

Economic Development Policy and Foreign Direct Investment in the American States:
Assessing their Impact on Private Sector Unionization

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DEDICATION

I dedicate this work to my son, Patrick Truman Young-Grady, and his father, Michael Grady, in hopes that its completion will help to provide our family with a solid, middle-class life,

And to my mother, Mary Ellen Young, who taught me what is right.

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ABSTRACT

Most previous research on the role of U.S. state policy in shaping unionization outcomes has emphasized presence or absence of “right-to-work” laws as the key explanatory factor. This dissertation emphasizes the role of state economic development programming in driving the variation in unionization observed across the American states. It also revisits the role that foreign direct investment plays in regard to union power.

I first discuss the variation in private sector unionization levels among the 50 states. I then provide a literature review on two key types of economic development policy, entrepreneurial and locational. I revisit previous scholarship on foreign investment, positing that it has a positive association with unionization, contrary to the commonly-accepted view of many scholars.

I then empirically test these hypotheses using two original models of unionization outcomes measured at both macro and micro units of analysis. First, I present an error correction model with time-series cross sectional data on state private union density from 1983-2004. Here I find that “demand-generating” entrepreneurial development strategies exert a negative long-term impact on annual change in union density, while foreign direct investment exerts a positive shock to it. Next I use logistic regression to test for the variables’ impact on individual-level union election outcomes. Here I find that foreign firm nationality and entrepreneurial policy both exert a positive impact on likelihood of unions to win certification elections. Neither presence of a “right-to-work” statute or locational economic development strategies demonstrate significant effect on the long-term decline of union density or on likelihood of union election wins.

Finally, I consider the impact of economic development and unionization on state income inequality from 1983-2004 using an error-correction model. Private sector union density has a negative independent association with inequality, and entrepreneurial policy increases inequality. In the presence of higher levels of entrepreneurial activism, however, private union density loses its significant impact in equalizing the income distribution. I close by discussing some normative implications of the proliferation of economic development policies and conclude that at present most run counter to labor movement goals and power, especially those using entrepreneurial strategies.

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Introduction

This dissertation addresses the dynamics of unionization, usually considered as a sociological and economic process, from a political framework. As a scholar of political science, I contend that unionization in America is shaped first and foremost by political factors, namely policies pursued by the individual states. Union strength continues to vary across the states even in a day and age of waning union power overall. The underlying cause for this is federalism, which gives states power to craft unique policies to promote their individual economies. The varying economic policies enacted by states condition the ability of unions to organize and grow within them. These policies are legislated and implemented by 50 unique state governments, which differ in regard to partisanship and ideology. Specific economic policies are the factors most directly influencing union outcomes, but federalism, partisanship, and ideology condition which policies will be enacted.

Most policy-oriented research on variation in state unionization levels emphasizes the role of labor relations policies in impacting the union organizing environment. The presence of “right-to-work” laws are the most widely cited policy variable in examinations of state labor union strength. While this dissertation does not intend to refute the argument that “right-to-work” laws have historically affected state labor movements, it does argue that others policy factors need to be explored to fully understand the cross-sectional variation in state unionization outcomes in recent decades. Labor relations statutes can only go so far in explaining why private sector union density levels vary across states and how state density levels have changed over time.

The primary contribution of this project is that it emphasizes a policy variable which has been relatively untapped to study comparative differences in growth and decline of unionization rates. I hypothesize that variations in economic development policies, which states enact to grow their business and labor sectors, are likely to influence labor union strength across the states. While scholars have considered these policies' impacts on job growth, foreign investment attraction, and other important economic factors, their relationship to unionization has been under-examined. In keeping with custom, I will also discuss and consider variation in state labor relations laws as a controlling variable in this study.

A secondary focus of my research will consider the role of the international economy in shaping unionization outcomes. Sociology and economics perspectives highlight inward foreign investment as a key determinant of changes in unionization levels. The amount of foreign direct investment (FDI) has been analyzed frequently as a factor impacting state unionization. However, the measure specifications of FDI range greatly, from those that account for FDI as a stock variable (accumulated levels of assets) to those which measure it as a flow variable (new quantities of inward investment in a given year). My examination considers FDI differently, as the quantity of jobs attributable to inward investment as a percentage of the state labor force, a measure that had been used with less frequency. Moreover, the nationality of individual firms experiencing unionization attempts has also received limited attention as a determinant of labor election outcomes. I examine foreign investment from both the "macro" perspective of FDI jobs in the states and the "micro" perspective of individual firm nationality. This coupled approach - based on multiple units of analysis - will present a fuller picture of how capital mobility impacts unionization potential.

To empirically analyze federalist variation and state levels of unionization, I offer a dynamic time series analysis to account for changes in union density rates over a two decade time period, from 1984 to 2004. This model emphasizes economic development policy as the critical independent variable. I also conduct a cross-sectional analysis of individual firms experiencing unionization attempts to uncover if foreign firms differ from American firms in their likelihood to organize. This second model helps to better explore the role of foreign investment in impacting new organizing.

Finally, I offer an examination of why unionization and economic development policy matter to citizens' economic prosperity by examining differences in income inequality across the states. Unionization and economic development policy affect the distribution of income in the state economies and impact equity. Moreover, I find that certain types of development programs effectively disable unionization as a force in advancing the interests of the low-income workers.

An underlying theme of this research is the search for an economic development strategy that is compatible, rather than at odds with unionization. In recent years, states such as Ohio, Indiana, Michigan, and Wisconsin have passed legislation that limits the power of unions to compel dues from workers covered under union-negotiated contracts. Leaders passing these bills cite promotion of economic development and business attraction as the main motivation. Most southern business and political leaders have endorsed this view for decades.

Other states appear to retain a union-friendly approach in their labor relations policies, which could also indicate that the economic development strategies these states enact will be favorable to unions. The bigger question that this dissertation asks is if there is an economic development strategy currently in use by state governments that actually includes and preserves

the role of unions in shaping economic outcomes. Is it possible that encouragement of economic growth and job creation can run parallel to maintaining union-friendly policies, or is there simply no room for unions in economic development strategies pursued by states?

The layout of this dissertation is as follows: In Chapter One, I will demonstrate that states display regional variation in unionization rates, and I will review the literature contending that “right-to-work” statutes account for this regional variation. In Chapter Two I will discuss differences in two major state economic development policy orientations and posit their relationship to varying unionization levels. In Chapter Three I will review literature regarding the relationship of foreign investment to unionization outcomes and offer some statistical analysis to tentatively refute the finding that foreign investment and firm nationality hinders unionization. In Chapters 4 and 5 I will offer two multivariate regression models to test my hypotheses regarding economic development, foreign investment, and unionization outcomes. Chapter 4 will present a time series model, using “macro” state union density as the dependent variable. Chapter 5 will present a cross sectional logit model, using union wins in individual election contests as the dependent variable. Chapter 6 will utilize state union density along with economic development orientation as independent variables to explain variation in income inequality. In the concluding chapter, I will offer final thoughts on the compatibility of state economic development strategy and union strength and suggestions for future research.

Chapter 1: Variation in State Unionization Levels

The story of unionization in the United States is clearly one of decline. Research confirms an overwhelmingly consistent trend- union density rates have fallen markedly since the late seventies, and most of this loss has occurred in the private sector (Mayer 2004, Farber 2005, & 2001, Slaughter 2007, Hirsch and MacPherson et al. 2001). The dwindling of private sector union membership is apparent from the state as well as national perspective. When analyzing the twenty year change from 1984 to 2004, not a single state in the union gained in the percentage of the private sector labor force organized, and all but four experienced a drop in the total number of private sector workers who were union members (Gordon 2015).¹ The overall conclusion to be drawn by these numbers is that the strength of the American union movement, at both a national and state level, has been substantially eroded.

Even though the decline in private sector union density is common to all states in recent decades, noteworthy variations in the proportion of unionized state workforces remain. As of 2004, the last year in my study, a quarter of American states retained private sector union densities of 10% or more, with a high of 16% in Hawaii. A larger group of states had private sector union densities lower than 5% with North Carolina, the least unionized state, having less than 2%. There is a strong regional association to the variation between the most and least unionized states. Table 1 presents 2004 private sector union density data for all states individually, as well as by regional grouping (Hirsch and Macpherson 2004, BLS 2004). States in the Far West, Midwest, and Mideast (Middle Atlantic) tend to display the highest private sector union rates, with regional averages reaching above 10%. The Southeast, Rocky

¹ States that increased membership were Alaska, Hawaii, Nevada, and Washington.

Table 1. State and Regional Private Sector Union Density, 2004

Regional Grouping	Union Density (%)
<u>Far West</u>	
Hawaii	16.2
Washington	13.2
Alaska	10.9
Nevada	10.0
California	9.4
Oregon	8.1
Regional Average	11.3
<u>Great Lakes</u>	
Michigan	15.9
Illinois	12.1
Ohio	10.5
Wisconsin	10.4
Indiana	9.0
Regional Average	11.6
<u>Mideast</u>	
New York	15.1
New Jersey	11.6
Pennsylvania	9.7
Delaware	7.7
Maryland	6.0
Regional Average	10.0
<u>Plains</u>	
Minnesota	11.1
Missouri	10.9
Iowa	7.2
Kansas	6.1
Nebraska	5.0
North Dakota	4.1
South Dakota	2.9
Regional Average	6.8

Table 1. Continued.

Regional Grouping	Union Density (%)
<u>New England</u>	
Rhode Island	8.8
Massachusetts	7.7
Connecticut	7.3
Maine	5.9
New Hampshire	4.8
Vermont	4.2
Regional Average	6.5
<u>Rocky Mountains</u>	
Montana	5.5
Wyoming	5.3
Colorado	5.2
Idaho	3.7
Utah	2.9
Regional Average	4.5
<u>Southeast</u>	
West Virginia	10.5
Kentucky	7.5
Alabama	5.7
Tennessee	4.9
Louisiana	4.8
Georgia	4.3
Mississippi	4.0
Virginia	3.4
Arkansas	3.2
Florida	2.8
South Carolina	2.6
North Carolina	1.6
Regional Average	4.6
<u>Southwest</u>	
Arizona	3.9
Oklahoma	3.5
New Mexico	3.4
Texas	2.7
Regional Average	3.4

Source: Hirsch and Macpherson 2001 and updates listed at www.unionstats.com, and Bureau of Labor Statistics.

Mountains, and Southwest show the lowest rates regionally. The Plains states fall somewhere in the middle, displaying substantial range in private sector unionization- between 11 and 3% - but averaging at about 7% for the region. Interestingly the New England states, once renown for their labor union strength, only averaged about 6% in private union density as of 2004. (New England retains relatively high rates of overall union density due to the prevalence of public sector unionization in these states.) It has been common for analysts to draw marked distinctions between “strong labor” states, concentrated in the Northeast (and Midwest and West), and “weak labor” states of the South and Rocky Mountain regions (Farber 2005). However, given the waning power of industrial unions in the New England states, it is important to recognize that most private sector unionization in the Northeast is now concentrated in the mid-Atlantic region.

This regional variation in unionization is a function of economic, demographic, and political factors. Examining the composition of states’ industrial sectors and work forces help to understand some of the differences in state level unionization. Regional variation in union strength relates to “legacy effects” of industrial development patterns in the states. Historically, union organizing has been most successful in industries such as transport, warehousing, shipping, and durable goods manufacturing (Mayer 2004; Sanyal 1990), and these industries are prevalent in the Pacific, Mid-west and Northeastern states. “Light” manufacturing such as textile production, as well as agriculture and lower-skilled services, have proven to be less lucrative organizing targets and were the major industries in the Southern states for much of the 20th century (Mayer 2004). Thus, northern and western states featuring heavy manufacturing, utilities, and transport employment as a higher proportion of their workforce experienced more unionization in the successful years of the labor movement (1940’s-1970’s) than did southern states with lower proportions.

The demographic characteristics of state labor forces are also likely related to union membership levels. Black workers are more likely to be union members than white workers or Hispanics, and men are slightly more likely to be union members than women, although the gap between men and women has declined in recent decades (Mayer 2004). The higher proportions of black and male workers in some state labor forces may exert an independent positive effect on state union density, although other associated state-level variables, such as lack of union shop protections, may obscure the demographic impacts of race and sex in the South.

Most political science research on unionization differences have focused on partisanship, ideology, and policy variation across the states. American federalism promotes a diversification of the state institutional environments in which labor unions operate. Each state elects its own unique set of leaders empowered with discretion in policy areas that impact the political economy, including labor relations. Partisanship of state legislatures and executive offices, along with the ideological orientations of elected branches, are variables that condition the organizing and bargaining capacity of unions. Comparative researchers, borrowing from themes in sociological literature, stress the role of working class “power resources” as tools used by non-elites to enable routes of representation to political and economic decision making (Korpi 1983, Hewitt 1977, Hicks and Swank 1984). The presence of ideologically left governments, to provide a political voice to working people, and labor union movements, which coordinate their participation in both market wage setting and policy-making favorable to their class interests, are the key power resources (Kelly and Witko 2012, see also Radcliff and Saiz 1998).

