossible to determine statistical strength from QCA, the correlation analysis serves to provide critical assessment as to the

necessity or utility of a measure. Contradictions, or contradictory statements, arise when identical causal sets have different outcomes. The series of prime expressions use the logic terms of *AND* (noted by the use of ***) and *OR* (noted by the use of *+*) are used to indicate Boolean algebraic multiplication and addition processes, respectively. The causal set notation is characterized through the capitalized of items that score high and the use of lower case notation for those items that score low on each particular measure (e.g., DEPFED and depfed).³⁵

Table 4-2 summarizes the raw data truth table detailing the various causal sets for three variations of the dependent variable TAXCHANGE. Preliminary examination of the data suggested that the dependent variable (TAXCHANGE) was complicated by those industries with historically low effective tax rates but unable to further reduce their tax rate by the 5%. This led to the conclusion that the analysis must take into account the historically low industries (those industries with average effective tax rates below 20% for both periods) by either incorporating them into an overall “winner” classification or eliminating them from the analysis.

Three Separate Analysis: Economic, Political, and Combined

In order demonstrate the impact of the different explanations; separate QCA analyses were conducted for both the political and economic variables on all three models. Following the economic and political models was an analysis of the combined model. The result, was a more complete and definitive explanation of industry power; the result of an interaction of various forms of political and economic characteristics. The fact that past research has focused

³⁵ Throughout the discussion of variables and models, capital letters denote a strong condition, and lowercase letters denote a weak condition. The models relate to the three forms of the dependent variable used in this study. When findings are simplified they are represented in notion format. For example, if strong federal relationship, weak total economic, and strong inter-industry conditions are found, it would be noted as Dtl.

exclusive theoretical or variable-oriented approaches has led to a discounting of the interaction between structural position in conjunction with directed political behavior that leads to power and ultimately benefit from the state. Together the integrated approach informs us about the causal conditions that determine “who wins” from “who plays.”

Contradictions or contradictory rows result when identical causal sets have different outcomes. Ragin (1987) suggests several solutions to overcome contradictions. The first is to return to the theory to identify another cause yet unidentified. The second approach is to disregard cases that have too few occurrences. A third approach allows for the recoding of items depending on the tendency of the cases (for example if 15 out of 16 cases had positive outcomes and only one case had a negative outcome, it is feasible that the causal set would be considered a positive outcome). When this third approach is taken the causal set is no longer has a *certain* outcome and must then be considered only “likely.” When contradictory rows are included with *certain* rows, then the outcomes are only “possible.” In this analysis, only *certain* outcomes (positive and negative) were considered. The expressed contradictions in the limited models (economic or political variables only) are so severe that it is clear that other explanations (variables) are contributing to the outcome. The combined analysis highlights the importance of an interaction between economic condition and political behavior in a manner that has not been demonstrated prior to this study.

Structural Economic Causal Conditions

Structural economic variables examine the degree to which economic position affects industry power. The notation for the economic analysis is:

$$TAXCHANGE = DEPFED * TOTALECO * INTERDEP$$

DEPFED, TOTALECO, and INTERDEP are three unique and conceptually important economic measures. The first variable, DEPFED, measures the Federal Government's demand for goods from a particular industry. Of the eight industries that achieved greater than 5% reduction in effective tax rate (Model 1), seven scored high on DEPFED, while only three of the ten *taxchange* industries scored high on this measure. The second measure, TOTALECO, measures industry production as a percentage of total production. Only three "winner" industries scored high on this measure. However, all four of the *HISTLOW/taxchange* industries scored high on this measure. The third measure, INTERDEP, measures the number of inter-industry connections. Four of the eight "winning" industries scored high on this measure, as did three of the *HISTLOW/taxchange* industries.

Table 4-3 lists the raw data matrix for these three variables.³⁶ For Models 1 and 2, there are eight outcomes or rows (which is equal to the total possible number of outcomes 2^3) and for Model 3 there are seven outcomes.³⁷ Model 1 has two contradictory rows, accounting for eight of the 18 rows (five of which are associated with "1" or positive outcomes and three of which are associated with "0" or negative outcomes). Model 2 has three contradictory rows, accounting for 10 of the 18 cases. Model 3 has one contradictory row, comprising 5 of 14 cases. The causal combinations represent the actual cases found in the data set, for which "1" outputs are reduced to a "partially reduced sum-of-products equation" and then further reduced using prime implicants (Ragin 1987:108).

³⁶ The truth table is the raw data matrix expression of the algebraic combinations of causal sets. Each row represents a possible outcome and combination of outcomes for each of the independent variables.

³⁷ The term outcome refers to the number of rows in the truth table.

Table 4-3. Truth Table: Economic Causal Conditions for Three Models

Model 1 N=18 DTI=TAXCHANGE Case Frequency			Model 2 N=18 DTI=TAXCHANGE/HISTLOW Case Frequency			Model 3 N=14 DTI=TAXCHANGE Case Frequency		
Case	1	0	Case	1	0	Case	1	0
1011	1	0	1011	1	0	1011	1	0
100C	3	2	100C	3	2	100C	3	2
0011	1	0	0011	1	0	0011	1	0
1101	1	0	1101	1	0	1101	1	0
111C	2	1	1111	3	0	1111	2	0
0110	0	3	011C	2	1	0110	0	1
0000	0	2	0000	0	2	0000	0	2
0100	0	2	010C	1	1	0100	0	1
Minimized Outputs: Certain "1" Outcomes								
$\text{totaleco} * \text{INTERDEP} + \text{DEPFED} * \text{TOTALECO} * \text{interdep}$ 1011 and 0011 = tI (GENMAN & DFIN) 1101 = DTi (FABMET)			$\text{DEPFED} * \text{INTERDEP} + \text{DEPFED} * \text{TOTALECO} + \text{totaleco} * \text{INTERDEP} +$ 1011 and 1111 = DI (GENMAN, CHEM, OIL, TRANS) 1101 and 111 = DT (FABMET, CHEM, OIL, TRANS) 1011 and 0011 = tI (GENMAN, DFIN)			$\text{DEPFED} * \text{INTERDEP} + \text{DEPFED} * \text{TOTALECO} + \text{totaleco} * \text{INTERDEP}$ 1011 and 1111 = DI (GENMAN, CHEM, OIL) 1111 and 1101 = DT (CHEM, OIL, FABMET) 1011 and 0011 = tI (GENMAN & DFIN)		
8 Contradictions 100C (5): MEAS, ELEC, AUTO, AERO, DRUGS; and 111C (3): TRANS, CHEM, OIL,			10 Contradictions 100C (5): MEAS, ELEC, AUTO, AERO, DRUGS; 011C (3): RETAIL, RUBBER, UTIL; and 010C (2): FOOD, PAPER			5 Contradictions 100C (5): MEAS, ELEC, AUTO, AERO, DRUGS		
Minimized Outputs – Certain "0" Outcomes								
$\text{depfed} * \text{TOTALECO} + \text{depfed} * \text{interdep}$ 0110 and 0100 = dT (retail, rubber, util and food, paper) 0000 and 0100 = di (food, paper and text, print)			$\text{depfed} * \text{totaleco} * \text{interdep}$ 0000 = dti (text, print)			$\text{depfed} * \text{TOTALECO} + \text{depfed} * \text{interdep}$ 0110 and 0100 = dT (retail and food) 0000 and 0100 = di (text, print, food)		

There are three *certain* cases in Model 1 (no contradictory statements exists). These three statements can be further reduced (to their simplest expression of prime implicants) with causal set statements representing: 1) cases in which total economic strength is weak (totaleco) but the number of inter-industry connections is high (INTERDEP) which is represented as *tI*; and 2) cases in which both Federal-industry (DEPFED) and total economic strength (TOTALECO) are high in the presence of a low number of inter-industry connections (interdep), represented as *DTi*. Model 2 and Model 3, produced identical *certain* causal sets, although Model 2 has ten contradictions whereas in Model 3 the contradictions are reduced to five. The reduction in contradictions occurs because of the elimination of the four *HISTLOW/taxchange* industries. The causal sets that emerged with these two models indicate that when: 1) Federal-industry dependence (DEPFED) and total economic strength (TOTALECO) were high, represented as *DT*; 2) Federal-industry dependence (DEPFED) and number of inter-industry connections (INTERDEP) were high, represented as *DI*; and 3) when total economic strength was low (totaleco), inter-industry connections were high (INTERDEP), represented as *tI*. Both of these models, like Model 1, suffered from many contradictions. The significant number of contradictions leads to the conclusion that by itself, structural measures of industry interconnectedness do not present as an adequate causal set associated with tax benefit.

Economic causal conditions that resulted in unsuccessful outcomes (“0”) represent instances in which industries were unable to achieve the desired change in effective tax rate. In each of these causal sets the consistent, or necessary factor is weak a Federal-industry relationship. While this factor is not in itself sufficient to explain failure, the data suggest that a weak State (Federal-level) relationship contributes to an unsuccessful outcome. The opposite conclusion, however, associating DEPFED with a “1” outcome cannot be made from the data.

Industry Political Behavior - Causal Conditions

The political causal sets present stronger links between political behavior and tax policy outcomes (Table 4-4). Strong political behavior is apparent in actions directed at key congressional members. Positive outcomes associated with each of the three models possess a consistent pattern of direct political influence (comprised of political campaign contributions to members of the House Ways and Means and Senate Finance Committees (PACFUND), a high number of registered lobbyists (REGLOBBY), and a high number of lobby firms (HIREDGUN) with both high and low number of PACs). In Model 1, three out of eight industries are represented by the single *certain* positive “0” outcome *PHRn*. In Model 3, six out of eight industries are represented by a single causal set, *PHRN*. This represents a case in which all four of the political variables are strong. In Model 1, when all four political measures are strong, five contradictory cases result (three positive outcomes and two negative outcomes). These contradictions involve industries (utilities and paper) that have a tax status *HISTLOW/taxchange*. The other row contradiction in Model 1 occurs when the variables *pacfund*, *reglobby* and *hiredgun* are all weak while the *numpac* is high. This contradiction exists in all three dependent variable models and involves two “winning” industries (general manufacturing and fabricated metals) and one “unsuccessful” industry (food).