The causal relationship between left governments and union strength is bi-directional. Labor unions undergird the organization of left-leaning political parties, generate left candidates,

and secure left votes in the electorate. But the ideological orientation of governments also impact the union “opportunity structure” because it impacts labor relations regulations and the amount of public resources channeled to protect worker organizations (Kelly, Witko and Young 2013, Stephens and Wallerstein 1991, Bronfenbrenner 2009). Even in the United States, where the ideological spectrum is shifted right, the partisan composition of the Congress and the President matters to union density outcomes (Dark 1999; Kelly, Witko, and Young 2013). At the state level, where the Democrat Party is sometimes centrist or even conservative, the average ideological scores of state legislators better explain variation in union density. Time series regression analysis reveals a positive association between left state government power and state unionization levels when combining private and public sectors (Kelly, Witko, and Young 2013).

While partisanship and ideology of governments is an underlying variable affecting unionization, it is arguably labor, employment, and economic policies pursued by state governments that offer the most direct causal link to the strength of state labor movements. Policy differences provide clear evidence for the role of federalist variation in social outcomes. Labor relations laws known as “right-to-work” statutes, which differ widely across the states, are the classic policy variable utilized in the study of unionization (Farber 1984, Ellwood and Fine 1987, Moore 1998), and are determined at a state, rather than national level.

The legal foundations of union-management relations in the U.S. is based upon the National Labor Relations Act, a Depression-era law that guaranteed American workers in the private sector the fundamental rights to organize into unions and collectively bargain with their employers. While the National Labor Relations Act retains supremacy across the country, amendments passed in the late 1940’s give discretion to states in influencing the potency of

union organizing activities. The Taft-Hartley Act diluted the original NLRA organizing protections by granting states the authority to pass “right-to-work” laws, establishing “open shop” bargaining units (Taft Hartley Act 1947, 14(b)). Open shops allow workers covered under union contracts to opt-out of union membership and dues deduction, thus eroding the revenue-raising potential for labor organizations. This is in contrast to states operating with “union shops” which give unions legal authority to mandate dues payment, post-hiring, for employees covered under union-negotiated contracts.² The discretion given to states in regard to mandating union dues payment contributes to the regional variation in labor strength previously discussed. As of 2004, the last year of my study, about 22 states were open shop “right-to-work” states, concentrated in the southeast, west Plains, and Rocky Mountain regions. The remainder of states, including the District of Columbia, had union-shops and were located in the north-east, upper mid-west, and Pacific Coast regions.

Variation in these differing labor regulatory systems impact labor union recruitment in the private sector significantly. “Right-to-work” states consistently rank among the lowest in terms of union density figures; for instance, in 2004 every one of the bottom 16 states in terms of private sector union density levels, all under 7%, were right-to-work states (Mayer 2004, see also Davis and Huston 1995). Union density levels are strongly associated with average wage levels, with union shop states exhibiting higher per capita income levels than open shop states (Mishel 2000). Moreover, the upward pressure that unions place on wages has spill-over effects for all employees. Even non-union workers in the private sector earn more in states with union shops,

² A third type of bargaining unit, the “closed shop,” was prohibited under Taft-Hartley. The closed shop requires all employees to be members of the certified union before hiring. Only pre-established union members would be eligible to become employees in this arrangement. Some industrial relations professionals argue that the construction industry still works under a closed shop system.

whereas union to non-union wage differentials are greater in “right-to-work” systems (Farber 2005). Moreover, states with greater union density spend more on education per pupil, income support supplements, and total government social program spending (Radcliff and Saiz 1998), further magnifying the positive externalities generated from union activity in the wider economy.

Efforts to strip private sector workers of union rights tends to coincide with restrictions on public employees’ union security guarantees as well, as recent examples in Indiana, Ohio, and Wisconsin demonstrate (see Greenhouse 2011, Davey 2015). Federalism allows near-total discretion to states in providing rights to state and municipal workers to join unions, to engage in collective bargaining, and to strike (Supreme Court of the U.S., *National League of Cities vs. Usury*, 1976). States vary significantly in the degree of protections they have legislated for their public employees to engage in labor activities (Freeman and Valletta 1988, Farber 2005). States with private sector “right-to-work” laws, namely those in the south, often correspond to the states which lack strong public employee bargaining rights and union security guarantees in the public sector (Farber 2005). While public sector unionization is outside the scope of this project, the link between “right-to-work” policies and limited public employee labor protections reaffirms the significant impact that federalist variation has in setting institutional constraints on unions. While scholars heavily focus on “right-to-work” (RTW) statutes as a major determinant of state union strength, there are limits to the degree to which this policy variable explains the erosion of unionization in recent decades. Table 2 lists all states, in ascending order of private sector union density in 2004, along with the state’s RTW status as of 2004, as well as the year that the RTW

Table 2. State Private Union Density and Right-to-Work Status

	Private Density, 2004	RTW Status, 2004*	Year Enacted*	Density Change 1984-04**	Density Change 2004-05**
Hawaii	16.2	No		-5.1	0.7
Michigan	15.9	No		-9.2	-1.5
New York	15.1	No		-8.5	1.0
Washington	13.2	No		-6.6	-1.8
Illinois	12.1	No		-7.8	-0.3
New Jersey	11.6	No		-7.2	0.2
Minnesota	11.1	No		-6.4	-1.4
Alaska	10.9	No		-6.5	2.2
Missouri	10.9	No		-9.0	-1.1
Ohio	10.5	No		-10.5	0.3
West Virginia	10.5	No		-13.4	0.1
Wisconsin	10.4	No		-10.2	0.7
Nevada	10.0	Yes	1951	-11.2	2.0
Pennsylvania	9.7	No		-11.4	-1.2
California	9.4	No		-7.4	0.3
Indiana	9.0	No		-15.1	1.0
D.C.	8.8	No		-5.7	-1.8
Rhode Island	8.8	No		-5.1	-0.4
Oregon	8.1	No		-10.6	-0.4
Delaware	7.7	No		-5.8	-0.1
Massachusetts	7.7	No		-7.4	-0.3
Kentucky	7.5	No		-9.6	0.1
Connecticut	7.3	No		-6.3	0.3
Iowa	7.2	Yes	1947	-7.5	0.1
Kansas	6.1	Yes	1958	-4.3	-1.0
Maryland	6.0	No		-7.6	1.4
Maine	5.9	No		-7.2	-0.3
Alabama	5.7	Yes	1953	-8.0	0.3
Montana	5.5	No		-8.1	0.2
Wyoming	5.3	Yes	1963	-6.1	0.3
Colorado	5.2	No		-4.7	0.1
Nebraska	5.0	Yes	1947	-6.3	-0.5
Tennessee	4.9	Yes	1947	-6.2	-1.6
New Hampshire	4.8	No		-2.5	-0.8
Louisiana	4.8	Yes	1976	-4.0	0.0
Georgia	4.3	Yes	1947	-5.4	-0.6
Vermont	4.2	No		-2.2	0.9
North Dakota	4.1	Yes	1947	-3.9	-0.5
Mississippi	4.0	Yes	1954	-4.9	1.1
Arizona	3.9	Yes	1947	-3.3	0.0
Idaho	3.7	Yes	1985	-3.8	-0.4
Oklahoma	3.5	Yes	2001	-5.0	-0.6
Virginia	3.4	Yes	1947	-6.5	0.0
New Mexico	3.4	No		-4.8	0.0
Arkansas	3.2	Yes	1947	-5.9	-0.1
South Dakota	2.9	Yes	1947	-4.3	-0.2
Utah	2.9	Yes	1955	-6.3	-0.2
Florida	2.8	Yes	1943	-3.1	-0.3
Texas	2.7	Yes	1993	-3.5	0.4
South Carolina	2.6	Yes	1954	-0.9	-1.5
North Carolina	1.6	Yes	1947	-3.2	0.2

Sources: * National Right to Work Committee 2015. ** Colin Gordon, "Mappings of Union Membership", www.unionstats.com

law was enacted. It also lists the annual change in union density for 2004, as well as for the two decades preceding 2004.

Clearly, the most unionized states tend to be those without open shop laws, which seems, on first glance, to support the classic theory that “right-to-work” statutes explain state level variation in union membership. However, when looking at the annual and 20-year change in union density, in tandem with the year a state’s RTW statute was enacted, the relationship appears less conclusive. Almost all states with RTW statutes passed them fifty to sixty years ago, and only three states passed laws during the two decades of my study.³ Once the laws were passed, they remained static for all states; in other words there has been no back-and-forth fluctuation between union shop and open shop status upon enacting a RTW statute. Yet the twenty year change for all states between 1984 and 2004 was one of decline. Thus, union density changed for all states, but right-to-work status remained static for most states. Moreover, regarding annual change in union density, states do show variation in recent years, with some increasing and others decreasing. RTW status appears to have little relationship to this annual change in states, as those which gained, as well as those which lost, are a “mixed bag” of open shop and closed shop states.⁴ So while labor relations policy may relate to cross-sectional variation between states, it lacks clear relevance when examining variation in over-time change. It may be hypothesized that the impact of RTW laws are long-term, explaining union density rates five to six decades after their passage, even though the argument for long-range impacts of

³ Ohio, Indiana, Michigan, and Wisconsin passed RTW laws in more recent years outside my study

⁴ This lack of relationship can also be observed in more recent years with states that passed RTW laws after my period of study. Michigan lost members since the passage of RTW. However, Indiana actually gained membership in the year after enacting their RTW law. See Davey 2015.

RTW laws on union strength have been refuted (Moore 1998, Farber 1984). Even if one accepts this argument, it still does not adequately account for differences in recent years among states in the annual change in private union density.

Tables of descriptive statistics can not properly analyze dynamic changes in variables over time. One contribution of my later chapters will be the presentation of a time series regression model which better captures historical change in union densities across the states. In any case, the static nature of right-to-work laws in the years under study immediately motivates the search for other variables which do change over time, which could better account for annual union density change.

In addition to labor relations statutes, employment policies also vary across states and may factor into unionization levels, at least indirectly. States design distinct employment-insurance programs and worker safety programs (Hansen 2001). They operate their own departments of labor and employment security agencies to enforce state-generated employment laws, such as minimum wage provisions. While states are bound to guarantee most employees a minimum wage as established by the federal government, states do retain discretion to set the wage floor higher, if they choose. States in the south and Mountain West typically have no state wage floor and thus only honor the minimum federal rate; compared to northeastern and West Coast states which feature state minimum wages that best the federal rate (Department of Labor, Wage and Hour Division, 2015). Minimum wage rates are usually thought of as an effect of unionization. However, higher base level wages raise the “starting point” from which contract wage bargaining begins, helping unions to achieve even higher wages for their members. This enriches union dues revenues and union reputation among workers, which could in turn lead to

higher unionization potential. States also have discretion in the administration of worker's compensation programs, including the frequency of denying claims, provision of resources for monitoring fraud, and the determination of benefit levels (Lemov 1997). More pro-worker provisions assist unions in their ability to win claims for their members affected by job-related injuries. Union reputation and membership recruitment may be enhanced in states with high-level worker compensation standards.

For scholars concerned with the impact of policy on state unionization, labor relations and employment laws are “natural” factors to explore. They have a straight-forward relationship to working conditions, wages, and protections for the labor force and clearly affect policy areas that are central to labor unions. However, the limitations of labor relations policies to adequately explain trends in unionization require policy-oriented scholars to cast a wider net in their research. Policies that focus on “bigger picture” development of the state macro-economy are likely to influence labor force dynamics and unionization capacity, but have received less attention. Economic development policies, which provide government resources and planning to cultivate state business and labor sectors, are a major area of interest in federalist studies in recent decades. As will be discussed in the next chapter, projects to evaluate the intended economic consequences of such policies- such as job growth and increased investment from outside the state - have been prolific. Other scholars of federalism focus on assessing the disadvantages that may have emerged from economic development policies, particularly their negative impact on revenues for public-sector services. While scholars fairly frequently acknowledge a general relationship between economic development and unionization in broader discussions of income equality and jobs quality, there has been little examination of the causal relationship that development policies may have on the labor movement.

In reality, union movement vitality is determined by a complex interplay of political, social, and economic factors. Policy-oriented scholars should not attempt to explain it as a function of labor relations policies alone. Economic development policies have a wide reach on the state macro-economy, which sets the overall conditions in which unions must organize. Some of these conditions include: the prevailing array of industries in the state economy, the degree of expansion of the state economy, and the specific terms and conditions of new jobs created. In some cases, economic development policies may even directly address unions with the intent to support or subvert them, as will be discussed.

The central research question of this dissertation – “*What is the causal impact of economic development policy on unionization outcomes in the states?*” – is essentially empirical in nature. However, allow me to offer an alternate framing of the question, which is perhaps more normative in its approach: “*Is there an economic development strategy that actually aligns with the agenda of the union movement? Which states, if any, use development strategies that are compatible with unions and their efforts to nurture economies of shared wealth?*” As I shall discuss in Chapter 2, a state government’s orientation to development, and its perception of labor as a cost or an asset to business, may impact the overall favorability of the state economy to labor union growth. This matters because the relationship between unionization and economic development policy may have a significant impact on the equity of income distribution in the state economy, as will be examined in Chapter 6.