In Model 2, a new contradiction emerges for the row associated with all low scores on all political measures, this results from the shift of Rubber/Stone/Cement to a “winning” case. The unsuccessful cases in all three models share a common factor; each has a low score on directed campaign contributions (*pacfund*). It should also be noted, that the greatest frequency of failure was associated with those industries that scored low on all four political measures (*phrn*).

Table 4-4. Truth Table: Political Causal Conditions for Three Models

Model 1 N=18 PRHN=TAXCHANGE			Model 2 N=18 PRHN=TAXCHANGE/HISTLOW			Model 3 N=14 PRHN=TAXCHANGE		
Case	1	0	Case	1	0	Case	1	0
0001C	2	1	0001C	2	1	0001C	2	1
1111C	3	2	11111	5	0	11111	3	0
11101	3	0	11101	3	0	11101	3	0
01100	0	1	01101	1	0	-	-	-
00000	0	4	0000C	1	3	00000	0	3
01000	0	1	01000	0	1	01000	0	1
01110	0	1	01110	0	1	01110	0	1
Minimized Outputs: Certain "1" Outcomes								
Model 1			Model 2			Model 3		
PACFUND*REGLOBBY* HIREDGUN*numpac 11101= PRHn (DFIN, AERO, DRUGS)			PACFUND*REGLOBBY* HIREDGUN + REGLOBBY*HIREDGUN*numpac 11111 and 11101 = PRH (AUTO, CHEM, OIL, UTIL, PAPER, DFIN, AERO, DRUGS) 11101 = RHn (DFIN, AERO, DRUGS, TRANS)			PACFUND*REGLOBBY* HIREDGUN*NUMPAC 1111 and 11101 = PRHN (AUTO, CHEM, OIL, DFIN, AERO, DRUGS)		
8 Contradictions 0001C (3): FOOD, GENMAN, FABMETAL; and 1111C (5): UTIL, PAPER, AUTO, CHEMICAL, OIL			7 Contradictions 0001C (3): FOOD, GENMAN, FABMET; and 0000C (4): RETAIL, TEXTILES, PRINT, RUBBER			3 Contradictions 0001C (3): FOOD, GENMAN, FABMETAL		
Minimized Outputs: Certain "0" (unsuccessful) Outcomes								
pacfund*REGLOBBY* HIREDGUN+ pacfund*REGLOBBY*numpac + pacfund*hiredgun*numpac 0111 and 0110 = pRH (electrical and tran) 0110 and 0100 = pRn (tran and measure) 0000 and 0100 = phn (retail, rub, text, print and meas)			pacfund*REGLOBBY* HIREDGUN*NUMPAC + pacfund*REGLOBBY* hiredgun*numpac 0111 = pRHN (electrical) 0100 = pRh (measurement)			pacfund*hiredgun*numpac + pacfund*REGLOBBY*HIREDGUN NUMPAC 0000 and 0100 = phn (retail, text, print and measure) 0111 = pRHN (electrical)		

Causal Variables

Table 4-5 presents the complete set of causal conditions as they relate to effective tax rate outcomes. No contradictory rows exist in the 14 case rows identified for either Model 1 (18 industries) or Model 2 (14 industries). This data is gathered from the raw data truth table, which as you recall represents the actual causal combinations found in the 18-industry sample. The total number of possible logical combinations would be 27 (or 128 possible combinations). Five prime, or *certain*, expressions result from the reduction or simplification of causal statements associated with a positive outcome. The combined analysis creates causal sets that include specific patterns of economic and political strength as associated with a reduction in effective tax rate of five percent or greater (*TAXCHANGE*). Models 1 and 3 produce a similar picture of the causal sets affecting tax policy outcome. Model 2 is helpful, to the extent that it reinforces the complexity of the dependent variable as associated with historical trends in tax favor. The *HISTLOW/taxchange* industries have causal sets that resemble both winning and losing industries and therefore confound the clarity of the analysis between winners and losers, because they have both a winning history and a current losing status for tax change. By recoding these items (Model 2), the conflated relationships are exposed. It was for this reason that the four industries that represent *HISTLOW/taxchange* industries were removed from the analysis. From this point forward the discussion will be limited to Models 1 and 3, for Model 2, while effective in clarifying the role of *HISTLOW/taxchange* industries, is no longer pertinent to the discussion at this time. The relationship between economic and political variables is especially striking in Model 3.³⁸

³⁸ This model excludes four industries (*HISTLOW/taxchange*) from the analysis.

Table 4-5. Truth Table: Combined Causal Conditions for Three Models

Model 1 Frequency			Model 2 Frequency			Model 3 Frequency		
Case	1	0	Case	1	0	Case	1	0
10100011 (GENMAN)	1	0	10100011 (GENMAN)	1	0	10100011 (GENMAN)	1	0
10011111 (AUTO)	1	0	10011111 (AUTO)	1	0	10011111 (AUTO)	1	0
00111101 (DFIN)	1	0	00111101 (DFIN)	1	0	00111101 (DFIN)	1	0
11000011 (FABMET)	2	0	11000011 (FABMET)	1	0	11000011 (FABMET)	1	0
11111111 (CHEM) (OIL)	2	0	11111111 (CHEM) (OIL)	2	0	11111111 (CHEM) (OIL)	2	0
10011101 (AERO) (DRUGS)	2	0	10011101 (AERO) (DRUGS)	2	0	10011101 (AERO) (DRUGS)	2	0
11101100 (TRANS)	0	1	11101101 (TRANS)	1	0	-	-	-
01100000 (RETAIL) (RUBBER)	0	2	0110000C (RETAIL) (RUBBER)	1	1	01100000 (RETAIL)	0	1
01111110 (UTIL)	0	1	01111111 (UTIL)	1	0	-	-	-
10010000 (MEAS)	0	1	10001000 (MEAS)	0	1	10010000 (MEAS)	0	1
00000000 (TEXT) (PRINT)	0	2	00000000 (TEXT) (PRINT)	0	2	00000000 (TEXT) (PRINT)	0	2
10001110 (ELEC)	0	1	10001110 (ELEC)	0	1	10001110 (ELEC)	0	1
01000010 (FOOD)	0	1	01000010 (FOOD)	0	1	01000010 (FOOD)	0	1
01011110 (PAPER)	0	1	01011111 (PAPER)	1	0	-	-	-
Total			Total			Total		
8			10			12		
			6			8		
						6		
Certain "1" Outcomes								
Model 1 And Model 3	DEPFED*totaleco*interdep*PACFUND*REGLOBBY*HIREDGUN + DEPFED*TOTALECO*INTERDEP*PACFUND*REGLOBBY*HIREDGUN*NUMPAC + depfed*totaleco*INTERDEP*PACFUND*REGLOBBY*HIREDGUN*numpac + DEPFED*totaleco*INTERDEP*pacfund*reglobby*hiregun*NUMPAC + DEPFED*TOTALECO*interdep*pacfund*reglobby*hiregun*NUMPAC							

Table 4-5 Continued

Certain "0" Outcomes	
Model 1	$\text{depfed}^*\text{TOTALECO}^*\text{PACFUND}^*\text{REGLOBBY}^*\text{HIREDGUN}^*\text{NUMPAC} +$ $\text{depfed}^*\text{totaleco}^*\text{interdep}^*\text{pacfund}^*\text{reglobby}^*\text{hiredgun} +$ $\text{DEPFED}^*\text{TOTALECO}^*\text{INTERDEP}^*\text{pacfund}^*\text{REGLOBBY}^*\text{HIREDGUN}^*\text{numpac} +$ $\text{DEPFED}^*\text{totaleco}^*\text{interdep}^*\text{pacfund}^*\text{REGLOBBY}^*\text{HIREDGUN}^*\text{NUMPAC} +$ $\text{DEPFED}^*\text{totaleco}^*\text{interdep}^*\text{pacfund}^*\text{REGLOBBY}^*\text{hiredgun}^*\text{numpac} +$ $\text{depfed}^*\text{TOTALECO}^*\text{INTERDEP}^*\text{pacfund}^*\text{reglobby}^*\text{hiredgun}^*\text{numpac}$
Model 3	$\text{depfed}^*\text{totaleco}^*\text{interdep}^*\text{pacfund}^*\text{reglobby}^*\text{hiredgun} +$ $\text{DEPFED}^*\text{totaleco}^*\text{interdep}^*\text{pacfund}^*\text{REGLOBBY}^*\text{HIREDGUN}^*\text{NUMPAC} +$ $\text{DEPFED}^*\text{totaleco}^*\text{interdep}^*\text{pacfund}^*\text{REGLOBBY}^*\text{hiredgun}^*\text{numpac} +$ $\text{depfed}^*\text{TOTALECO}^*\text{INTERDEP}^*\text{pacfund}^*\text{reglobby}^*\text{hiredgun}^*\text{numpac}$

Positive Outcomes

The minimized causal sets leading to a positive outcome on TAXCHANGE includes:³⁹:

Dti PRH (Auto, Aerospace, Drugs)
 DTI PRH N (Oil&Gas, Chemical)
 dtI PRH n (Diversified Financial)
 Simplified: PRH (DTI +DTIN + dtIn)

DtI prh N (General Manufacturing)
 DTi prh N (Fabricated Metal)
 Simplified: DprhN (tI + ti)

A clear pattern of relationships emerges from this combination of variables. Six out of eight cases are represented by strong direct political behaviors (PACFUND, REGLOBBY, and HIREDGUN - PRH) and a strong relationship with the state (D). When grouped in this manner it is easy to see the inherent similarities between the cases. The first set is characterized by very strong-targeted political behaviors, in addition to having either a strong Federal (State) relationship, and weak economic position and weak inter-industry dependence (DtiPRH). The

³⁹ The notation used in these causal sets represents the first letter for each of the independent variables. A capital letter represents the high presence of a condition, while a lower case notation indicates the low presence of a condition.

second set is characterized by a strong Federal relationship, and both a strong total economic position and a strong inter-industry connection (*DTIPRHN*). In these first two sets, five of the eight winning industries are represented. A positive outcome would naturally be expected when all of the variables are strong.

Diversified financials are a somewhat special industry in this analysis because they are the only industry that does not manufacture a product. Their pattern of success could be representative of a different kind of relationship. The causal set associated with this industry has a weak Federal relationship, weak total economic position, but a strong level of industry-interconnections, and a strong directed political activity score (*dtIPRHn*).

The third group of causal sets has a strong Federal relationship, and either a strong total economic position or a strong level of inter-industry connections, but a low level of directed political activity score with a high general political activity score *DTi* or *DtIprhN*. The industries, fabricated metals and general manufacturing, represent two cases in which PACFUND, REGLOBBY and HIREDGUN are low, but still achieve a positive outcome (TAXCHANGE). The causal sets associated with these two industries are represented by a strong economic position, or inter-industry dependency and a strong Federal relationship, low directed political behavior while the general political involvement of a high number of PACs exists. This presents a different political scenario than the majority of winning cases. Although not included in the analysis, another explanation for their success might lie in their political representation by industry associations. These two industries had strong industry association lobby efforts being conducted by the National Association of Manufacturers, the Chamber of Commerce, the Business Round Table, and the Business Industry Political Action Committee, not to mention a series of key lobbyists such as Charls Walker & Associates who headed the “Carlton Group” (a specialized tax lobby). It could be the case that industry associations

exercised the political influence for these industry segments, which was not a part of the data collected for this analysis. Even so, as stated above, these two industries did produced a unique causal set, represented by the following statement: $TAXCHANGE = phrN (DtI+Dti)$. Positive outcomes are associated with a careful mix of economic and political variables; when the targeted political behavior variables were low then the industry had to have a high number of PACs and a strong Federal relationship in addition to either a strong economic position or a high number of inter-industry connections. All of the “winning industries have unique sets compared to the “losing” industries.

Negative Outcomes

The causal pattern for unsuccessful “0” outcomes is also clear. In every case, failure was associated with a low score on pacfund. The four causal sets for “0” outcomes fail to have

$$\begin{aligned}
 & dtiprh \\
 & DtipRHN \\
 & DtipRhn \\
 & DTIprhn \\
 & \text{Simplified: } p(dtirh)(DtiRHN)(DtiRHn)(dTIrhn)
 \end{aligned}$$

economic or political strength: In particular, the missing element in each of the cases is campaign funding (pacfund). As is evident, even all other political behaviors are strong, the “losing” industries lack sufficient economic strength or inter-industry connections to overcome the lack of political engagement. While the “losing” or some might say non-winning industries also have a mix of economic and political characteristics, the most prominent set is all weak scores which results in a negative outcome. It is also worth noting, that an industry could be strong on all three economic variables, but weak on all political variables and still lose.

The “loser” industry models help to clarify the conditions associated with a weak or negative tax outcome, which contrary to most regression analysis, negative outcome in this case

is a failure to decrease effective tax rate.⁴⁰ Failure to contribute to the members of the House Ways and Means, and Senate Finance Committees in conjunction with weak economic conditions resulted in low change in effective tax rate. In addition, four of the six causal sets scored low on economic dependence (totaleco) and inter-industry dependence (interdep). These cannot be determined “necessary conditions” however because they also appear in “winning” cases, although in different causal set combinations this may account for the difference of political activity.

The Economic Recovery Tax Act of 1981

The passage of the Economic Recovery Tax Act of 1981 marked a significant and dramatic shift for tax policy in the United States. A long battle waged by key industry representatives and corporate giants paid off with the largest tax reduction package in the history of the country. Changes in the tax code included the radical accelerated depreciation schedules, investment tax credits, a 25 percent reduction in tax credits for research and development, tax credits for older structures, diminished tax rates for windfall oil profits, and the short lived (but much abused) provision of safe-harbor leasing.⁴¹

Accelerated depreciation was a major issue for the business lobbyists. Early on, the basis of the tax reduction was to limit the marginal rate (a provision that would not be furthered

⁴⁰ In regression analysis, a negative effect means that while the independent variable increases, the dependent variable of tax decreases. This is expressed as a negative effect. A negative effect should not be confused with a negative outcome.

⁴¹ This is not a complete list of tax changes, but rather represents items of interest to corporate entities. Safe-harbor leasing was a practice wherein one company could sell tax credits to another company by arranging for “lease” provisions to be transferred from one company to the other. If a company had more capital investment credits than it could use, safe-harbor leasing allowed them to distribute them to other companies. It is estimated that billions in lost tax revenue resulted from this provision. It was quickly recognized as so abusive that it was repealed in 1982, although was not effective until 1984.

until the mid-1980's) and accelerate the rate at which capital investments could be written-off. The old system relied on the life of the goods approach, and the business community felt that it tied up too much capital. Their rationale was that the write-off was inevitable, why not speed up the process and inject much needed capital into the system. The new accelerated depreciation schedule, known as accelerated cost recovery system (ACRS) of 3:5:10:15 replaced the old life of the good depreciation method (see Appendix A). The pre-1981 system allowed for property, vehicles, equipment and the like to be written-off over the realistic life of the good. The new system dramatically reduced the write-off period, with a dramatic effect on the tax statements for those industries poised to take advantage of these new tax provisions.

Certain industries clearly benefited from the tax changes. Other industries however, such as electrical, were unable to reap similar benefits. The electrical industry is comprised of firms that vary from small appliances to government contractors. Many of the government contracts were completed during this period (known as completed contract form of accounting), causing a minor accounting effect that elevated effective tax rates for the industry. When a government contract is complete, even if completed payment is not complete, the company must account for the income. Although it sounds detrimental, the reality is that before contract completion, the firm does not have to claim any of the income on its balance sheets and therefore can significantly reduce their income during one period, but must account for it later. This is the case for many of the electrical firms in the sample.

Summary

The industries that benefited from ERTA81 are clearly identified by both their economic position and their political behavior. While it is easy to claim industry "winners" as those industries of greatest importance, this is not the single best indicator of political influence. In

1998, Jerry Jasinowski, then President and CEO of the National Association of Manufacturers, reflected on the importance and strength of the manufacturing industry political voice as he claimed that the congressional agenda was heavily influenced by NAM because NAM member firms represented 85% of the manufacturing output (Jacobs 1998). The idea that economic strength and political effort are synonymous is incorrect. Power emerges from an interdependent relationship between economic position and certain political actions. Economic strength alone did not guarantee or present itself as a “necessary” condition for a positive tax outcome. The business community claims that the policy winners are those industries described by Amitai Etzioni (speaking of developmental economics in response to supply-side trends):

They seek to identify industries that are future winners and losers in terms of providing exports, jobs, and productivity growth. The winners are to be subsidized and otherwise promoted; the losers are to be helped to find a “sunset.” This approach might entail too-detailed reading of the future, and it puts too much of a burden on the government, or the yet-to-be formed government-business-labor “investment committees.”(Etzioni 1980: 16)

While economic position is important (although not as clearly defined with the employment variable) the state does not blindly reward economic performance. If it did, then retail would be a tax “winner” as would the electronics industry, but they are not. The importance of directed political behavior is critical to the success of an industry. The idea that there exists some form of industry hierarchy is neither new or nor startling, however being able to clearly define a model of causal conditions is a radical advancement of our understanding of the nature of political power.

Economic prosperity is not the sole criteria defining political benefit. Neither does political behavior alone produce a model of policy success. Clearly, industries with economic

standing, in concert with direct political activity benefited from the tax policy changes in the form of reduced effective tax rates.⁴² As a side note, not long after the passage of ERTA81, press accounts appeared forecasting warnings about supply-side promises (Economist 1982), quickly realizing that shifting capital flow to investors did not guarantee increased investment in this country.

⁴² Note that the decrease in effective tax rates did not result from a reduction in profitability. In fact, the overall profitability increased from t to $t+1$.

CHAPTER V

CONCLUSIONS

Overview

In this analysis, a power relationship was uncovered through the introduction of conceptually unique measures of economic industry interdependence and directed political behaviors, in the comparison of 18 industries change in effective tax rates associated with the passage of the Economic Recovery Act of 1981. A significant set of findings from this analysis identify *certain*, non-contradictory causal sets that *combine unique political actions and economic conditions* with positive tax outcomes in a manner that has not been demonstrated in the past. Industries that were able to successfully reduce their effective tax rates by five percent or more, had in common a set of related causal conditions that are both politically strong and connected to the economic structure in a particular manner. The identification of these unique causal sets provides a clearer explanation for the relationship between variables and outcomes, and evidence that our current theoretical models are inadequate to address the complexity of the relationships evidenced by winning industries.

Previous studies have failed to identify a consistent causal mechanism of political power because the relationships are more complex than a linear model can effectively communicate. This study demonstrates the existence of a pattern of relationships between economic and political variables that supports the finding that under certain conditions, industries are able to affect change in tax policy in a way that allows them to ultimately reduce effective tax levels. This interaction of variables establishes a clear pattern and a tangible model of intra-industry segmented power. For the first time, a clear empirical picture emerges regarding the varied and complex relationships that exist between industry and State relations. On their own, neither

political nor economic variables were able to provide a clear explanation of events, both suffering from major contradictions. The presence of such strong contradictions leads to the conclusion that the theoretical explanations associated with the exclusive variable models (political and economic) are unable to explain industry power.