Finally, since unionization is an economic, as well as a political phenomenon, it is also necessary to re-consider how the internationalization of the economy impacts state labor movements. Scholars have debated how the openness of a state’s economy, as determined by the amount of foreign investment entering the state, impacts union strength for several decades.

Chapter 3 offers a review of this literature and posits that in spite of the general assumption that inward foreign investment impedes unionization, it might actually present opportunities for labor unions. Moreover, consideration of inward foreign investment is critical to the greater discussion of how economic development impacts unionization, as increased inward investment is a primary objective of such policies.

Chapter 2: Economic Development Strategy and Unionization Outcomes

Federalism enables distinct political economies to evolve across the 50 states (Eisinger 1990; Amberg 2010). Labor force dynamics, including unionization of the workforce, are important aspects shaping state political economies. Public policies that impact the state labor force can be grouped into three major types: labor-management relations policies, employment protections, and economic development strategies. Labor-management relations policies, as discussed in Chapter One, are the most thoroughly researched policy-factor impacting unionization outcomes, with right-to-work laws commonly associated with lower rates of unionization. As for employment regulations, the second related policy factor, their relationship with unionization is an endogenous one. Unionization has positive externalities on state wage rates and employment protections for the entire labor force –including non-union workers (Radcliff and Saiz 1998). State policies establishing minimum wages, employer unemployment taxes, strong safety and occupational standards and worker compensation protections are products of union efforts to lobby policy-makers and support pro-worker candidates. However, the presence of strong worker protection laws also has a feedback effect on unions in their ability to service their own members. Union contract enforcement of wage and safety provisions is much easier if a minimum level of worker protections is already backed by the full force of state law.

Economic development is an area that has received less attention than labor and employment regulations as a policy determinant of unionization and is critical to understanding state variation in union outcomes. This chapter will first review the variation in economic development policy approaches and compare two major types of strategies. Next, it will

summarize the findings about the impacts of these strategies on state job growth, wage rates, and availability of public funds. It will then discuss the Saiz economic development indices, the primary metric available to measure economic development policy, which tracks the intensity of states to engage in two major types of strategies. I will then posit possible impacts that the two economic development approaches have on unionization outcomes and craft tentative hypotheses for later testing. Lastly, this chapter will present a descriptive statistics comparison of three example states as an illustration of the differences in policy and unionization levels between states using the different types of economic development approaches.

I contend that economic development strategies to target and/or grow new business investment exert an impact on unionization outcomes that is independent and distinct from the impact of state labor relations policies. Admittedly, at some level investment and development strategies are inter-related to state labor laws and employment programs. For example, state efforts to keep unionization low through “right-to-work” laws have themselves been classified as a definable economic development strategy by some scholars (Leicht and Jenkins 1994). However, this dissertation concurs with scholarship that recognizes the distinction between economic development policy and labor and employment policy and conceptualizes them separately. The former utilizes positive incentives and resource provision to attract and/or grow capital in the state economy, while the latter prioritizes regulation of business actions that specifically target unions and employees (Eisinger 1988). Labor and employment policies directly enforce union and/or worker protections, and given this, it is no wonder that they have received much attention as factors impacting unionization outcomes. However, economic development policy as an independent influence on unionization capacity is also worthy of attention.

First of all, economic development policy cultivates the firm and industry mix operating in the state, which in turn determines the environment within which labor unions organize and bargain. For example, one state might offer an investment incentive to lure durable goods manufacturing industries such as those in the automotive sector, while another state's incentive package could target lower-skilled manufacturing and service-sector businesses, while still another state program could promote start-up funding for emerging information tech businesses. The industry sectors nurtured under these approaches vary greatly, and unions may have more or less organizing potential in one industry versus another. The employment market's shift away from durable goods manufacturing to service sectors in recent decades, especially to lower-paying ones in the retail, food, and hospitality industries, is noted as a factor confounding unions in their efforts to maintain membership and achieve growth (Farber and Kruger 1992 in Acemoglu et al 2001).

Another way that economic development policy could affect unionization is that it could attract and/or provide incentives to firms contingent on the degree of collaboration or combativeness that firms are willing to display toward unions. Investment incentives could be awarded by state programs with the stipulation that recipient businesses remain "union free"; or alternatively, incentives could be designated for firms with a history of collaborative, non-combative union relations. It is difficult to statistically substantiate this, as the details of bargaining are notoriously kept "sub rosa" in most deals that state officials strike with investors (Mattera et.al. 2010)⁵. However, some qualitative research shows that conditioning of incentives

⁵ For example, I submitted Open Records requests to three states' economic development programs during the course of research for this project. Officials from two states, South Carolina and Tennessee, maintained that much of the records detailing the recipients of incentives could not be released, because the information was "proprietary." Eventually, the state of SC provided some requested information. Tennessee did not provide any requested data.

packages based on how firms approach union relations does happen. **Table 3**, taken from a report conducted by the corporate-subsidy watchdog group Good Jobs First, displays a number of economic development programs in 2011 that included requirements specifically addressing unions and labor relations. For instance, some programs require that unions be given proper notice and participation in the implementation of skills and training programs, such as California's Employment Training Panel, Kentucky's Bluegrass State Skills Corporation, and New Hampshire's Job Training fund. Most of the remaining identified requirements deny tax credits to companies that relocate as a means of nullifying existing collective bargaining agreements or use incentives in other ways that attempt to weaken unions (West Virginia Governors Guaranteed Workforce Program and the Missouri Rebuilding Communities program, for example). It is important to note that these specific references to unions are not the norm in economic development programs surveyed. Moreover, the characteristics of the programs documented in this table do not imply that all of the state's other development programs will be union-friendly. For example, it is conceivable that while California provides favorable treatment to unions in its Employment Panel program its other corporate subsidy programs contain provisions that attract businesses which are less amenable to union participation. Still, the degree to which the highlighted program requirements relate to a unified union-friendly strategy has implications on the strength of the labor movement in the overall state economy.

The before mentioned cases highlight ways that some economic development programs attempt to safeguard the status of unions. In contrast, the unionization attempt during Volkswagen's (VW) construction of a new automotive factory in Chattanooga, TN is a recent example of how a state government used incentives to discourage companies from allowing union participation in their operations. Law-makers from Tennessee, including U.S. Senator Bob

Table 3. State Economic Development Program with Labor Relations Provisions

<i>State</i>	<i>Program</i>	<i>Labor Relations Provisions</i>
CA	Employment Training Panel	Prior to presenting a funding application, the employer needs to notify appropriate collective bargaining units.
CO	Enterprise Zone Program	Labor agreements must be maintained when a company is approved for participation.
DC	New E-Conomy Transformation Act of 2000 (NET 2000)	Qualified employees cannot include those employed as the result of a strike or lockout.
IL	Film Productions Services Tax Credit	Rules state that “if any of the provisions in this section conflict with any existing collective bargaining agreements, the terms and conditions of those collective bargaining agreements shall control.”
KY	Bluegrass State Skills Corporation	A company has to notify a union, if there is one, about an application for assistance, and an employer cannot ask a job applicant about his/her union affiliation or sentiment toward organized labor; it is also prohibited to deny a job based on an applicant’s affiliation with a union.
MI	Michigan Economic Growth Authority (MEGA) Tax Credits	The state may not discriminate against a company on the basis of its collective bargaining status.
MN	Job Skills Partnership Program	The program must be consistent with existing collective bargaining agreements covering health and human services workers.
MO	New Jobs Training	If there is a bargaining unit in a facility, the employer has to formally request the bargaining agent for written comments on the proposed training program.
MO	Rebuilding Communities	If a recipient company’s relocation violates or terminates a collective bargaining agreement at its previous location, the company is not eligible the tax credit.
NH	Job Training Fund	The committee that reviews applications must include a member representing labor.
WA	New Jobs in Rural Counties and CEZ Tax Credit	No recipient may use tax credits approved under this program to decertify a union.
WV	Governor’s Guaranteed Work Force Program	Funds may not be awarded or reimbursed to any business or industry for the training, retraining or upgrading of skills of potential employee with the purpose of replacing or supplanting employees engaged in an authorized work stoppage.

Table taken from Mattera, Philip, Thomas Cafcas, Leigh McIlvaine, Andrew Seifter, and Kasia Tarczynska. December 2011. "Money for Something: Job Creation and Job Quality Standards in State Economic Development Subsidy Programs". Good Jobs First. pg. 22. Accessed on line at www.goodjobsfirst.org. Used by permission of the author.

Corker, openly threatened the German firm, stating that its incentives package could be reduced according to whether or not the United Auto Workers successfully organized the facility during the May 2014 union recognition election (Pare 2014). Tennessee press uncovered that Governor Bill Haslam, while not publically vocal about the organizing attempt, conditioned the provision of a \$300 million incentive package to VW on the facility remaining union-free in insider communications (Williams 2014). Democratic State House representative Mike Turner described the Haslam administration's efforts to influence VW's labor relations position candidly: "They put a gun to their head and said, 'Look, this is what we are going to give you if you do it our way, and we are going to jerk it away if you don't.'" (Quoted in Williams 2014). Moreover, Governor Haslam has since called for a second secret-ballot union election, in an attempt to block VW's recent promise to voluntarily recognize the UAW union as a representative of the workers through an alternative card-check agreement (Schelzig 2014).

Such examples suggest that economic development policies are a means for states to foster a political economy that is more or less favorable to macro-level union density growth, as well as a tool to roadblock specific unionization attempts at the micro-level, even when a corporation may originally be tolerant to a union presence. The following sections detail major differences among states' economic development strategies and begin a discussion of how variation in development policies could have differential impacts on union organizing and labor movement strength.

Entrepreneurial and Locational Economic Development Strategies

Economic development strategies have been classified in different ways. The classification scheme most corroborated by research is the distinction between entrepreneurial and locational development strategies, as named by American States scholar Martin Saiz. His grouping is based closely around the comparison of “supply” and “demand” side strategies first identified by Peter Eisinger in his important work *The Entrepreneurial State* (Saiz 2001a, Eisinger 1988, Gray and Hanson 2012; see Jenkins et. al. 2006 and Langer 2001 for alternative economic development classifications). This project uses the Eisinger/Saiz categories as the basis for examining federalist variation in state economic development policies.

The entrepreneurial development orientation, utilized increasingly throughout the past two decades, utilizes state actors to buoy the competitiveness of existing business sectors through modernization measures and development of supportive relationships between work force training and finance entities. It also targets new industries for growth in emerging sectors if key supply-side inputs are locally available for exploitation. The major goal of the entrepreneurial strategy is to encourage business creation and wealth generation throughout communities based on core capacities that are already present in the state economy (Anderson 1993). Its prioritizes high-technology and research innovation to create a more “value-added” business environment for the state economy, one that optimizes consumer and commercial demand in contrast to other strategies which prioritize lowering input factor costs for business (Eisinger 1988). Development of an advanced and educated workforce capable of supplying high-skill labor to preferred industry sectors is a major objective of the entrepreneurial strategy.

The state-level executive branch plays a particularly important “trustee” role in entrepreneurial economic development (Saiz 2001b, Hart 2007). Governors act as direct ambassadors between business enterprises and the higher education system to ensure that business labor needs are met. For example, Tennessee Governor Bill Haslam’s recently enacted Tennessee Promise program, which provides all graduating high school seniors in the state two free years of community college, was the result of direct consultation between the executive branch and the Tennessee business community. In a series of “round tables” called by Haslam, Tennessee business leaders cited lack of skilled labor as a number one impediment to expansion and growth. (Office of Bill Haslam 2011). The Tennessee Promise program was instituted to fill this gap in quality labor in emerging industrial sectors. Local governments also have a role to play in this strategy by partnering with state governments to support workforce development and entrepreneurial mercantilism programs. Such initiatives provide loans, education and training, information, and recruitment to develop workers and new business at the community level (Clarke and Gaile 1997). With the entrepreneurial approach the labor force is viewed as a core asset. A highly skilled labor force is regarded as a tool to increase and attract foreign direct and inter-state investment. Studies confirm that many foreign firms prefer to relocate to areas where laborers demand higher compensation in order to attract better skilled employees (Kucera 2002).

Still, it is important to understand that with the entrepreneurial orientation the *primary* motive for building a quality work force is to nurture the creation and expansion of industries from within the state (State Science and Technology Institute 2014). Entrepreneurial strategies, while likely increasing the attractiveness of the state to outside investors, prioritize the modernization of existing industries, the incubation of new businesses, and promotion of markets for their products (Saiz 2001b.) One of the key tools entrepreneurial programs use to cultivate a

“value-added” business sector is the establishment of public-private entities to raise venture capital from the private sector and to leverage it with public funds.