The dominant causal sets associated with a positive outcome are three closely related patterns (causal sets) of directed political behavior (PAC contributions, registered lobbyists and hired guns) with a distinct combination of economic conditions. The first set is the combination of directed political activity (PAC contributions, registered lobbyists and outside lobby firms) and the presence of a strong Federal-industry relationship and a mix of either total economic strength or a strong level of inter-industry connectivity (or both) resulted in a positive outcome for five of the eight “winning” industries. The only difference between the two dominant causal sets is that one has a strong total economic measure and the other has a strong number of industry interconnections.⁴³ The other two types of causal sets are far less frequent. Diversified financials represent a causal set wherein a positive outcome was achieved with the same directed political activity as above, but in this case the economic conditions were marked by a low score on total economic position and a low score on Federal-industry relationship, while the number of inter-industry connections was strong. The last type of causal set was associated with a strong Federal relationship and a strong score on either total economic condition or number of inter-industry relationships in combination with a strong general political strategy of a larger number of PACs for the industry.

⁴³ The “six winning industries” discussed are oil& gas, diversified financials, aerospace, chemical, automotive, and drugs. The two other winning industries are discussed in footnote above.

A low score for all economic and political variables clearly led to failure. A negative outcome was also associated with a mix of high and low scores on both political and economic variables with one exception. Negative outcomes were associated with causal sets having low scores on PACFUND. An industry, strong on all other political measures, but weak on PAC contributions still resulted in a negative outcome. However, a high level of PAC contributions does not insure a positive outcome. In order to achieve a positive *certain* outcome PACFUND had to be associated with a number of other political and economic conditions. Of equal importance was the case of failure. In all cases, industries that failed to achieve the tax outcome, scored low on PAC funding. Overall, industries that did not have the particular causal sets discussed above, resulted in the failure to effectively reduce industry tax burden.⁴⁴ Findings from this study support an integrated theoretical model that necessitates the combination and interaction of both economic and political explanatory factors in the explaining industry-state power relations.

Implications for Future Theory and Analysis

Theoretical implications resulting from this research lead to support for the development of a more integrated and contingent model of industry political power. Contrary to both class dominance and structuralist explanations, my findings did not support either of the theoretically exclusive structural economic or the political dominance models. While counter to these theoretical models, my research is consistent with quantitative research findings that have not been able to effectively link political behavior alone with policy outcomes (or voting behavior),

⁴⁴ This is assuming that the industries GENMAN and FABMETAL are recoded or removed from the analysis because of their limited number of occurrences. More likely, these two industries are misspecified due to their heavy involvement with industry association representatives such as NAM and BIPAC.

or support the concept of a unified class effect. Similarly, my study fails to identify a solely economic explanation for reduced tax rates resulting from tax policy change. The most important and therefore significant conclusion drawn from this study is support for the existence and identification of a segmented capitalists class demarcated by industry or an intra-industry segmented class. No class-wide benefit emerged in the sample. Distinct political and economic combinations separated the tax avoiders or “winners” from the non-tax avoiders as associated with distinct industries.

Use of Boolean logic and qualitative comparative analysis (Ragin 1987) provides a methodological departure from past research that has heavily relied on qualitative case studies and linear regression analysis. The power of QCA, lies in the ability to present multiple casual conditions, alone or in combination, that provide an explanation for the varied conditions within which successful outcomes are achieved. Lifting the limitations of a single model to the possibility that different explanations exist for the similar outcomes, streamlines the understanding of the causal conditions into manageable and understandable sets.

In this case, a single model could not capture the causal conditions associated with decreasing industry effective tax rates. The causally complex and multi-leveled series of interactions that exist between industry economic strength and political engagement is riddled with highly correlated measures of political behavior that in a statistical analysis would fail due to problems of multicollinearity. Yet, this analysis provides evidence that it is this precise combination of political behaviors and specific economic conditions that leads to a successful outcome. Although the methodological approach cannot provide statistical support for these casual conditions, it dramatically improves the basis from which we can evaluate the effect of political and economic factors as they affect tax policy outcome.

Limitations of the Study

A number of limitations are associated with this analysis. First, a larger sample (both in terms of number of firms per industry and number of industries) would strengthen this analysis. Missing data eliminated both a large number of firms and entire industries from the sample set. The inclusion of a larger sample would increase the validity of the results and allow for a comparison of findings with regression techniques. Second, variable thresholds (determining the high and low categories) were set established primarily by mean values and data break points. Most measures fell short of the 95 percent confidence interval. Although not as serious a problem when using QCA, as would be the case in regression analysis, it still leaves some question as to the appropriateness of the established breakpoints for each measure. Third, this analysis is limited to those industries associated with the 1981 *Fortune* listing of largest industries. Therefore, the findings are limited to a discussion for the largest industry representatives and not the total industry or all industries. Fourth, missing data and the elimination of primary metals, commercial banking, and insurance also leaves the question as to whether their presence would have altered the threshold values of the measures evaluated.⁴⁵ While different thresholds could yield vastly different results, the interesting thing is that the thresholds established (often low thresholds) have an impact on the outcome. Fifth, the use of corporate level data for an industry analysis may be problematic. Although the intent was to examine the industries using the largest firms, the ability to generalize past the largest corporate representatives of an industry is limited.

⁴⁵ Only commercial banking and insurance could have negatively affected the development of the measures. Primary metal was included in the development of the measures as was not eliminated until it was clear that it had failed to make a profit in the years following the passage of ERTA81.

Recommendations for Future Research

In the course of developing this project, it became clear early on that this would be but the first of many tax policy evaluations. Since the Economic Recovery Tax Act of 1981, the U.S. Congress has passed several more industry friendly legislative initiatives. Each of the subsequent pieces of legislation needs to be investigated to determine whether the winning causal conditions found in relation to the 1981 tax act are stable throughout time, or whether the specific relationships are contingent and varying.

Second, this model should be tested using different policy content to determine whether the causal sets are policy specific or whether broader policy networks exist. When Glasberg and Skidmore (1997) found that banking interests did not have to contribute PAC dollars to members of the banking committees to gain favorable results, they established an important element for work like my own. When congressional committees have a natural constituency, as found in the case of banking committees, they may respond differently than committees that have a more global mandate.

Third, the use of many different policy outcomes (as defined in my work as the implementation of a policy) as the dependent variable would add to our overall understanding of the varying nature of political/economic power.

Fourth, future studies should include a measure of industry association impact. The important role played by multi-industry associations is apparent when considering the role that the National Association of Manufacturers, the Association of Chemical Manufacturers, and the American Banking Association. Although not included in this study, the political involvement of these associations was, and continues to be, important to the establishment of political

power.⁴⁶ Another measure that would be useful to evaluate would be grassroots lobbying efforts. The qualitative literature indicates grassroots behavior to have had a significant impact on the perceived support for tax reduction legislation. Grassroots efforts are often organized by industry sponsored events, and used to defend the necessity of tax reform. Including a measure of grassroots actions would reduce the possibility of missing important (influential) political behavior as an independent variable.

Fifth, conducting firm-level analysis could prove informative and a basis for comparison with industry-level data analysis. A firm-level analysis would provide the opportunity which to apply statistical techniques in addition to the Boolean logic, as well as provide an opportunity to introduce firm level variables into the analysis (e.g., product diversity, organizational form).

Sixth, an in-depth historical analysis of the industries associated with both winning and losing status would be informative. This type of analysis could provide additional measures that might be missing currently from the overall model.

Conclusions

This study clearly departs from the existing literature on state-industry power relations. Using a qualitative approach based on logic, the emergent casual sets support a theoretical power model based on intra-industry class segmentation and the integration of political and economic explanatory variables. The introduction of new measures assisted in understanding the complex economic and political relationships between industry-state (Federal Government) that result in positive tax policy outcomes. Findings from this study call for the refinement of current theories, supporting a move toward a more middle-range contingent theoretical approach guided

⁴⁶ Industry political behaviors were limited to firm specific involvement and not a total industry measure.

by grand theory but not limited by exclusive causal conditions. In the case of the Economic Recovery Tax Act of 1981 and the 18 industries examined in this study, power-base is not an economic or political strength alone, but a combination of both. The causal conditions associated with industry power (as demonstrated by a *certain* positive tax outcome) emerged in the form of a clearly identifiable set of causal conditions, refuting existing models, findings and theory.

This study provides explicit models for industry political success. Successful industries were able to benefit from their participation with the state. The Economic Recovery Tax Act of 1981 provided specific provisions that benefited some, not all industries. This finding directly contradicts any notion of free-riders (Olson 1965) within the economic elite firms used for this sample. Theoretical development must address the type of industry, the type of firms within industry (as in this case industries evaluated were made up of the largest firms within the industry), and the context within which policy is being affected. Certainly, it could be expected that oligopolistic industries will behave differently than more competitive industry segments

The findings and approach used in this study, represent a departure from earlier research in this area, and suggest that current theories are inadequately conceptualized and unable to fully address the complex and dynamic nature of industry – state power relations. This study provides a new framework from which to further the discussion of the interdependency of economic conditions and political action in relation to legislative benefit and state relations.

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APPENDIX A

TABLE A-1. MAJOR PROVISIONS OF THE ECONOMIC RECOVERY ACT OF 1981

Depreciation Period	Applicable Property
3-Year (ADR of 4 years or less)	<p>Section 1245 property – tangible personal property.</p> <p>Tangible property with a class life of four years or less, including vehicles (cars, light trucks) and some machinery.</p> <p>Assets used in research and development.</p>
5-Year (ADR of 4.5 to 18 years)	<p>Section 1245 property not included in the 3,5, or 15 year classes. Includes most machinery, equipment and furniture.</p> <p>Single purpose agricultural and horticultural buildings.</p> <p>Property (not buildings) used in the manufacturing process, mining, communications or transportation.</p>
10-Year (ADR of greater than 25 years)	<p>Public Utility Property (with asset depreciation range (ADR) midpoint life greater than 18 but not greater than 25 years).</p> <p>Certain coal-fired boilers and burners.</p> <p>Railroad Tank Cars.</p> <p>Some residential mobile homes.</p> <p>Section 1250 property, with ADR midpoint life that is less than 12.5 years.</p>
15-Year Real Property	Section 1250 property not falling in the 10-year range.
15-Year Public Utility	Section 1245 public utility property with a current class life of more than 25 years, including: electric utility steam production plants, gas utility manufactured gas product plants, water utility property, and telephone distribution plants.
(Source: Drawn directly from the AMA Property Management summary of the 1981 Economic Recovery Tax Act.)	