For instance, in the mid –nineties, the state of Missouri created the Missouri Technology Corporation – whose board is appointed directly by the Governor and legislative heads - as a public-private partnership to promote growth of emerging bio-science companies in the agricultural sector. (Missouri Technology Corporation 2015). The MTC oversees loan programs for four separate seed and venture capital funds, including the High-Tech Industrial Expansion Program. Consider some of the published objectives of this program related to workforce and employment dynamics:

- “ Create a successful research or intellectual property licensing relationship with a Missouri-based university ... or establish an internship program to *provide career opportunities for high school and/or college students*; and
- Create and retain sustainable *high-paying, private sector jobs*.” (Italics mine)

Both Missouri-based companies or companies wishing to create new enterprises in Missouri are eligible, but the intent is to develop businesses that are not yet commercially viable, instead of luring up-and-running businesses from elsewhere (Missouri Technology Corporation 2014). It is also clear that development of a well-paid workforce is a priority of this public-private program.

The emphasis on forming partnerships between higher education, private businesses, and bureaucratic agencies to promote economic development programs indicates that the governmental role in the private sector economy is likely to be quite substantial in states pursuing entrepreneurial strategies. Such policies require an extended period of time to yield tangible benefits and gains. Elected officials will be less able to claim immediate successes from these policies in a time frame that is politically useful to them (Hart 2007, Brace 1993).

Moreover, such policies demand more in terms of coordination and information acquisition, as well as possible risk. Thus, there are impediments to adopting these approaches, and other strategies to development are probably easier and more politically feasible to implement (Brace 2002).

An alternative economic development orientation is the locational approach. Such strategies aim to ensure lower costs on the factors of production – land, capital, and labor – to enhance attractiveness. Maintaining low wages and payroll taxes, as well as subsidizing asset, land and financing costs to companies establishing operations in the state is part of this economic development strategy. There is a wide range of policy tools utilized in locational recruitment programs; in fact, incentives for business cost reduction are the most common characteristic of economic development programs throughout the states (Saiz 2001a). Direct provision of grants, loans, and financing incentives such as loan guarantees and revenue bonds are often utilized by state government to subsidize capital investment costs. Property tax abatement, land grants, and subsidized land-lease deals can be offered to defray real property factor costs to expanding businesses. Financing for generalized infrastructure improvements in hopes to create a more attractive investment environment is also a means of limiting production costs for new businesses (Saiz 2001a, Dubnick and Holt 1985). Indirect methods of subsidization reduce businesses labor costs, such as tax credits and exemptions on payroll contributions for workers employed in newly-created jobs (Brace 2002).

It is important to note that many of these same policy instruments are used in entrepreneurial approaches, but to different ends. The presence or absence of a particular policy instrument such as tax credits or direct financing is not the defining feature used to classify an

approach as “locational” versus “entrepreneurial.” The Eisinger and Saiz classification is based upon “attributes” of programs, rather than policy instruments utilized, *per se* (Saiz 2001a). Thus in addition to the low-factor-cost aspect of locational development, the level of discretion and involvement allowed to government officials in direct decision making is also critical.

Locational approaches are designed to limit the amount of government planning and “intrusion” into the operation of the market. Even as the government takes on the role of a provider of positive incentives to businesses, it is also expected to offer these resources with a “few-strings-attached” attitude. While governmental entities using locational approaches are active in cultivating an easy business environment for potential investors, they are generally more restrained in making direct decisions that would strategically alter the discretion of private-sector actors in the economy. Incentives that are a part of a locational strategy are designed to maintain low operation costs for businesses, through use of passive administrative tools such as tax exemptions, which limit government involvement in actual business operations (Saiz 2001a). Moreover, locational incentives are generally not targeted to specific business sectors (Saiz 2001a, Eisinger 1988, Fosler 1988). In the locational strategy, governments refrain from directly engineering the mix of businesses that operates in the state economy, leaving that to market forces.

Development programs often offer a combination of policy tools, but again, it is the attributes related to *how* these tools are used which indicates the orientation of the state toward entrepreneurial or locational development. *The Directory of Incentives for Business Investment and Development in the United States*, a comprehensive catalog that has been published periodically from 1983 to 2006, is the most reputable data source for economic development

program descriptions used in the subfield of state policy research (Saiz 2001, Gray and Hanson 2012). The latest edition of the directory, published by the research consulting firm Friedman and Associates, provides qualitative summaries for thousands of state-level incentives programs, allowing researchers to link policy tools used by these programs to stated purposes of these tools.

For example, the South Carolina Jobs Economic Development Authority offers industrial revenue bonds (IRBs) for the acquisition of land and other assets related to the construction of new buildings for manufacturing industries (Friedman and Associates 2006). IRBs are issued by public-sector entities such as state or local governments *on behalf* of private corporations, for the purpose of lowering the interest that must be paid out as income to the bond-holders. Interest income received by investors in publically issued bonds is exempt from taxes by the federal and state governments, whereas privately-issued bond income is not exempt from taxes. Thus, issuing bonds through a government is a way for businesses to lower the amount of interest-income that must be paid out to bond-holders over the life of the bond. Critics of IRBs describe them as “essentially private transactions laundered through a public entity” to subsidize the costs of investor returns on the bonds (Good Jobs First 2014.) South Carolina’s IRB program has multiple attributes of locational development strategies. The issuance of the bonds clearly serves to lower capital acquisition costs for businesses to locate in the state. Moreover, there is no targeting of specific manufacturing industries noted in the program description for the bonds, nor are there any job-creation quotas or other substantial requirements listed (Friedman and Associates 2006). In theory, any large manufacturing-based business wishing to expand operations into the state could apply for this bond assistance and be eligible to receive it. Moreover, the program suggests minimal involvement from the state in the actual working operations of the business.

Compare this to the Missouri Small Business Incubator Program, which also offers direct financing to lower the cost of business investment. However, its funds are targeted specifically to “incubator” organizations that promote small businesses in their initial start-up phases. Clearly, the use of funds is designed to encourage the creation of new businesses within the community, not simply to lower operation costs for existing, fully-operational enterprises. Moreover, the Incubator Program offers a credit to taxpayers who contribute to the fund. However, in this case the tax credit is not being used to lower a business payroll cost, as is often the case in locational incentive packages; rather it is an incentive to motivate businesses and individuals to contribute to a government-run fund. Additionally, the incubator sites receiving funds have to be approved by the state administrators as a part of the program (Friedman and Associates 2006). There is a much larger involvement of the government in the direct provision of this program and in determining the eligibility of recipients.

Moreover, the goal of this program and others like it is to create the financing instrument for clusters of start-up businesses, operating collectively through the incubator organization. Left alone on the private market such enterprises would likely not even form, but the “protective business environment” offered by the state-sponsored incubator gives them a chance to emerge and grow (Friedman and Associates 2006). The program attempts to transcend market forces and offer new entrepreneurs a shot at survival, even if during the initial years of operation there is little profit to be made. The higher level of involvement of the government in the direct operation of a funding source, which is targeted specifically to start-up businesses, demonstrates core attributes of entrepreneurial programming.

Table 4 offers a summary of selected economic development programs operating during year 2006, providing additional examples of entrepreneurial and locational attributes. In some programs both classes of strategy-related attributes are discernible, illustrating the mix of approaches that can be present in each state's economic development program.

In addition to corporate subsidies and funding tools, states also operate programs with more generalized objectives such as initial location, advertising, and communication with businesses and customers outside the state. While such activities are not officially tracked as “incentives” programs, they are important to states' overall economic development strategies. Since they are often created to persuade existing businesses to invest in the state, these activities are typically associated with locational development. A primary example of state investment marketing is the location of branch offices abroad. States operated over 240 trade offices in over 30 different countries, while spending almost \$200 million on international marketing and recruitment efforts, NOT including incentives packages, according to some research (Conlan, Dudley, and Clark 2004). South Carolina operates offices in China, Germany, and Japan to encourage “mutually positive relationships between the state and foreign countries,” contributing to an impressive 1,200 foreign subsidiary locations in the state (SC Department of Commerce 2014). Governors play a leading role in marketing for foreign investment by conducting field visits and leading regional delegations to foreign trade partners, such as Tennessee Gov. Haslam's 2012 visit to Tokyo for its annual meeting of the Japan-U.S. Southeast Association trade group (Nashville Chamber of Commerce 2012). Governors have also been active in hosting

Table 4. Attributes of Selected Economic Development Programs, 2006

Program	State	Program Description	Analysis of Attributes
Community Bank Tax Credit	Missouri	State tax credits provided to contributors and investors of a community bank.	<u>Entrepreneurial:</u> Incentive targeted to grow a “value added” sector – banking. Investment eligible for credit must be made to a bank “created for a public purpose.”; bank investments purpose is to create/ expand new small businesses. Stated program purpose is to create investment in distressed areas that would otherwise not receive conventional funding on the private market. <u>Locational:</u> Tax credit tool is administratively passive. Banks themselves are allowed to determine terms, rates, collateralization, etc. of loans to eligible projects.
Customized Training Program	Missouri	Job training program administered directly by state agencies to upgrade workers skills or train new workers when a facility modernizes production processes.	<u>Entrepreneurial:</u> Customized employee training to enable modernization of facility or recruitment and training of employees in new jobs created by industry investment in new processes. <u>Locational:</u> Not specified to any particular industry sector or geographic location.
Ethanol Producer Incentives	Missouri	Production-based grant to producers of ethanol.	<u>Entrepreneurial:</u> Targeted grant to encourage production in an emerging industry.

Table 4. Continued.

Program	State	Program Description	Analysis of Attributes
Local Industrial Development Bonds	Missouri	Municipalities and counties are allowed to issue state tax exempt general obligation or revenue bonds to finance industrial development projects.	<u>Locational:</u> Non-targeted program is eligible to any manufacturing plant or warehouse approved by local government. Passively administered IRBs, not subject to public referendum. Advantages the enterprise via cost reduction of financing.
Missouri Technology Corporation	Missouri	Creation of public-private corporation to operate loan programs for four separate seed and venture capital funds, including the High-Tech Industrial Expansion Program.	<u>Entrepreneurial:</u> Program created by the MO General Assembly as a public-private enterprise. Targets emerging bio-tech industry. Provides funding for initial start-up of businesses which pose higher risk and would struggle to obtain funding on conventional private market. Operates incubators for emerging tech industries.
Jobs-Economic Development Authority Bond Program	South Carolina	Provides Industrial Revenue Bonds to manufacturing entities to acquire land and equipment and to construct buildings.	<u>Locational:</u> Program is non-targeted to include manufacturing, as well as healthcare, Educational, and solid waste disposal sectors. Passively-administered tax-exempt bond program.. Advantages the enterprise via cost reduction of financing.

Table 4. Continued.

Program	State	Program Description	Analysis of Attributes
Air Carrier Hub Exemption	South Carolina	Exempts aircraft and other personal property of an air carrier operating a hub terminal facility in South Carolina from property taxation.	<u>Locational:</u> Passively administered tax exemption. Advantages the enterprise via capital-asset factor cost reduction. <u>Entrepreneurial:</u> Targeted incentive specific to air-transport industry sector.
Big Fee	South Carolina	Allows preferential local tax rates for firms that invest in South Carolina through negotiation of a Fee-in-lieu-of-property-tax agreement. Reduces assessment ratio and millage rate of firm property as compared to rates assessed on other businesses.	<u>Locational:</u> Passively administered tax abatement. Advantages the enterprise via capital and land factor cost reduction. Not targeted to large firms in any sector.
Construction Contracts with Manufacturers	South Carolina	Generally, construction contractors must pay sales tax on purchases. This incentive provides construction contractors of manufacturing companies tax-free purchases of parts that are used as components of manufacturing machinery.	<u>Locational:</u> Passively administered sales tax exemption on purchases. Advantages both the construction contractor and the manufacturer who contracts with them via capital asset factor cost reduction. Not targeted to specific sectors of manufacturing industry. Actually extends incentives beyond eligible manufacturing firms, to also include construction contractors of these firms.
Community Development Corporation Investment Credit	South Carolina	Provision of tax credit on SC income tax, band tax, or insurance premiums tax to businesses investing in a community development corporation, a non-profit entity that is devoted to development of small businesses and residential properties in low-income areas.	<u>Entrepreneurial:</u> Leverages private funds to grow capital in community development corporations to promote small business creation and growth. Targeted to low-income areas.

Table 4. Continued.

Program	State	Program Description	Analysis of Attributes
Small Business Energy Loan Program	Tennessee	Provides low-interest loans to small businesses to install energy-efficiency improvements in existing operations.	<u>Entrepreneurial:</u> Targeted to small business sector. Purpose is modernization of existing small businesses to make them more productive and lower energy demand.
Telecommunications Assistance Program for Small and Minority Owned Businesses	Tennessee	Provides loan guarantees for small businesses and minority/women-owned businesses in the telecommunications sector.	<u>Entrepreneurial:</u> Incentive targeted to a “value added” sector - telecommunications. Incentive targeted to small business sector, and to women and people of color in particular.

Data Source: Friedman and Associates 2006. “Analysis of Attributes” column is my own analysis, based on coded attributes described in Saiz 2001a.

conferences in-state and establishing state global competitiveness agencies as cabinet level positions (National Governors Association 2002) to encourage foreign direct investment.

However, state economic development marketing efforts are not only important for encouraging inward investment. Foreign trade offices are just as active in “demand side” messaging, working to connect customers and consumers in out-of-state markets to services and products manufactured within the state. Prospecting for export markets is likely to benefit emerging, home-grown industries even more than re-located enterprises, which may have a customer-base pre-established; thus marketing research programs are also compatible with entrepreneurial development. South Carolina’s Department of Commerce advertises an “export team” on its website ready-and-willing to mine for customer markets in foreign countries. Assistance is provided in organizing trade-related training seminars and providing trade counseling, market research on export potential and logistics, and coordination of international trade missions to conduct sales meetings (SC Department of Commerce 2014). These general day-to-day operations which enhance demand for in-state products are not offered as incentives direct to companies, but they serve as important support activities for both entrepreneurial and locational strategies of economic development, nonetheless.

Impacts of Economic Development Programs on State Economies

Given the enormous value of many corporate investment incentives packages, and the ever-pressing need for states to nurture dynamic and competitive economies in a global age, the research agenda to evaluate the tangible impacts of economic development programming has been prolific. Locational development programs have tended to receive more attention than

entrepreneurial ones, as the latter entail long-term strategies that are more complex to assess (Hart 2008). There is conflicting evidence regarding the effectiveness of either strategy in building stronger economies, but a more or less common conclusion is that locational approaches have resulted in significant disadvantages overall, even if they have yielded benefits for some communities.

It is important to understand the scope of economic development programs in terms of monetary value. Previous scholarly research estimated the value of total state and local economic development expenditures at around \$50 billion a year (Peters and Fisher 2004, Thomas 2000). A more recent investigation by the *New York Times* found that in aggregate states award \$80.4 billion in incentives each year, through at least 1,800 different programs (Story 2012). In reality the figure is probably much higher, as few states have strong legal requirements to provide public disclosure of the value of incentive packages, and even those that do probably under-report the real cost of economic development programming (Mattera et al 2010). According to the *New York Times* project, Texas heads the list offering an estimated \$19.1 billion a year in subsidies, amounting to over \$700 per capita. Michigan, California, New York, and Pennsylvania each provide over \$4 billion a year. Other states, such as Oklahoma, Nebraska, Vermont, and Alaska offer less in total incentives, but at a per capita basis the give-away is substantial (between \$580 to \$990 per citizen). The state of Tennessee is estimated to award almost \$2 billion a year in incentives, or \$249 per capita. These examples are illustrative of a four-decade trend of states adopting increasing numbers of tax incentive programs to aid inward investment. By the beginning of the 1990's four in five states had instituted some sort of incentive package program, whereas in 1969 only about 20 to 30 percent had such programs in place (Brace 2002). While locational tax incentive programs are common and continue to grow,

entrepreneurial programs actually gained more momentum during the eighties and nineties, although in the past decades states have tended to shift emphasis once again to locational programs (Saiz and Clarke in Gray and Hanson 2012).

A number of high-profile incentives packages provide provocative examples of states' fascination with corporate subsidizing, many of them offered to bring automotive facilities to the southeast United States. South Carolina gave Bayerische Motoren Werke AG (BMW) \$130 million in incentives to locate in Greenville in the early 1990's, and agreed to lease land to the company for \$1 a year (Brace 2002). Alabama lavished Mercedes Benz with an estimated \$325 million, even though much of the subsidy provision was controversial and arguably unethical (Brace 2002, Donahue 1997). Volkswagen was lured to Chattanooga in 2008 by over \$550 million in incentives from federal, state, and local sources combined, which equated to about \$200,000 for each job created (Flessner 2014). South Carolina offered \$900 million in incentives to Boeing in a failed attempt to entice the aircraft manufacturer to Charleston in 2003. While the recruitment effort was not successful, the state was prepared to shell out \$1.25 in direct financing and future tax breaks for every \$1 Boeing invested in the project (Stech and Slade 2010).

The rationale for these generous offers is that the potential for job growth, rising incomes, and the multiplier effect of business investment on the greater community justify the loss of tax revenues. However, the evidence that incentives programs have resulted in better economic outcomes is conflicting. First, there is the jobs debate. It is no surprise that politicians responsible for sealing investment deals are happy to boast about the number of new jobs created by high-profile relocations (Hart 2007). Governor Haslam, for example, regularly takes credit for job

growth on the state's Economic and Community Development newsroom website, releasing stories about new facilities expanding or re-locating to Tennessee (State of Tennessee Newsroom and Media Center 2014). Major plant expansions certainly make a mark on local economies fortunate enough to benefit from them. The 2008 VW deal included the promise of 2,000 new jobs to Chattanooga, and a follow-up report revealed that VW actually hired 2,500 since the deal closed, while announcing plans to expand hiring in the future (Flessner 2014). It is clear that job growth is a real advantage of corporate subsidy packages when assessing investment deals on a case by case basis.

However, academic researchers question the impact that such development policies have on the long-term trajectory of the state economy. According to Susan Hansen's in-depth examination of "low-cost" development approaches in the age of globalization, such strategies actually had a significant negative effect on average income in states from 1970-95. Moreover, they largely failed to increase foreign direct investment and only decreased unemployment marginally (Hansen 2006, 2001). While incentives packages may lure facilities and create jobs, there is usually no guarantee that such jobs will be high-paying or that they will include benefits. Many researchers emphasize that the quality of jobs created, the productivity of new jobs and innovation processes (Hall 2007), and overall raises in per capita income (Atkinson and Andes 2010) are more meaningful indicators to evaluate the impact of locational incentives programs. If incentives packages actually contribute to "lower-end" employment and declining household income, the effectiveness of these policies, even if yielding job growth, is doubtful. Multiple studies suggest that tax incentives do little to create quality employment or efficient expansion of the labor force (Lynch 2004, Atkinson and Andes 2010, Christopherson and Rightor 2010).

In fact, many costly locational projects have failed to deliver sustained net growth in employment at all. In 2009 General Motors issued a list of sites set for closing due to its looming bankruptcy proceedings. According to a *New York Times* investigative report, 50 of those facilities were in jurisdictions where General Motors had received state and local incentives to locate or maintain existing facilities. The state of Wisconsin offered GM \$150 million in tax breaks to continue operations in Janesville in 2009, but the company closed the facility. The town of Moraine, Ohio lost a GM factory in 2008, after giving GM incentives in 1997 to expand operations. At the time, local officials had been warned by company officials that locations in Louisiana and New Jersey were also being considered. It was later discovered that GM had never even been in active communication with leaders in either location (Story 2012). Concerns over the security and duration of jobs created as a result of incentives deals has prompted outcries for greater accountability measures to ensure employment targets be met (Office of the New York State Comptroller 2006, National Governors Association 2002). Surveys of municipal leaders reveal increasing use of “clawback” agreements in incentive packages, which provide some compensation to communities when job growth does not occur as projected or when a recipient company exits the community after only a short period of generating local employment opportunities (Bartik 2004).

Another disadvantage to luring investment through locational strategies is that even if jobs are generated through such deals, the trade-off in lost revenues for public services exacts substantial costs on state economies. In Texas and Kansas the “low-cost path” of development contributed to a troubling erosion of public funds for education and social programs, even as companies were rewarded with generous exemptions from corporate taxes (Burkdull and Truman 1999, Story 2012). Business locations may entail wide social costs as a result of environmental

degradation, population growth, public school overcrowding, and even public health concerns. Intel, for example, won a sizable incentives package from the state of New Mexico to locate a facility in Rio Rancho, but pollution from the plant was soon found to be a contributor to skin disorders among residents (Friedman 1996). The concentration of subsidies to large corporations may disadvantage smaller businesses which rely on state spending for maintenance of roads, infrastructure, and public education to ensure productivity and quality employees (Brace 2002). Corporate subsidizing arguably harms the business community at a collective level because it causes public entities to misallocate total resources available that can encourage “bigger picture” economic growth (Burstein and Rolnick 1995).

The loss of public revenues and resources exacerbated by locational development approaches has been challenged by taxpayers in at least one state. Concerned citizens in Ohio argued that the state and the City of Toledo violated the Commerce Clause of the Constitution by granting DaimlerChrysler incentives to expand operations at the beginning of the 21st century. The company had received a franchise tax credit from the state for the purchase of machinery, as well as a property tax waiver from the City on land acquisitions. The citizens argued they had standing to contest the subsidy package because they would sustain injury due to the loss of revenues to fund vital public services. In *DaimlerChrysler v. Cuno* (2005) the Supreme Court ultimately ruled that taxpayers have no legal standing to litigate state or local tax exemptions to corporations because they sustained only a generalized, rather than particularized injury (Denning 2005). This decision is a significant impediment for citizens in challenging the logic and equity of the practice of granting corporate subsidies. The high court’s ruling essentially precludes possibility of the federal government intervening on this issue, even though it is clearly germane to inter-state commerce.

It is the competitive dynamic that federalism cultivates among the states that drives up the cost of the incentives give-away game (Hart 2007). While tax costs may not be of primary concern for firms when initially targeting relocation sites, if there are multiple appropriate sites available for investment, state incentives packages can contribute to firms' ultimate re-location decisions. Companies know that many state leaders operate as if they are trapped in a prisoner's dilemma, focused on the interests of their state individually, without careful consideration of the collective inter-state costs of "bidding wars" (Brace 2002). It is strategically in a company's interests to dangle the possibility of incentives offers from neighboring states to optimize their bargaining position in another (Donahue 1997 in Gray and Hanson 2012). Pitting states against each other has created an unfortunate "race to the bottom" in some regions of the country, one in which rival states are not only willing to sacrifice tax revenues for needed public services, but are also compelled to slash existing labor and environmental regulations in order to maintain a "business-friendly" climate. The adoption of locational incentive policies by neighboring states is a significant determinant of whether a state pursues "low cost" strategies to economic development (Siaz 2001b), and interstate competition for investment has contributed to the diffusion of policies which reduce labor wages and company employment costs (Hansen 2006). Concerns over the depression of worker protections and environmental standards in neighboring jurisdictions of states pursuing locational development strategies has led to calls for reform (Frey 1999, Chapter 4). Coalitions of academics and policy practitioners (Pierce 1995), including the National Governors Association (Brace 2002), have united to discourage the "predatory competition" implicit in the locational approach. Nevertheless, corporate subsidy provision as an economic development tool still features heavily in many states' programs, in spite of questions about its success.

Given the rising doubts about the efficiency and effectiveness of locational “smokestack chasing” programs, entrepreneurial development approaches emerged in the eighties as an alternative (Brace 2002). However, the ability to directly evaluate the cost-effectiveness of entrepreneurial development programming is limited, since its policy instruments, such as greater public-private collaboration, are not always tracked directly in state budgets (Hart 2007). The impact of entrepreneurial programs has been found to have positive influences on productivity (Yilmaz and Dinc 2002), equitable income distribution (Langer 2001), and manufacturing employment (Saiz 2001b) in some larger N examinations. Case studies specific to individual economic sectors provide some favorable evaluation as well. For instance, tax credits in research and development to promote innovation enhancements generated an equal amount of private sector investment according to one case study (Wu 2005). Moreover, a California Small Business Loan Guarantee Program experienced positive employment growth for recipient firms, and was an overall fiscal gain for the state government (Bradshaw 2002). However, the targeted use of incentives to buoy the “value added” film and television industries has been quite costly to states without producing convincing returns (Christopherson and Rightor 2010). Even in the “successful” examples of entrepreneurial development a critical missing element is a finding of net gains in state employment or reduced unemployment. While entrepreneurial development may help to produce better quality jobs, there is less evidence to show that the overall labor force benefits from greater employment opportunities with this approach.

Evaluation of the impact of development strategies is typically centered on job creation and erosion of public revenues, but the effect that economic development orientation has on unionization has received only scant attention. Susan Hansen provides a rare examination of this subject, finding that pursuit of “low-wage” strategies did negatively impact unionization rates

from 1975-1995 (Hansen 2006). This research project has not identified an already existing examination that directly assesses the impact of entrepreneurial development strategies on labor unionization. A contribution of this dissertation is that it examines both development strategy-types side-by-side to uncover the unique influence, if any, they have on unionization.

One clarification is necessary regarding my consideration of locational development policies and unionization. Researchers sometimes conflate locational, supply-side approaches to development with presence of “right-to-work” laws, by definition (Grant et. al. 1995, for example). Again, I underscore that economic development policy tools are more accurately conceptualized as separate from labor regulations. States may offer generous incentives to lower labor costs for businesses, while still allowing union shops. (The state of Michigan, prior to 2010, is an example.) This study directly tests the impact of development approaches -as defined by the attributes of economic policy instruments offered by state programs- on union density rates, instead of defining “right-to-work” status as an element of the locational strategy. “Right-to-work” laws will be examined as a separate controlling factor in my upcoming statistical analysis.

Measuring Types of Economic Development Strategy

Empirical research into the impact of development policy on unionization outcomes requires the utilization of a proper measure which can capture the differences between the states in their propensity to use each approach. States generally do not embrace only one type of economic development strategy; in fact most states use locational incentives alongside the more “demand generating” initiatives to encourage entrepreneurship (Saiz 2001a), sometimes within

the same program. States also differ in the amount of economic development activism displayed using *either* locational or entrepreneurial programs (Langer 2001). Given that states employ a mix of approaches with varying degree of intensity, a straight-forward qualitative classification of state programs into mutually exclusive nominal categories is not appropriate.