APPENDIX B

TABLE B-1. 1981 FORTUNE 500 AND 300 FIRMS

COID	Company Name	Final Set x = in final; d = deleted	Industry
20	United Technologies	x	aerospace
31	Boeing Co.	x	aerospace
45	McDonnell Douglas Corp.	x	aerospace
48	Rockwell International	x	aerospace
57	Lockheed	x	aerospace
130	Martin Marietta	x	aerospace
149	Kidde	x	aerospace
194	Northrop	x	aerospace
262	Fairchild Industries	x	aerospace
302	Cessna Aircraft	x	aerospace
305	Sundstrand	x	aerospace
361	Bangor Punta	x	aerospace
444	Gates Learjet	x	aerospace
452	Rohr Industries	x	aerospace
76	General Dynamics	d	aerospace
203	Grumman	d	aerospace
3	General Motors Corp.	x	auto
6	Ford Motor Co.	x	auto
26	Chrysler	x	auto
71	TRW	x	auto
86	Bendix	x	auto
139	Eaton	x	auto
158	Dana	x	auto
162	American Motors	x	auto
165	American Standard	x	auto
216	PACCAR	x	auto
243	Evans Products	x	auto
245	AMF	x	auto
278	GATX	x	auto
321	ACF Industries	x	auto
347	Federal-Mogul	x	auto
366	A.O. Smith	x	auto
426	Todd Shipyards	x	auto
466	Sheller-Globe	x	auto
476	Arvin Industries	x	auto
46	International Harvester	d	auto
70	Signal Companies	d	auto
174	Ogden	d	auto
183	Fruehauf	d	auto
380	Trinity Industries	d	auto

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
12	Du Pont (E.I.) de Nemours	x	chemical
24	Dow Chemical Co.	x	chemical
30	Union Carbide	x	chemical
53	W. R. Grace	x	chemical
106	American Cyanamid	x	chemical
122	PPG Industries	x	chemical
193	Olin	x	chemical
201	SCM	x	chemical
206	Rohm & Haas	x	chemical
214	Ethyl	x	chemical
217	Stauffer Chemical	x	chemical
228	Air Products & Chemicals	x	chemical
231	Sherwin-Williams	x	chemical
280	Pennwalt	x	chemical
320	Reichhold Chemicals	x	chemical
346	Freeport-McMoRan	x	chemical
351	Big Three Industries	x	chemical
367	Vulcan Materials	x	chemical
384	Dow Corning	x	chemical
389	Clorox	x	chemical
392	Ferro	x	chemical
398	Insilco	x	chemical
407	Nalco Chemical	x	chemical
462	Savannah Foods & Industries	x	chemical
50	Monsanto	d	chemical
55	Allied	d	chemical
104	Celanese	d	chemical
156	NL Industries	d	chemical
157	Hercules	d	chemical
190	Koppers	d	chemical
196	International Minerals & Chemical	d	chemical
198	Williams Companies	d	chemical
218	National Distillers & Chemical	d	chemical
225	American Hoechst	d	chemical
282	Airco	d	chemical
303	CF Industries	d	chemical
307	BASF Wyandotte	d	chemical
318	Morton-Norwich Products	d	chemical
337	Lubrizol	d	chemical
383	Thiokol	d	chemical
405	National Starch & Chemical	d	Chemical

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
434	Sun Chemical	d	chemical
463	Dexter	d	chemical
477	Mallinckrodt	d	chemical
601	Federal National Mortgage Assn.	x	dfin
603	American Express (New York)	x	dfin
605	Merrill Lynch (New York)	x	dfin
609	First Boston	x	dfin
610	Loews Corporation (New York)	x	dfin
613	Transamerica	x	dfin
618	Beneficial (Wilmington)	x	dfin
620	Avco Corp. (Greenwich, Conn.)	x	dfin
622	E.F. Hutton Group (New York)	x	dfin
625	Donaldson Lufkin & Jenrette	x	dfin
635	Alleghany Corp. (New York)	x	dfin
638	Paine Webber (New York)	x	dfin
602	Aetna Life & Casualty	d	dfin
604	Travelers Corp.	d	dfin
606	H.F. Ahmanson	d	dfin
607	INA	d	dfin
608	Great Western Financial	d	dfin
611	First Charter Financial	d	dfin
612	Lincoln National	d	dfin
614	Imperial Corp. of America	d	dfin
615	American General	d	dfin
616	Continental	d	dfin
617	American International Group	d	dfin
619	Walter E. Heller International	d	dfin
621	Household Finance Corp.	d	dfin
623	Golden West Financial	d	dfin
624	Baldwin-United	d	dfin
	Gibraltar Financial Corp. of		
626	California	d	dfin
627	U.S. Fidelity & Guaranty	d	dfin
628	St. Paul Cos.	d	dfin
629	Bache Group	d	dfin
630	General Reinsurance	d	dfin
631	Crum & Forster	d	dfin
632	Financial Corp. of America	d	dfin
633	American Financial	d	dfin
634	Kemper	d	dfin

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
636	Capital Holding	d	dfin
637	City Federal Savings & Loan Assn.	d	dfin
639	Chubb	d	dfin
640	SAFECO	d	dfin
641	Reliance Group	d	dfin
642	Financial Federation	d	dfin
643	American Savings	d	dfin
644	American Savings & Loan Assn. Of Florida	d	dfin
645	Western Financial	d	dfin
646	TRANSOHIO Financial Corp.	d	dfin
647	Financial Corp. of Santa Barbara	d	dfin
648	Northern California Savings & Loan	d	dfin
649	Broadview Financial	d	dfin
650	Guarantee Financial Corp. of Calif.	d	dfin
68	Johnson & Johnson	x	drugs
113	Bristol-Meyers	x	drugs
119	Warner-Lambert	x	drugs
145	Merck	x	drugs
154	Eli Lilly	x	drugs
160	Avon Products	x	drugs
171	Revlon	x	drugs
172	Abbott Laboratories	x	drugs
205	Upjohn	x	drugs
210	Schering-Plough	x	drugs
211	Sterling Drug	x	drugs
236	Chesebrough-Pond's	x	drugs
500	Shaklee	x	drugs
25	Proctor & Gamble	d	drugs
72	Colgate-Palmolive	d	drugs
93	American Home Products	d	drugs
133	Pfizer	d	drugs
195	Smithkline	d	drugs
207	Squibb	d	drugs
239	Baxter Travenol Laboratories	d	drugs
268	Richardson-Vicks	d	drugs
281	Lever Brothers	d	drugs
304	G.D. Searle	d	drugs
372	Miles Laboratories	d	drugs
396	Purex Industries	d	drugs
421	Economics Laboratory	d	drugs

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
11	General Electric	x	electrical
34	Westinghouse	x	electrical
44	RCA	x	electrical
62	Raytheon	x	electrical
79	Litton Industries	x	electrical
118	Emerson Electric	x	electrical
126	Motorola	x	electrical
135	Warner Communications	x	electrical
150	Singer	x	electrical
166	Whirlpool	x	electrical
179	Gould	x	electrical
184	White Consolidated Industries	x	electrical
237	Sunbeam	x	electrical
274	AMP	x	electrical
287	National Semiconductor	x	electrical
289	Square D	x	electrical
291	Johnson Controls	x	electrical
331	Scovill	x	electrical
349	General Instruments	x	electrical
354	Champion Spark Plug	x	electrical
363	Intel	x	electrical
376	Hoover	x	electrical
402	Magic Chef	x	electrical
461	Raychem	x	electrical
468	Oak Industries	x	electrical
14	International Telephone & Telegraph	d	electrical
22	Western Electric	d	electrical
91	Texas Instruments	d	electrical
131	North American Philips	d	electrical
204	Allegheny International	d	electrical
229	Harris	d	electrical
266	Avnet	d	electrical
269	Zenith Radio	d	electrical
343	National Service Industries	d	electrical
400	Varlan Associates	d	electrical
464	M/A Com	d	electrical
74	Continental Group	x	fab metals
124	Textron	x	fab metals
173	Gillette	x	fab metals
220	Foster Wheeler	x	fab metals
221	Whittaker	x	fab metals

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
233	National Can	x	fab metals
253	Chromalloy American	x	fab metals
257	Crown Cork & Seal	x	fab metals
286	Harsco	x	fab metals
295	Parker-Hannifin	x	fab metals
315	Stanley Works	x	fab metals
338	Masco	x	fab metals
413	H.H. Robertson	x	fab metals
427	Wyman-Gordon	x	fab metals
493	Ampco-Pittsburgh	x	fab metals
494	Barnes Group	x	fab metals
497	Ceco	x	fab metals
498	Illinois Tool Works	x	fab metals
61	Gulf & Western Industries	d	fab metals
81	American Can	d	fab metals
108	McDermott	d	fab metals
326	CBI Industries	d	fab metals
358	Ball	d	fab metals
394	Signode	d	fab metals
428	Wallace Murray	d	fab metals
445	Hoover Universal	d	fab metals
41	Beatrice Foods	x	food & bev
43	Philip Morris	x	food & bev
49	Pepsico	x	food & bev
52	General Foods	x	food & bev
58	Coca-Cola	x	food & bev
60	Nabisco Brands	x	food & bev
73	Ralston Purina	x	food & bev
80	General Mills	x	food & bev
85	Borden	x	food & bev
89	CPC International	x	food & bev
96	American Brands	x	food & bev
99	Anheuser-Busch	x	food & bev
107	Archer-Daniels-Midland	x	food & bev
121	Carnation	x	food & bev
127	Esmark	x	food & bev
129	Pillsbury	x	food & bev
141	Norton Simon	x	food & bev
153	Campbell Soup	x	food & bev
161	Quaker Oats	x	food & bev
175	Kellogg	x	food & bev
197	Amstar	x	food & bev