Policy researchers have utilized various quantitative measures to gauge the differences in state programs relative to the major economic development orientations, usually basing them at least in part on Eisinger's "supply side" and "demand side" distinction (Gray and Lowery 1990, Hansen and Berkman 1990, for instance). Jenkins and Leich coded programs into separate interval indices denoting labor regulation, industrial recruitment (locational), and entrepreneurial approaches in their 1994 study. However, their measures are limited to earlier decades (1971-90) and have been criticized for their inability to accurately track historical shifts in state development policy approaches (Grant et. al 1995). Researcher Laura Langer adopted the Eisinger conceptual classifications, creating ratio measures to test the impact of overall economic policy activism, supply-side policies, demand-side policies, and mixed approaches on income inequality (Langer 2001). However, Langer included only 16 of the most visible and frequently-used incentive tools as cataloged in the *Directory of Business Incentives* (National Association of State Development Agencies 1998) guide to construct her measures.

Martin Saiz has provided the most empirically supported quantitative measure of state economic development orientation with his construction of two separate indices tracking entrepreneurial and locational development utilization (2001a). Like Langer, he used the NASDA guide to assess attributes of state programs, but he coded all incentives programs listed in the catalog according to a fuller range of related program attributes to create his interval-data

indices of locational and entrepreneurial approaches. The separate indices allow researchers to consider the activism of states in regard to both entrepreneurial policy and locational policy in the same model, as the measure is not constructed to categorize the state according to one or the another strategy. Saiz also subjected his indices to a confirmatory factor analysis, demonstrating support for the definition of these development types as unique, discrete concepts. Since the Saiz measures are interval level and do change longitudinally over time, they are able to be analyzed in multivariate regression and time-series models.

Even though the Saiz indices have methodological advantages and have been subjected to rigorous statistical standards, they do have some limitations. First of all, Saiz was only able to update his indices in years when the NASDA guide was published, which was approximately every 4 years, so the indices updates are sporadic. Interpolation for missing years is necessary to deploy the measures in annual time-series analysis. Moreover, Saiz' attribute-based coding of locational approaches is not always able to account for important variations in corporate subsidy programs. Some, though not all, locational tax credits for job creation do require quality standards, such as pay over an area minimum wage and provision of health benefits (Mattera et. al, 2011). All tax credit job creation programs that are not targeted to specific industries are coded as locational in the Saiz typology (Saiz 2001a), even though the higher job standards required in some state programs do not conform strictly to a "low" factor-cost objective. Thus, some nuances of locational development programming escape consideration in the Saiz indices. Despite these limitations, the indices are the most comprehensive source of historical data available for measuring different economic development policy types used by the states.

Table 5 shows the 2006 Saiz indices tables for each development approach. States that are high in one development orientation tend to score lower on the other, but this is not absolute. The state of Tennessee, for instance, scores a little above average on both indices, while the state of Wyoming shows low levels and the state of Nevada shows high levels on both measures. Moreover, this table displays results for only two of the years available due to limited space. Looking across all years available, the state indices readings do change over time, demonstrating the dynamic temporal nature of the data.

Predicting the Impact of Economic Development Strategy on Unionization

Given the unique means that entrepreneurial and locational strategies use to accomplish economic development, it is sensible to predict that their intensity of use could impact unionization levels differently. The two orientations regard labor in very different ways, with the locational approach viewing it as an input cost which must be minimized, while the entrepreneurial approach considers it as an asset which can add value to business. Additionally, the entrepreneurial approach prioritizes overall wealth generation to cultivate more consumer activity; and well-paid laborers contribute more to consumer demand than less affluent ones. The “bread and butter” function of unions is to elevate the wage and salary rates of workers, and union jobs pay significantly higher rates than non-union ones in the same sector, especially when considering benefits provisions (Bureau of Labor Statistics 2014, Bryson 2014). Since labor wage rates feature so prominently in both economic development approaches, as well as being a critical issue to organized labor, the adoption and use of development approaches is likely associated with declines or increases in unionization.

Table 5. State Economic Development Strategy Indexes, 2006 & 2002

Locational Index			Entrepreneurial Index		
State	2006	2002	State	2006	2002
South Carolina	2.28	2.31	Nebraska	3	1.14
Idaho	2.08	1.57	New Hampshire	3	3
Oklahoma	1.87	1.71	Nevada	2.63	1.5
Kentucky	1.86	1.96	New Jersey	2.59	2.47
Arizona	1.8	1.2	Florida	2.38	2.35
Nevada	1.75	1.75	Minnesota	2.29	2.22
Hawaii	1.73	1.67	Wisconsin	2.26	2.21
Connecticut	1.69	1.58	North Dakota	2.21	2.55
Maine	1.68	1.68	Massachusetts	2.2	2.2
Rhode Island	1.68	1.55	New York	2.2	2.15
Montana	1.67	1.67	West Virginia	2.14	1.94
North Dakota	1.63	0.95	Missouri	2.13	2.06
Arkansas	1.62	1.56	Maryland	2.12	1.92
Georgia	1.61	2	Washington	2.09	2
Kansas	1.6	1.52	Pennsylvania	2.04	1.77
North Carolina	1.58	1.5	Illinois	2	2.04
Nebraska	1.57	1.79	South Dakota	2	1.36
Colorado	1.56	1.4	Utah	2	2
Mississippi	1.56	1.37	Iowa	1.95	1.75
New Mexico	1.56	1.4	Texas	1.93	1.85
Louisiana	1.55	1.71	Virginia	1.93	1.91
West Virginia	1.48	1.35	Indiana	1.83	1.79
Tennessee	1.47	1.47	Tennessee	1.8	1.8
Alabama	1.43	1.36	US Mean	1.78	1.71
Delaware	1.35	1.53	Louisiana	1.75	1.74
US Mean	1.34	1.32	Oregon	1.74	1.7
Virginia	1.33	1.41	Montana	1.67	1.6
New York	1.32	1.28	Vermont	1.67	1.67
Ohio	1.32	1.24	Connecticut	1.66	1.53
Michigan	1.3	1.09	Ohio	1.65	1.62
California	1.19	1.12	Oklahoma	1.65	1.57
Florida	1.14	1.09	California	1.63	1.53
Texas	1.13	1.3	Alaska	1.6	1.63
Washington	1.13	1.13	Arkansas	1.57	1.76
Iowa	1.1	1.05	Alabama	1.52	1.52
Vermont	1.08	1.25	New Mexico	1.52	1.52
Massachusetts	1.07	1.07	Delaware	1.5	1.67
Alaska	1.05	1.16	Michigan	1.5	1.55
Oregon	1.05	1.1	Kentucky	1.48	1.48
Missouri	1.03	1.03	Hawaii	1.4	1.4
Wyoming	1	1	North Carolina	1.37	1.7
Pennsylvania	0.98	1	Mississippi	1.26	1.15
Maryland	0.96	1	Wyoming	1.25	1.33
Indiana	0.9	0.85	Rhode Island	1.21	1.28
Utah	0.9	0.9	Arizona	1.2	1.2
New Hampshire	0.82	0.82	Georgia	1.19	1.32
Illinois	0.8	0.76	Kansas	1.19	1.68
New Jersey	0.79	0.76	Maine	1.18	1.18
Wisconsin	0.77	0.77	Idaho	1.15	1.71
South Dakota	0.67	1.45	South Carolina	1.03	0.69
Minnesota	0.64	0.89	Colorado	0.67	0.9

Source: Data taken from tables published in Gray and Hanson 2012, 2008. See Saiz 2001.

Locational policies could challenge labor unions in their efforts to raise wages and as a result could place downward pressure on unionization rates. First of all, locational policies may be more likely to attract the particular businesses that desire low-cost employees, given the factor-cost reduction emphasis of corporate subsidy packages. Such firms, according to the “conventional wisdom” of many advocates of foreign direct investment, would actively resist and avoid unionization fearing the upward pressure unions place on labor costs (Leahy and Montagna 2001); and this could challenge unions in their success to win new members. These firms may also be more adamant in their attempts to challenge union representation where it already exists, seeking to layoff union workers and replace them with non-union labor, and may be combative with unions in wage negotiations (Bronfenbrenner 2000). In this scenario, union membership levels could drop due to the perceived ineffectiveness of unions to win wage gains and provide job securities for workers.

Also consider another argument made by economists contending that increased business competition impedes labor unions attempts to raise wages. Locational approaches aim to increase the number of enterprises in existing, established industry sectors by luring investment into the state from elsewhere. Domestic firms would face increased competition from relocated firms in the state market and may experience tighter profit margins as a result. This could lead to less surplus available to pass on as wage increases, limiting “rent-seeking” opportunities for unions to redirect profits to labor (Acemoglu, Aghion, Machin and Violante 2001, referenced in Acemoglu et. al. 2001 explores this). Still, one must also keep in mind the role of competition from the labor perspective. Increased entry of firms into the state economy may also intensify companies’ demand for labor, pressuring firms to pay premium wages to attract or maintain workers who

could find job opportunities more plentiful. Thus, one could also argue that unions would benefit from an increase in “rent-seeking” opportunities due to heightened competition.

Another way to think about the impact of locational development strategies on unionization is to consider how they could increase the demand for unionization among workers. Well-paid workers could find there is little to gain from unionization membership, but as wages slip and benefits are cut workers may become more motivated to collective action to resist these losses. Low-wage strategies of development may be a crucial catalyst to encourage greater union activism and organizing campaigns. Some historical analysis supports the argument that in circumstances of low job security and wage cuts unionization activity actually increases (Gregory 2009).

However, the single direct examination of locational incentives policies and unionization that I have identified indicates a negative impact on union membership rates (Hanson 2006). Given this, and the likelihood that locational strategies attract non-union businesses, I offer this general working hypothesis:

Higher levels of locational policy orientation will have a negative impact on state unionization levels.

As with locational development, one can posit a variety of causal links between entrepreneurial policy and unionization. Given the lack of extant research examining this relationship, hypothesis generation is rather speculative. A simplistic model would emphasize the “quality jobs” focus apparent in much entrepreneurial development programming and its possible association with higher levels of unionization. Since in the entrepreneurial orientation firms are encouraged to view labor as an asset rather than a cost, there may be greater willingness to pay higher wages. This could lead to increased collaboration and goal congruity

between firms and unions, and less hostility toward collective bargaining and union organizing in economies promoting entrepreneurial policy tools. This in turn could enhance unions in their ability to secure wage gains and entice more workers to join. Noteworthy examples from the practitioner literature demonstrate engagement between entrepreneurial innovation projects and unions. The Apollo Alliance, for example, is a “third-way” consortium of skilled trade labor unions and “green” manufacturing companies that collaborate to advance industrial growth through a “high wage, union jobs” model (BlueGreen Alliance 2014). Tailored job training and apprenticeship programs, classified as entrepreneurial policy tools by definition, tend to utilize unions as providers of professional and skills development (see table at chapter’s opening). Anecdotal evidence from the state of Wisconsin demonstrated the use of entrepreneurial policies in numerous highly regarded initiatives, such as the Wisconsin Regional Training Partnership and the Milwaukee Jobs Initiative, in producing jobs in union-friendly businesses (Center for Wisconsin Strategy 2011). “Freelancers” in the software development, financial advising, and artistic trades have developed innovative approaches to securing job opportunities through an “entrepreneurial union” model, which has united 115,000 white-collar workers across all 50 states (Wilkinson 2009). In these examples entrepreneurialism and unionization appear to walk hand-in-hand.

But an alternative argument is that high-wage development actually reduces demand for unionization among workers, namely because the willingness of firms to provide generous salaries could obviate the perceived need for union activism. This interpretation regards entrepreneurial development policy as a substitute for labor wage bargaining (Kaufman 2004). An additional, somewhat more complex theory, casts further doubt on the assumption that entrepreneurial development strategies are compatible with heightened union opportunity. The

“skills-biased technical change” premise contends that higher-skilled, higher-educated workers have increased their wage earnings at the expense of earnings by lower-skilled labors (Acemoglu 2002). Some prominent political economists contend that skills-biased change impacts unionization as well, by undermining the solidarity between skilled and unskilled workers. Union wage bargaining generally has the effect of compressing the wage earnings spectrum between the highest and lowest paid workers. In the innovation economy promoted by entrepreneurial development, highly skilled workers may find the cost of wage compression higher than the so-called “outside option” of working non-union (Acemoglu et al 2001). A technically advanced worker may see no need to join a union to safeguard pay increases as the value of their skills on the market affords them wage gains beyond what union bargaining provides. The information technology and finance sectors, which entrepreneurial strategies often seek to promote, historically show some of the lower rates of unionization (Bureau of Labor Statistics 2012). Additionally, the mindset of workers in “knowledge economy” sectors may be less amenable to collective identity-building that aids unionization. Such employees tend to be more assertive and individualistic in their approach to wage bargaining, even to the point of demanding premium wages above those made by their high-skilled peers (Pontusson, Rueda, and Way 2002). The opportunism displayed by many “quality job” employees may run counter to union growth.