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
199	Central Soya	x	food & bev
202	Anderson Clayton	x	food & bev
247	Geo. A. Hormel	x	food & bev
298	International Multifoods	x	food & bev
323	Adolph Coors	x	food & bev
355	Monfort of Colorado	x	food & bev
360	G. Heileman Brewing	x	food & bev
382	Dean Foods	x	food & bev
397	Pabst Brewing	x	food & bev
408	McCormick	x	food & bev
419	Gerber Products	x	food & bev
429	Wm. Wrigley Jr.	x	food & bev
436	Idle Wild Foods	x	food & bev
443	Stokely-Van Camp	x	food & bev
471	Tyson Foods	x	food & bev
472	Brown-Forman Distillers	x	food & bev
491	Rath Packing	x	food & bev
29	Dart & Kraft	d	food & bev
32	Reynolds (R.J.) Industries	d	food & bev
63	Consolidated Foods	d	food & bev
82	Greyhound	d	food & bev
90	BATUS	d	food & bev
92	IC Industries	d	food & bev
95	United Brands	d	food & bev
111	H.J. Heinz	d	food & bev
115	Land O'Lakes	d	food & bev
192	A.E. Staley Manufacturing	d	food & bev
212	Gold Kist	d	food & bev
227	Heublin	d	food & bev
238	Joseph E. Seagram & Sons	d	food & bev
244	Hershey Foods	d	food & bev
255	ConAgra	d	food & bev
270	Campbell Taggart	d	food & bev
283	Mid-America Dairymen	d	food & bev
296	Federal Co.	d	food & bev
306	Universal Leaf Tobacco	d	food & bev
335	Jos. Schlitz Brewing	d	food & bev
340	Thomas J. Lipton	d	food & bev
350	General Cinema	d	food & bev
352	Peavey	d	food & bev
399	DPF	d	food & bev
401	Kane-Miller	d	food & bev

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
451	American Bakeries	d	food & bev
490	Frederick & Herrud	d	food & bev
496	Knudsen	d	food & bev
37	Caterpillar	x	general manufacturing
65	Deere	x	general manufacturing
102	Combustion Engineering	x	general manufacturing
109	FMC	x	general manufacturing
120	Ingersoll-Rand	x	general manufacturing
142	Cooper Industries	x	general manufacturing
155	Borg-Warner	x	general manufacturing
188	Allis-Chaimers	x	general manufacturing
200	Cummins Engine	x	general manufacturing
213	Hughes Tool	x	general manufacturing
215	Emhart	x	general manufacturing
248	Black & Decker Manufacturing	x	general manufacturing
250	Timken	x	general manufacturing
259	Clark Equipment	x	general manufacturing
260	Brunswick	x	general manufacturing
290	Rexnord	x	general manufacturing
292	Ex-Cell-O	x	general manufacturing
311	Dover	x	general manufacturing
322	Cincinnati Milacron	x	general manufacturing
324	Cameron Iron Works	x	general manufacturing
330	Mattel	x	general manufacturing
332	Midland-Ross	x	general manufacturing
339	Bally Manufacturing	x	general manufacturing
356	Tecumseh Products	x	general manufacturing
362	Outboard Marine	x	general manufacturing
371	Figgie International	x	general manufacturing
412	Harnischfeger Industries	x	general manufacturing
415	Mohasco	x	general manufacturing
422	Eagle-Picher Industries	x	general manufacturing
442	Briggs & Stratton	x	general manufacturing
449	Peabody International	x	general manufacturing
134	Teledyne	d	general manufacturing
185	Baker International	d	general manufacturing
209	Wheelabrator-Frye	d	general manufacturing
285	U.S. Industries	d	general manufacturing
297	Joy Manufacturing	d	general manufacturing
359	Trane	d	general manufacturing
409	Scott & Fetzer	d	general manufacturing
420	Hyster	d	general manufacturing

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
437	American Hoist & Derrick	d	general manufacturing
458	L.B. Foster	d	general manufacturing
473	Flat-Allis	d	general manufacturing
475	Bucyrus-Erie	d	general manufacturing
482	Chicago Pneumatic Tool	d	general manufacturing
485	Enviortech	d	general manufacturing
492	Research-Cottrell	d	general manufacturing
8	IBM	x	measurement
28	Eastman Kodak Co.	x	measurement
42	Xerox	x	measurement
54	Minnesota Mining & Manufacturing	x	measurement
66	Sperry	x	measurement
110	Hewlett-Packard	x	measurement
116	NCR	x	measurement
137	Digital Equipment	x	measurement
219	General Signal	x	measurement
235	Lear Siegler	x	measurement
251	Polaroid	x	measurement
252	Pitney Bowes	x	measurement
300	Becton Dickinson	x	measurement
301	Tektronix	x	measurement
325	Storage Technology	x	measurement
341	Wang Laboratories	x	measurement
365	Sybron	x	measurement
391	EG&G	x	measurement
393	Bell & Howell	x	measurement
430	Foxboro	x	measurement
433	Bausch & Lomb	x	measurement
69	Honeywell	d	measurement
128	Burroughs	d	measurement
144	Control Data	d	measurement
293	Perkin-Elmer	d	measurement
379	Data General	d	measurement
381	Geosources	d	measurement
423	Beckman Instruments	d	measurement
2	Mobil Corp.	x	oil & gas
4	Texaco	x	oil & gas
5	Chevron Corp.	x	oil & gas
10	Atlantic Richfield	x	oil & gas
13	Shell Oil	x	oil & gas
15	Phillips Petroleum	x	oil & gas
16	Tenneco	x	oil & gas

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
18	Occidental Petroleum	x	oil & gas
23	Getty Oil	x	oil & gas
33	Amerada Hess	x	oil & gas
39	Cities Services	x	oil & gas
56	Union Pacific	x	oil & gas
59	Coastal	x	oil & gas
83	Dresser Industries	x	oil & gas
100	Agway	x	oil & gas
101	Kerr-McGee	x	oil & gas
117	Tosco	x	oil & gas
164	American Petrofina	x	oil & gas
167	Murphy Oil	x	oil & gas
182	MAPCO	x	oil & gas
187	Superior Oil	x	oil & gas
242	Crown Central Petroleum	x	oil & gas
267	Witco Chemical	x	oil & gas
273	Louisiana Land & Exploration	x	oil & gas
277	Smith International	x	oil & gas
299	Pacific Resources	x	oil & gas
327	Quaker State Oil Refining	x	oil & gas
390	Dorchester Gas	x	oil & gas
403	GAF	x	oil & gas
1	Exxon	d	oil & gas
7	Standard Oil (California)	d	oil & gas
9	Gulf Oil (Pittsburgh)	d	oil & gas
17	Sun Co.	d	oil & gas
21	Standard Oil INDIANA	d	oil & gas
27	Union Oil of California	d	oil & gas
35	Ashland Oil	d	oil & gas
36	Marathon Oil	d	oil & gas
64	Farmland Industries	d	oil & gas
75	Charter	d	oil & gas
112	Diamond Shamrock	d	oil & gas
123	Penn Central	d	oil & gas
159	Pennzoil	d	oil & gas
232	Natomas	d	oil & gas
265	Farmers Union central Exchange	d	oil & gas
314	Commonwealth Oil Refining	d	oil & gas
	National Cooperative Refinery		
374	Assoc.	d	oil & gas
377	Moore McCormack Resources	d	oil & gas
395	Mitchell Energy & Development	d	oil & gas

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
467	Midland Cooperatives	d	oil & gas
480	Westmoreland Coal	d	oil & gas
484	Belco Petroleum	d	oil & gas
495	Marion	d	oil & gas
67	Georgia-Pacific	x	paper
77	International Paper	x	paper
84	Weyerhaeuser	x	paper
97	Champion International	x	paper
140	Crown Zellerbach	x	paper
143	Boise Cascade	x	paper
146	Mead	x	paper
147	Kimberly-Clark	x	paper
151	St. Regis Paper	x	paper
176	Scott Paper	x	paper
191	Jim Walter	x	paper
222	Union Camp	x	paper
230	Westvaco	x	paper
240	Great Northern Nekoosa	x	paper
254	Hammermill Paper	x	paper
316	Willamette Industries	x	paper
336	Potlatch	x	paper
369	Southwest Forest Industries	x	paper
375	Washington Post	x	paper
410	Nashua	x	paper
455	Consolidated Papers	x	paper
457	Sonoco Products	x	paper
465	Federal Paper Board	x	paper
486	Fort Howard Paper	x	paper
261	Diamond International	d	paper
312	Louisiana-Pacific	d	paper
342	AM International	d	paper
386	Bemis	d	paper
388	Saxon Industries	d	paper
411	Maryland Cup	d	paper
416	Avery International	d	paper
441	Dennison Manufacturing	d	paper
447	James River Corp. of Virginia	d	paper
454	Massonite	d	paper
489	Georgia Kraft	d	paper
168	McGraw-Edison	x	print
186	Times Mirror	x	print
258	Gannett	x	print

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
271	R.R. Donnelley & Sons	x	print
272	Knight-Ridder Newspapers	x	print
294	McGraw-Hill	x	print
344	New York Times	x	print
414	Dow Jones	x	print
453	Harcourt Brace Jovanovich	x	print
470	Delux Check Printers	x	print
478	American Greetings	x	print
487	Macmillan	x	print
125	Time Inc.	d	print
373	Arcata	d	print
438	Capital Cities Communications	d	print
801	Sears Roebuck (Chicago)	x	retail
802	Safeway Stores (Oakland)	x	retail
803	K Mart	x	retail
804	J.C. Penney	x	retail
805	Kroger Co.(Cincinnati)	x	retail
807	Lucky Stores (Dublin, Calif)	x	retail
809	Federated Department Stores	x	retail
810	Great Atlantic & Pacific Tea	x	retail
811	Winn-Dixie (Jacksonville)	x	retail
813	Southland (Dallas)	x	retail
814	Jewel Companies (Chicago)	x	retail
818	Albertsons ((Boise)	x	retail
819	May Department Stores	x	retail
821	ARA Services (Philadelphia)	x	retail
823	Allied Stores (New York)	x	retail
825	Associated Dry Goods (New York)	x	retail
826	Macy (R.H.) (New York)	x	retail
828	McDonald's (Oak Brook, IL)	x	retail
829	Rapid-American (New York)	x	retail
831	Stop & Shop Companies (Boston)	x	retail
835	Jack Eckerd (Clearwater, Fla)	x	retail
836	Walgreen (Deerfield, IL)	x	retail
837	Tandy (Fort Worth)	x	retail
838	Fisher Foods (Bedford Heights, OH)	x	retail
839	Giant Foods (Washington, D.C.)	x	retail
840	Waldbaum (Central Islip, NY)	x	retail
841	Revco D.S. (Twinsburg, OH)	x	retail
842	Mercantile Stores (Wilmington, DE)	x	retail
843	First Nat'l Supermarkets	x	retail
846	Pneumo (Boston)	x	retail

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
848	SCOA Industries (Columbus, OH)	x	retail
849	Thrifty (Los Angeles)	x	retail
850	Service Merchandise (Nashville)	x	retail
806	F.W. Woolworth	d	retail
808	American Stores	d	retail
812	Montgomery Ward	d	retail
815	Household Merchandising	d	retail
816	Dayton Hudson	d	retail
817	Grand Union	d	retail
820	Supermarkets General	d	retail
822	Carter Hawley Hale Stores	d	retail
824	Melville	d	retail
827	Dillon Companies	d	retail
830	Wal-Mart Stores	d	retail
832	Marriott Corp.	d	retail
833	Sigmore	d	retail
834	Zayre	d	retail
844	Pantry Pride (Food Fair)	d	retail
845	Marshall Fields	d	retail
847	U.S. Shoe	d	retail
98	Owens-Illinois	x	rubber, glass, stone, leather
169	Owens-Corning Fiberglass	x	rubber, glass, stone, leather
181	Johns Manville	x	rubber, glass, stone, leather
226	Corning Glass Works	x	rubber, glass, stone, leather
317	National Gypsum	x	rubber, glass, stone, leather
319	Anchor Hocking	x	rubber, glass, stone, leather
328	Lone Star Industries	x	rubber, glass, stone, leather
334	Certaineed	x	rubber, glass, stone, leather
479	Kerr Glass Manufacturing	x	rubber, glass, stone, leather
483	Ideal Basic Industries	x	rubber, glass, stone, leather
38	Goodyear Tire & Rubber Co.	x	rubber, glass, stone, leather
88	Firestone Tire & Rubber	x	rubber, glass, stone, leather
138	B.F. Goodrich	x	rubber, glass, stone, leather
177	Uniroyal	x	rubber, glass, stone, leather
263	Brown Group	x	rubber, glass, stone, leather
241	U.S. Gypsum	d	rubber, glass, stone, leather
264	Norton Simon	d	rubber, glass, stone, leather
275	Libbey-Owens-Ford	d	rubber, glass, stone, leather
368	Brockway Glass	d	rubber, glass, stone, leather
446	Gifford-Hill	d	rubber, glass, stone, leather
163	General Tire & Rubber	d	rubber, glass, stone, leather
364	Dayco	d	rubber, glass, stone, leather

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
448	Armstrong Rubber	d	rubber, glass, stone, leather
456	Dorsey	d	rubber, glass, stone, leather
132	Burlington Industries	x	textiles
148	Levi Strauss	x	textiles
170	Interco	x	textiles
189	J.P. Stevens	x	textiles
249	Blue Bell	x	textiles
276	West Point-Pepperell	x	textiles
348	Cluett Peabody	x	textiles
387	Genesco	x	textiles
404	United Merchants & Manufacturers	x	textiles
406	Cone Mills	x	textiles
431	Collins & Aikman	x	textiles
435	Kellwood	x	textiles
460	Fieldcrest Mills	x	textiles
474	Palm Beach	x	textiles
481	Warnaco	x	textiles
499	Riegel Textile	x	textiles
256	Armstrong World Industries	d	textiles
279	Akzona	d	textiles
329	Springs Mills	d	textiles
357	Haret Schaffner & Marx	d	textiles
378	VF	d	textiles
417	Dan River	d	textiles
432	M. Lowenstein	d	textiles
901	CSX Corp. (Richmond)	x	trans
908	Eastern Airlines (Miami)	x	trans
913	Northwest Airlines (St. Paul)	x	trans
916	Tiger International (Los Angeles)	x	trans
917	Republic Airlines (Minneapolis)	x	trans
923	Continental Air Lines (Los Angeles)	x	trans
924	Western Air Lines (Los Angeles)	x	trans
928	Yellow Freight System	x	trans
931	Texas Air (Houston)	x	trans
932	Piedmont Aviation (Winston-Salem)	x	trans
936	Federal Express (Memphis)	x	trans
943	Arkansas Best (Fort Smith, Arkansas)	x	trans
944	Alexander & Baldwin (Honolulu)	x	trans
948	Kansas City Southern Industries	x	trans
902	Trans World Corp.	d	trans

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
903	UAL	d	trans
904	Burlington Northern	d	trans
905	United Parcel Service	d	trans
906	American Airlines	d	trans
907	Pan American World Airways	d	trans
909	Delta Airlines	d	trans
910	Santa Fe Industries (Santa Fe South'n Pacific Corp.)	d	trans
911	Southern Pacific	d	trans
912	Missouri Pacific Corp.	d	trans
914	Norfolk & Western Ry	d	trans
915	Southern Ry	d	trans
918	Sohio Pipe Line	d	trans
919	Braniff International	d	trans
920	Consolidated Freightways	d	trans
921	Roadway Express	d	trans
922	USAIR Group	d	trans
925	Illinois Central Gulf Railroad	d	trans
926	Chicago & North Western Transp.	d	trans
927	Leaseway Transportation	d	trans
929	Exxon Pipeline	d	trans
930	ARCO Pipe Line	d	trans
933	BP Pipelines	d	trans
934	McLean Trucking	d	trans
935	Emery Air Freight	d	trans
937	Frontier Airlines	d	trans
938	Telecom Corp.	d	trans
939	Allied Van Lines	d	trans
940	PSA	d	trans
941	Chicago, Milwaukee, St. Paul & Pacific RR	d	trans
942	Rio Grande Industries	d	trans
945	Ozark Airlines	d	trans
946	World Airways	d	trans
947	United Van Lines	d	trans
949	Overseas Shipping Group	d	trans
950	RLC Corp.	d	trans
1001	AT&T (New York)	x	utility
1002	GTE Corp	x	utility
1003	Southern Company (Atlanta)	x	utility
1005	American Electric Power	x	utility
1006	Commonwealth Edison Co.	x	utility

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
	Southern California Edison		
1007	(Rosemead, Calif)	x	utility
1009	Consolidated Edison (New York)	x	utility
	Virginia Electric & Power		
1012	(Richmond)	x	utility
	Consumers Power Co. (Jackson,		
1013	Mich)	x	utility
1015	Duke Power Co. (Charlotte)	x	utility
	FPL Group (Florida Power and		
1017	Light) (Miami)	x	utility
	Carolina Power & Light Co.		
1021	(Raleigh)	x	utility
	Central and South West Corp.		
1022	(Dallas)	x	utility
	Columbia Gas System (Wilmington,		
1024	DE)	x	utility
	Long Island Lighting Co. (Mineola,		
1025	NY)	x	utility
	American Natural Resources		
1028	(Detroit)	x	utility
1029	Texas Eastern (Houston)	x	utility
1033	Northeast Utilities (Berlin, Conn.)	x	utility
1037	Cleveland Electric Illuminating (x	utility
1039	Transco Companies (Houston)	x	utility
	Gulf States Utilities Co. (Beaumont,		
1040	TX)	x	utility
1042	Baltimore Gas and Electric	x	utility
	Consolidated Natural Gas		
1046	(Pittsburgh)	x	utility
1047	Sonat (Birmingham)	x	utility
1050	ENSERCH Corp. (Dallas)	x	utility
10114	Detroit Edison (Detroit)	x	utility
1004	Pacific Gas & Electric	d	utility
1008	Middle South Utilities	d	utility
1010	Texas Utilities Co.	d	utility
1011	PSE&G	d	utility
1016	Philadelphia Electric Co.	d	utility
1018	Houston Industries	d	utility
1019	General Public Utilities Corp.	d	utility
1020	Pennsylvania Power & Light	d	utility
1023	United Telecommunications	d	utility
1026	Ohio Edison Co.	d	utility
1027	Niagra Mohawk Power	d	utility

Table B-1 Continued

COID	Company Name	Final Set x = in final; d = deleted	Industry
1030	Panhandle Eastern Pipe Line	d	utility
1031	Union Electric	d	utility
1032	Pacific Power & Light	d	utility
1034	Internorth (Northern Natural Gas)	d	utility
1035	El Paso	d	utility
1036	Continental Telephone	d	utility
1038	Arizona Public Service	d	utility
1041	Public Service Co. of Indiana	d	utility
1043	Allegheny Power system	d	utility
1044	Northern Indiana PSC	d	utility
1045	Northern States Power	d	utility
1048	Illinois Power Co.	d	utility
1049	Pacific Lighting	d	utility