I will start by advancing the more simplistic interpretation of entrepreneurialism in my hypothesis testing; that is, that the higher-paying jobs promoted by this approach will present opportunities for greater unionization. This is in contrast to the alternate skill-biased technical change theory, which suggests that entrepreneurialism could impact unions negatively.

Higher levels of entrepreneurial policy orientation will have a positive impact on state unionization levels.

Table 6 offers descriptive statistics of union elections outcomes and union density rates from three states based on data from the National Labor Relations Board for selected years. Missouri provides an example of a state that scores high on the use of entrepreneurial programs and low on the use of locational programs. In South Carolina the opposite is the case, as the state relies heavily on locational development and less on entrepreneurial development. Tennessee provides an example of a more balanced approach, using slightly above average amounts of both types of policies. The table shows that in Missouri unions conducted more elections, attempted to organize more workers, and actually organized more members than in either South Carolina or Tennessee. South Carolina experienced only 21 union elections, and contributed only 957 new members due to organizing activities, even though the actual win rate of union elections among those attempted was the highest of the three states. In Tennessee, numbers for both union organizing effort and actual new members fall between those of the other two states. Macro union density numbers are also supplied for the three states, tracking the percentage of the total state workforce that is unionized. A similar pattern appears. Missouri has the highest union density, followed by Tennessee, and South Carolina is last.

These descriptive statistics are an early indication that entrepreneurial development policies may encourage greater levels of union organizing and membership growth. In the chapters that follow, I will discuss the role of foreign direct investment as an additional critical variable which could impact unionization, followed by two multivariate regression models that statistically analyze the relationship of economic development strategies and labor organizing outcomes while controlling for other important factors. I proceed by predicting that high use of the locational approach erodes union membership levels and likelihood of union organizing

Table 6. NLRB Union Election Outcomes for Selected States (2005, 2007, 2009)

	Missouri (Entrepreneurial Focus)	South Carolina (Locational Focus)	Tennessee (Dual Focus)
Union win rate	57% of 147 elections	71% of 21 elections	56% of 48 elections
Employees eligible to vote for unionization	8808	1209	3492
New members unionized	6088	957	2633
Union density *	10.8%	3.6%	5.5%

Data from NLRB Election Reports, <https://www.nlr.gov/election-reports> except where otherwise noted.

* Hirsch, Macpherson, et. al, www.unionfacts.com. Average of annual union density percentages for 2005-2009.

victories, while high engagement of entrepreneurial programs lead to less union membership decline or even membership growth and enhanced likelihood of union election wins.

Chapter 3: Foreign Direct Investment and Variation in State Unionization

The most important independent variable in this study is economic development policy strategy. However, a proper examination of the state economic development environment and unionization outcomes must also consider the role of inward foreign investment as a critical secondary factor. First of all, foreign investment is a popular variable-of-interest in much of the extant research on unionization. The “conventional wisdom” held among many global economy policy-makers for a number of years was that increased openness of domestic economies to the global market would accelerate the decline of the labor movement during the late 20th century, because international investors want to avoid setting up operations where unions are strong (See Rodrik 1996, Friedman, Gerlowski and Silberman 1992, Culem 1988 (in Kucera 2001). This view has also been greatly challenged (Thelen 2001, Leahy & Montagna 2000, Oman 2000; Kucera 2001). I re-visit the question of whether or not inward investment causes declining unionization in this chapter and offer original evidence for why this argument is suspect. Another reason for the examination of foreign investment is that it is directly related to economic development policy, as increasing investment is an explicit goal of most economic development programs. There may be some important interactive effects revealed when considering how development policy in tandem with foreign investment influences unionization. At a minimum, the impact of foreign investment must be included as an important control variable in models attempting to account for the effect of economic development policy on unionization.

Inward foreign investment is a product of economic development activity. This is apparent when considering locational strategies, as the goal of this policy approach is to lure existing investment to relocate/expand into the state from elsewhere. It is expected that most locational programs are likely to prioritize direct marketing and recruitment of foreign investment into a

state. However, entrepreneurial development is probably just as likely to be a recruitment vehicle for foreign investment, even if the causality is not as direct. Entrepreneurial strategies seek to grow a “wealth economy” through nurturing new development in the human resource and industry sectors in which a state enjoys a comparative advantage. An affluent state economy could lure foreign investors for both demand and supply-side reasons, as will be discussed in this chapter. This project does not attempt to differentiate which of the individual development approaches is ultimately more successful in luring foreign investment. However, it does acknowledge the importance of considering foreign direct investment as a factor impacting unionization outcomes in the state, given its critical piece in the development of the state economy and its relationship to economic development policy.

Trends in Inward Foreign Direct Investment

First, it is useful to define foreign direct investment (FDI) as it is used in this dissertation. My project utilizes the definition provided by the U.S. Bureau of Economic Analysis, the most widely-used source of FDI data in the United States. It regards FDI as “an investment in which a resident of one country obtains a lasting interest in, and a degree of influence over the management of, a business enterprise in another country.” The BEA definition includes newly created and expanded business operations of foreign enterprises (greenfield investment), as well as those they gain through mergers and acquisitions (BEA 2008a, in US Department of Commerce 2008.) I contend that merger/acquisition FDI is valid for inclusion in my analysis because the ownership transfer of an existing business is often a factor that unions consider in evaluating organizing targets, and some evidence shows it is related to pro-union organizing outcomes (Bronfenbrenner & Hickey 2004).

Inward foreign direct investment has increased over the past decades, and in recent years in particular. **Figure 1** provides numbers for balance of payment and direct investment position for years 2003 to 2011 (Bureau of Economic Analysis 2014). This measure examines the financial transactions and income flows between foreign parent firms and their affiliate sites located in the U.S. (BEA 2008b). The graph indicates that even through the recent years of economic recession the amount of financial transactions between overseas parent firms and their U.S. subsidiaries continued to increase.

Figure 2 provides foreign investment data related to the actual operations of U.S.-hosted affiliates, rather than intra-firm financial transactions between parents and their subsidiaries. One of the most important metrics tracked related to FDI business operations is the number of persons employed by foreign-owned firms. The table indicates that in the U.S. between 5 and 6 million workers were employed by foreign-headquartered firms each year from 2007 to 2011. This represented about 4.5% of the national private sector workforce for years 2007- 2008 (U. S. Department of Commerce International Trade Admin 2008). The employment base of foreign-owned firms in the United States rebounded upward between 2009 and 2011, after dropping from 2008. The employment aspect of foreign investment is particularly important to this project, because union success and vitality is most often tracked as a function of the size of membership, and employed workers are potential union members. Of course, creation of jobs is also a highly emphasized goal of economic development policy and is cited by state elected officials as a motivator for prioritizing the creation of development strategies, as discussed in the previous chapter.

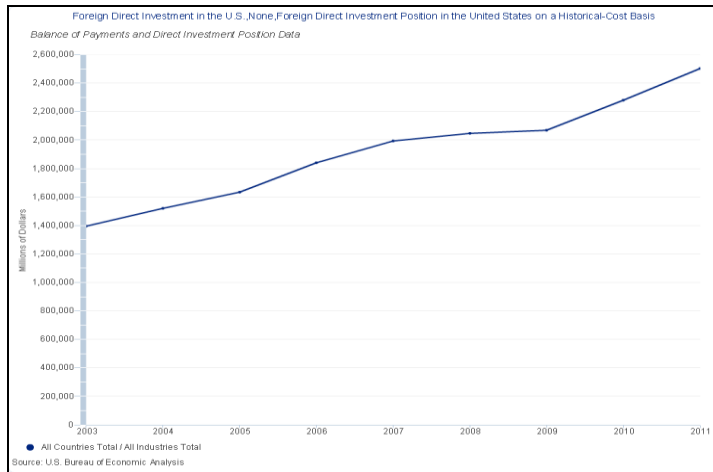


Figure 1. Total FDI in the United States, 2003-2011

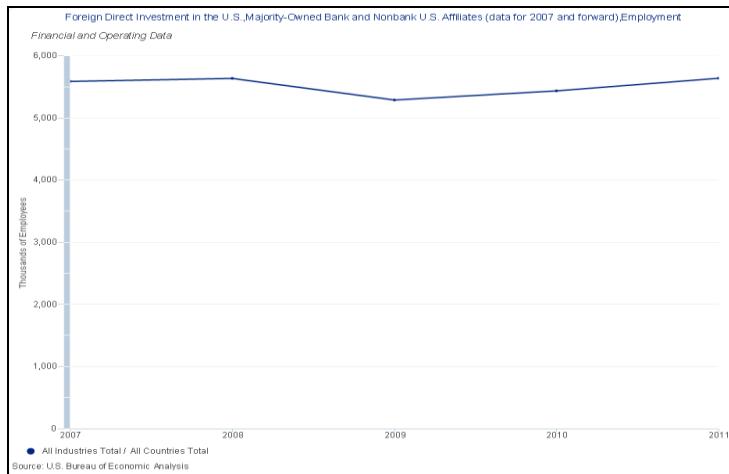


Figure 2. Total FDI Employment in the United States, 2007-2011

State and federal leaders are acutely aware that foreign investment, distinct from inter-state investment, is a major economic resource to be cultivated. They explicitly market to foreign investors in the competitive scramble with other states to attract new enterprises (See US Department of Commerce 2008, 7-8; Tennessee Department of Economic and Community Development 2013, National Governors Association 2002). Moreover, economic development programs openly cite federalist competition as one of the advantages of the U.S. market when advertising to international investors. Consider this excerpt from an “Invest in America” information bulletin, published by the US Department of Commerce in 2008:

“The United States is unique within the global investment community with regard to the number, scope, and lead role that states play in attracting foreign direct investment. Individual states compete (*often against each other*) for investments on a global scale employing highly skilled investment officials and, in some cases, by maintaining field offices in major financial centers worldwide... considering the diversity and size of the U. S. economy, sub-national investment promotion agencies are in a unique position to offer tailored services that meet the needs of international investors.... This decentralized system has successfully operated for decades and has yielded billions of dollars in international investment throughout the United States.” (italics mine)

Given the growth of FDI in the U.S. national economy, the sizable number of workers employed by foreign-firms in the United States, and the active efforts of state policy makers to attract FDI to the states, it is critical to account for inward foreign investment when analyzing variation in labor union power across the country. Does entry of FDI present a challenge or an opportunity for the union movement? The purpose of the rest of the chapter is to present evidence that at the very least it is not an impediment to unionization, and as we shall see, it could benefit unions.

Foreign Direct Investment and the International Economy

Most of the previous study in political science of how FDI impacts labor markets and trade unionism comes from the international relations subfield. The research focuses on how international openness and capital mobility influences national-level labor relations regimes. The oft-debated neo-liberal “convergence” theory stresses how international openness has pushed national economies to conform in regard to labor relations practices. Its adherents hold that capital mobility has reconfigured the international economic system of the 20th century by creating a borderless world with a single trans-national market supplanting national-level economic and political organization as the key institutional instrument of control (Reich 1991, Ohmae 1995). In order to compete with other firms companies will seek new locations for their operations that offer a comparative advantage in terms of labor and regulatory compliance costs. Countries will be compelled to slash their extant regulations on factors of production due to competitive pressures from neighboring nation-states to attract business investment, which will trigger a domino effect, as all countries adjust their policies to keep labor wages and regulations low (Oman 2000; Collinsworth, Goold, and Harvey 1994). The consequence of this process will be a bottom-ended convergence of countries’ policies related to worker rights, environmental standards, and capital taxation. National-level governance structures will become less distinct in an unfortunate “race to the bottom”.

One of the core assumptions of this argument is that capitalists across the globe view unions in the same way – as an unwanted interference - and will necessarily seek to avoid them to suppress labor costs and maintain control over personnel decisions (Freidman, Gerlowski, and Selberman 1992, 411). Given that the United States consistently ranks as having the weakest labor protections among the developed countries (Kucera 2007), and most FDI to the United

States comes from developed countries in Europe and Asia (Harrod 2002, 175), some interpret firm relocations to the U.S. as a means for capital to flee worker regulations in ‘strong labor’ countries. But there is a great deal of debate over what really motivates corporations to expand or re-locate their operations overseas. First of all, when examining the global economy in aggregate, foreign capital is more likely to flow into countries with superior worker rights enforcement than into those that do not have core labor protections (Rodrick 1997, Kucera 2002; Durham 2004). Most FDI is traded among the countries with advanced economies, which as a group have higher labor standards than those in developing countries (Drezner 2001). As for how firms evaluate the cost of labor, the relative productivity of the workforce, rather than unit labor costs is likely a more important consideration, which would favor the high- labor standard economies as an FDI destination (Harrod 2002, Krugman 1994). Perhaps most importantly, firm preferences are driven largely by demand-side considerations, such as improved access to lucrative consumer markets, rather than supply-side input costs (Whitley 1999, Spar and Yaffee 1999). As noted earlier, much of the FDI in the United States is not the result of strategic location decisions at all, but rather the result of mergers and acquisitions of existing operations. There is no consensus finding that union presence is significant to multinational firms in their relocation decisions.