APPENDIX C

TABLE C-1. VARIABLE DESCRIPTIVE STATISTICS

VARIABLE	DEPFED*	TOTALECO	INTERDEP	PACFUND	REGLOBBY (ratio)	HIREDGUN (ratio)	NUMPAC**	TAXCHANGE
Stdev	2%	2.0%	4.20	2049	.579	.28	4.15	3.47%
Mean	3%	3.30%	8.8	3663	1.087	.40	14.29	3.10%
Confidence interval*** + or -	1%	.09%	1.90	946	.275	.13	1.97	1.75%
Confidence Threshold	4%	4.2%	10.7	4610	1.36	.53	16.27	5%
Threshold Used in Study	3%	3.5%	10	4000	1	.40	15	5%
*Controlled for Aerospace, Measurement and Electrical **Controlled for Utilities ***Confidence Interval .05								

APPENDIX D

TABLE D-1. HOUSE WAYS AND MEANS MEMBERS 1979-1981

House Ways and Means Committee Seniority Ordered (All eligible for PAC contributions)			
Democratic Members	State/position	Republican Members	State
Dan Rostenkowski	Illinois/Chair		
Sam Gibbons	Florida	Barber Conable	New York
J.J. Pickle	Texas	John J. Duncan	Tennessee
Charles Rangle	New York	Bill Archer	Texas
Fortney H. "Pete" Stark	California	Guy Vander Jagt	Michigan
James R. Jones	Oklahoma	Philip M. Crane	Illinois
Andrew Jacobs Jr.	Indiana	Bill Frenzel	Minnesota
Harold E. Ford	Tennessee	James G. Martin	North Carolina
Ken Holland	South Carolina	L.A. "Skip" Bafalis	Florida
William M. Brodhead	Michigan	Richard T. Schulze	Pennsylvania
Ed Jenkins	Georgia	Bill Gradison	Ohio
Richard A. Gephardt	Missouri	John H. Rousselot	California
Thomas J. Downey	New York	Henson Moore	Louisiana
Cecil Heftel	Hawaii		
Wyche Fowler, Jr.	Georgia		
Frank J. Guarini	New Jersey		
James M. Shannon	Massachusetts		
Marty Russo	Illinois		
Don J. Pease	Ohio		
Kent Hance	Texas		
Robert T. Matsui	California		
Don Bailey	Pennsylvania		
Vacancy			
(Source: Congressional Quarterly Almanac 1981)			

TABLE D-2. SENATE FINANCE COMMITTEE MEMBERS 1979-1981

Senate Finance Committee (Seniority ordered)			
Republican Members	State/position	Democratic Members	State
Robert Dole	Kansas/chair		
Bob Packwood	Oregon	Russell B. Long	Louisiana
William V. Roth, Jr.	Delaware	Harry F. Byrd, Jr.	Virginia
John C. Danforth	Missouri	Lloyd Bentsen	Texas
John H. Chaffee	Rhode Island	Spark M. Matsunaga	Hawaii
John Heinz	Pennsylvania	Daniel Patrick Moynihan	New York
Malcolm Wallop	Wyoming	Max Baucus	Montana
David Durenberger	Minnesota	David L. Boren	Oklahoma
William L. Armstrong	Colorado	Bill Bradley	New Jersey
Steven D. Symms	Idaho	George J. Mitchell	Maine
Charles E. Grassley	Iowa		
(Source: Congressional Quarterly Almanac 1981)			

APPENDIX E

TABLE E-1. INDUSTRY-TO-INDUSTRY INPUT/OUTPUT MATRIX 1979 (Figures in Millions)

INDUSTRY	AERO	AUTO	CHEM	DFIN	DRUG	ELEC	FABMETAL	FOOD	GENMAN	MEASURE	OIL&GAS	PAPER	PRINT	PRIMMET	RETAIL	RUBBER	TEXTILE	TRANS	UTIL
AERO		4	1	0	0	2	741	1	2	3	8	1	1	1	0	1	1	1349	0
AUTO	0		5	19	1	6	101	27	637	14	43	2	6	3	163	77	4	616	27
CHEM	106	667		11	3737	1848	1808	1168	465	1761	3696	2517	1193	3216	29	16773	2296	228	342
DFIN	215	473	428		251	986	709	1093	691	1180	869	267	560	677	6430	765	593	3846	2388
DRUGS	0	4	63	12		0	85	717	3	27	227	51	0	3	256	145	271	31	0
ELECT	2450	3892	32	78	6		838	12	2528	7810	305	5	8	963	183	139	61	489	2299
FABMET	757	13507	1032	4	1238	4666		8438	3411	3768	1291	320	99	1764	145	1299	231	416	16
FOOD	55	14	806	138	618	85	38		61	163	123	410	37	23	272	137	659	431	41
GENMAN	1581	4099	1009	3	52	1829	2550	373		1454	2089	390	198	3454	216	1126	578	718	384
MEASURE	522	819	114	252	75	884	306	88	181		95	69	544	229	444	247	887	173	168
OIL	316	545	3079	870	586	754	841	1374	1427	1017		1800	258	11752	7880	3969	627	13451	37378
PAPER	50	302	747	751	741	1083	873	7151	333	1995	478		1149	10149	3917	3258	1421	259	171
PRINT	97	45	336	2860	14	334	443	1399	62	165	17	46		5709	893	71	96	305	528
PRIMMET	2569	13432	1230	2	29	12573	30131	114	17997	8562	941	172	185		13	815	58	602	90
RETAIL	804	7836	1702	950	1199	4187	3368	10951	3997	4602	1706	2532	1778	4686		3232	4987	4216	1498
RUBBER	263	6190	2463	103	2473	5207	2049	5114	2191	4730	726	2199	459	1708	1290		7403	1088	181
TEXTILE	66	2021	32	80	17	181	130	138	142	791	65	563	120	97	258	1631		242	621
TRANS	643	2362	2599	765	923	2147	2610	6287	1488	2220	7566	2775	2007	4875	6061	5334	1960		1638
UTILITIES	586	1077	4192	6155	505	2299	1974	2899	176	1671	3968	2123	1148	5323	16803	4211	1821	3547	
OTHER	3501	5725	5286	27529	9914	12344	6411	85509	5551	11556	14728	7946	8085	5088	69303	7568	7600	19394	22818
TOTAL	10758	56145	19436	13023	8476	36229	46236	45055	33997	38975	19597	13455	7990	50735	38631	25614	21060	25968	45013

TABLE E-1 Continued

INDUSTRY	AG	CONST	ORDNANCE	WOOD	OTHER TRANS	REAL ESTATE	SERVICES	FEDERAL	STATE	TOTAL OUTPUT	2%	Number of Industry Interconnections at 2%	INTERDEP	Percentage Federal Purchase per Industry	DEFED	Percentage Output/Total Industry Output	TOTALECO
AERO	11	0	733	0	0	0	0	13147	12	16019	320	3	0	82%	1	0.9%	0
AUTO	114	105	23	3	368	10	14857	1643	2502	21376	428	3	0	8%	1	1.3%	0
CHEM	10533	4187	63	250	213	206	3042	1848	1033	63236	1265	12	1	3%	1	3.7%	1
DFIN	2299	1795	54	203	139	8449	7499	360	4910	48129	963	10	1	1%	0	2.8%	0
DRUGS	144	0	3	0	4	13	4444	254	2708	9465	189	4	0	3%	1	0.6%	0
ELECT	127	6694	368	24	730	49	2544	12606	1042	46282	926	8	0	27%	1	2.7%	0
FABMET	512	32765	201	1399	1384	36	2820	2848	196	84563	1691	8	0	3%	1	5.0%	1
FOOD	10632	74	13	67	8	39	33262	367	5411	53984	1080	2	0	1%	0	3.2%	0
GENMAN	1117	3258	227	69	1801	65	2245	2781	1236	34902	698	14	1	8%	1	2.0%	0
MEASURE	53	4108	54	60	456	70	8313	4036	3553	26800	536	6	0	15%	1	1.6%	0
OIL	6411	10201	72	148	179	2575	7257	4646	1720	121133	2423	10	1	4%	1	7.1%	1
PAPER	431	21225	55	3440	1203	85	3228	243	1273	66011	1320	9	0	0%	0	3.9%	1
PRINT	59	62	7	25	15	143	3490	537	4430	22188	444	6	0	2%	0	1.3%	0
PRIMEMET	27	10432	992	1233	3461	1	124	412	21	106218	2124	8	0	0%	0	3.9%	1
RETAIL	6736	24952	168	1170	1120	1426	18025	2937	3808	124573	2491	14	1	2%	0	7.3%	1
RUBBER	880	25140	85	1459	656	641	5802	662	917	82079	1642	13	1	1%	0	4.8%	1
TEXTILE	466	954	27	1464	278	9	3701	338	561	14993	300	9	0	2%	0	0.9%	0
TRANS	2686	7093	135	656	397	685	7276	3602	4178	80968	1619	15	1	4%	1	4.7%	1
UTILITIES	2249	1327	212	320	243	3846	18108	1523	8307	96612	1932	14	1	2%	0	5.7%	1
OTHER		19033	1225	791	2448	1681	98947	32341	94106	586438							
TOTAL	32530	148285	2619	11534	11935	68044	120639	37792	39361	1705969							

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Educational Background

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2004	Ph.D. Sociology, Texas A&M University Chair: Dr. Alex McIntosh

Professional and Academic Experience

1987-1989	National Institutes of Health Office of the Director Legislative Analyst NICHD, NINDS, NIDHD, HHS, NCI and bioethics
1989-1990	Capital Associates Legislative Analyst Biomedical Health Lobbyist
1990-1992	American Psychological Association Washington, DC Legislative Analyst-Lobbyist Behavioral Science: National Science Foundation, Neuroscience, NICHD, White House Policy
1992-1995	Departmental Research Assistant Department of Sociology
1995-2001	Assistant Lecturer Department of Sociology Taught eight semesters (2-Complex Organizations and 6-Intro to Sociology)