Perhaps the most problematic aspect of neo-liberal convergence theory is that studies from both comparative and international political economists reveal that major differences endure across countries’ labor and capital policies, even after these countries have internationalized (Drezner 2001, Garrett 1995, Thelen 2001, Whitley 1999). A “race to the bottom” in terms of collective bargaining coverage is not happening, at least not with all countries (European Commission 2008). Comparative political scientists of the historical

institutional perspective contend that national governance and regulatory structures are necessary conditions for the long-term evolution of markets, and these structures set the path of national economies in persistent directions that are not easily diverted (Peirson and Skocpol 2002). Firms and business interests are actors embedded within national economies, and their behavior is constrained by the institutional arrangements and norms of the economy in which they arose. The nature of the labor relations regime operating in a country is a product of the path dependent development of the economy. Unique “varieties of capitalism” (VoC) can be found among the world’s advanced economies, challenging the view that nations will converge in regard to worker rights and employment policies (Hall and Soskice 2001, Streek and Thelen 2005, Jacoby 2005, Whitley 1999). This does not only have significance at the international level of analysis. Differences in the market economies of incoming foreign firms could impact unionization outcomes at the domestic US-state level, especially compared with home-based firms, as shall be discussed later in this chapter. While it is a comparative national politics invention, the Varieties of Capitalism approach may also have application to the question of how FDI impacts sub-national labor markets in an American, federalist context; thus a more detailed look at this body of research is in order.

VoC offers an accessible typology which groups post-industrial countries according to the “relational competencies” of their labor relations regimes (Hall and Soskice 2001, Chapter 1). Two major ‘ideal types’ of economies identified are the Liberal Market Economy (LME) and the Coordinated Market Economy (CME). LME’s rely on market structures, pricing, and formal contracting to resolve coordination problems in the national economy, and require flexibility in their labor supply. Workers are encouraged to develop easily transferable, general skills which adapt well to lay-off and re-employment cycles. The United States and the United Kingdom are

the classic examples. On the other hand, the Coordinated Market Economy (CME) utilizes a variety of non-market structures to coordinate work processes, using inside networks and collaborative relationships to promote the core competencies of companies. Corporate strategies are arranged around the long-term development of high-quality capital-intensive goods, requiring a highly skilled workforce that must invest sizable resources in training specifically for the tasks required by the firm's production regimen. This entails that workers will expect long-term job security with the companies that employ them. Sweden and Germany are two noteworthy examples of countries classed as CME's (Hall and Soskice 2001, Estevez-Abe et al. 2001, Iverson 2005).

These varying systems suggest different paths of historical development for labor unions and the roles they play in the different types of market economies. In LMEs unions are viewed as an interference to firm operations, potentially distorting market wage-setting and limiting firms' abilities to shed redundant workers or reskill workers to other production needs. Labor relations dynamics between firms and unions are likely to be conflicting and contentious. In CMEs unions evolved into essential tools for promoting firms' labor needs due to their role in setting standardized wage levels in return for job security for their members (Moene and Wallerstein 1993), thus protecting both worker and firm investments in skill development (Thelen 2004; Hall and Soskice 2001). In CME's unions have secured greater institutional recognition in state-mediated, corporatist bargaining arrangements, rather than having to fight for legitimacy as is often the case with unions in LMEs, where governments play a more limited role in the mediation of private sector collective bargaining (Iverson and Cusack 2000). The recognition that unions and businesses may develop synergistic, cooperative relationships in some market

systems challenges the neo-liberalist assumption that all multi-national firms will necessarily resist labor organizing attempts.

The VoC typology has empirical support. Unionization rates continue to be high in some countries, such as the Nordic states which are classified as CMEs, whereas in LMEs such as the US and United Kingdom union density has plummeted (Ebbinghaus and Visser 2000, Skruggs 2002). Moreover, we continue to see variation across post-industrial countries in the actual practice and enforcement of core labor rights provisions and employment protections with the United States and France ranking low, while Sweden, Finland, and Belgium - all classed as CME's - rank high (Kucera 2002, OECD 2004, OECD 1994). Union power in collective bargaining and ability to set binding industry-wide wage rates is notably higher in CMEs than in LMEs where union contracts are negotiated at individual company levels (Iverson and Cusack 2000, Frege and Kelly 2004). Moreover, in LMEs labor regulations and union power has eroded more dramatically than in CMEs. **Table 7** presents national union density rates for the advanced economies of North America, Europe, and Asia. Note that the five countries with the highest union density are all CMEs – mainly the Scandinavian economies. The English-speaking countries that comprise the Liberal Market Economy group show middle-range to low rates of unionization. The group averages listed demonstrate the noteworthy differences in CME (44%) and LME (22%) union density among the market economy types. Also note that the United States lags behind every other country in union membership levels, with the exception of France.

To summarize, the validity of the neo-liberal convergence theory from an international relations perspective is questionable for several reasons. First of all, it does not adequately account for firm preferences in the international economy. The assumption that firms will necessarily resist unions and re-locate to avoid labor power is disputable. Secondly, advanced

Table 7. Trade Union Density, 2005 for Advanced Economies

Sweden	76.52	CME
Finland	72.43	CME
Denmark	70.67	CME
Norway	54.89	CME
Belgium	52.87	CME
Ireland	33.96	LME
Italy	33.59	LME*
Austria	33.33	CME
United Kingdom	28.42	LME
Canada	27.73	LME
Australia	22.29	LME
Germany	21.68	CME
New Zealand	20.85	LME
Netherlands	20.56	CME
Switzerland	19.31	CME
Japan	18.80	CME
Spain	14.70	LME*
United States	11.96	LME
France	7.67	LME*
LME Average Density	22.35	
CME Average Density	44.10	

* Hall and Soskice contend these economies have aspects of both CME and LMEs. However, they contend that their labor relations characteristics resemble LMEs. (Hall and Soskice 2000, 21).

data extracted on 02 Aug 2014 18:09 UTC (GMT) from OECD.Stat.

economies have not unanimously cut worker rights, nor has union membership declined sharply in all advanced countries. Different varieties of capitalism have been identified, with CME countries maintaining strong trade union movements, while in LME countries unions enjoy less recognized legitimacy and labor regulations are weaker. Thus, the assumed outcome of policy convergence is not fully corroborated by empirical evidence when viewing this question from a comparative-countries perspective.

Neo-liberal convergence theory applied to the study of American states

While it is often discussed in an international relations context, the “race to the bottom” argument is just as provocative when applied to the study of unionization in the federalist context of the American states. First of all it raises the question of how state-level unionization levels might impact the amount of FDI that states receive. Investors are aware of the variations in state regulatory and economic development strategies as a result of America’s federalist structure, largely due to the marketing efforts of states to lure them to invest, and use these differences to their advantage (Brace 2000). Union membership levels and labor and environmental regulations, alongside differences in capital taxation are routinely advertised by state officials to make their state appear as a more attractive relocation target than another (See South Carolina Department of Commerce 2014 for just one state’s example). But similar to the debates among international relations scholars, researchers of the American states disagree about the extent to which foreign firms make their relocation decisions based on union avoidance strategies. Overseas companies seek location targets in states where union reach is limited according to some state-level scholars (Lipit 1997, Brady and Wallace 2000). Nonetheless, there is a fairly consistent finding that FDI flows more freely into higher wage, higher-union density states than

into their lower-wage peers (Perrucci 1994, Hansen 2001). The degree to which the state economy is internationalized via inward FDI, import competition, and exporting has been found to be unrelated to differences in labor costs across the American states (Hansen 2006). Most foreign firms pay higher average wages than domestic firms, (U.S. Department of Commerce 2011; Heyman, Sjöholm, and Tingvall 2007), suggesting that maintaining the cheapest possible wage is not a salient concern to overseas companies. However, an alternate view could be that foreign firms keep wages high specifically to avoid union agitation.

The neo-liberal perspective not only predicts that unionization impacts the attractiveness of a state to investors, it also suggests that flows of foreign investment could negatively impact unionization levels over time. In their “race to the bottom” states would be compelled to slash labor standards and suppress labor power to remain competitive with other states to attract FDI and out-of-state domestic investment. Unions could find their power base shrinking as the state economy becomes more exposed to the international market.

Economists frame the historical decline of unions as a function of increased competition among firms, rather than focusing on governmental policy-making to woo investment as do political scientists, but the consequences predicted are similar. As foreign companies enter the domestic economy corporate profit margins shrink with more competition for consumer demand. Lower surplus returns to capital would hinder unions’ abilities to charge higher “rents” to redirect corporate profits to labor in the form of increased wages, benefits and in particular, union dues revenues (Acemaglu, Aghion, Valante 2001, 233). The unions’ loss of leverage in wage bargaining could be most pronounced when there is direct product market competition between inward foreign investors and domestic firms; in other words when the motivation for investment is market access to consumer demand (Leahy and Montagna 2000). Firm

competition would decrease union resources and impede union efforts to organize new workers and maintain their existing membership base.⁶

Some empirical findings of social scientists confirm this economics perspective when analyzing the decline of unionization in the American states. Inward FDI was found to diminish union success in recognition elections, union effort in number of attempted organizing drives, and union density (percentage of unionized workforce) in comparative studies of the American states (Brady and Wallace 2000, Slaughter 2007). But research in state labor factor costs show that union declines over the last three decades are about the same for states with the highest levels of FDI and those with the lowest levels of FDI (Hansen 2006, 65).

Drawing conclusions about the impact of FDI on unionization is further muddled when considering that union coverage rates are actually higher in foreign-owned facilities than in American-owned firms. **Table 8** provides the latest governmental data on comparative unionization rates of foreign firms and all U.S. businesses. In manufacturing, retail trade, administration, support, and waste management and accommodation/food service categories, union share of employment in foreign firms is notably higher than it is in all U.S. businesses, while in wholesale trade and transport/warehousing, the rate is slightly lower. Overall, union share of employment in foreign firms is over 12%, compared with 8% for the total population of businesses. If inward FDI was really a critical factor in impeding union organizing, we might expect to find that foreign firms demonstrate a smaller share of union members in their total employment than businesses overall, but this is not the case.

⁶ However, Leahey and Montagna show that foreign firms would actually maximize utility by locating in centralized wage bargaining environments versus decentralized ones because of the competitive edge it provides them over internal firms. Centralized bargaining occurs in “strong labor” economies where unions enjoy greater institutional legitimacy. In the United States there are few industries where centralized collective bargaining still occurs. Almost all of the union wage bargaining in the American context occurs at a decentralized level.

Table 8. Union Represented Employment in Foreign Firms in U.S., 2007

	Union Represented Employment in Foreign Firms (Thousands)	Total Foreign Firm Employment (Thousands)	Percent Foreign Firm Employment Represented by Unions	Percent All U.S. Business Employment Represented by Unions
All Industries	685.2	5,519.5	12.4	8.2
Manufacturing	341.2	1,998.2	17.1	12.0
Wholesale Trade	31.9	620.3	5.1	5.7
Retail Trade	96.5	534.5	18.1	5.7
Transporting and Warehouse	47.2	243.4	19.4	22.3
Admin, Support, and Waste Management	50.4	536.5	9.4	4.2
Accommodation and Food services	51.3	361.8	14.2	4.2
Other Industries	66.7	1,224.7	5.4	8.0

Source: Bureau of Economic Analysis, November 2009. "Operations of U.S. Affiliates of Foreign Companies.", p. 54. http://www.bea.gov/scb/pdf/2009/11%20November/1109_foreign.pdf

The assumption of eventual convergence on labor relations policy as inward FDI increases is also suspect when examining the cross-sectional variation in state laws in our federalist system. The American political-economic system is actually a composite regime, according to one researcher, that can not be fully classed as a Liberal Market Economy, given sub-national differences in employment and labor development policies. Program innovation characterizes state economic development strategies, contributing to the diverse array of unionization levels, worker rights, and workforce development policies found across jurisdictions (Amberg 2008). As with countries in the global economy, previous research suggests that the American states do not show convergence in regard to labor power or employment policies, even given the high level of interstate competition for investment (Hansen 2006). While some studies indicate that states cut labor standards in an attempt to compete with their contiguous neighboring states (Saiz 2001b), nation-wide the states continue to operate with varied approaches. Divergence in state unionization levels persists, following regional divides and historical “right to work” status, and the marked contrast in the labor relations regimes of union-shop and open-shop states have endured for decades. With the exception of Oklahoma, Texas, and Idaho no states adopted new “right to work” statutes for years in my study. (See Kelly, Witko, Young 2013).⁷

Finally, the lack of labor standards convergence from an international perspective could create opportunities for unions to organize workers at a domestic level. Firms headquartered abroad, especially in CMEs, operate in national economies with less contentious management-

⁷ The examples of Michigan and Indiana, outside my years of study, do demonstrate some recent movement to prohibit union shops and cut worker rights, but whether or not inward FDI is the cause is questionable. Changes in the party in power in the states, resulting in shifts in the states’ policy agendas, appear to be the critical factors, rather than competitive impulses caused by inward investment.

labor relations dynamics than are seen in the US, and this may affect the employment practices they bring to their subsidiaries hosted in the US domestic economy. As discussed, international firms may not make decisions on site locations based on union avoidance. Furthermore, the Varieties of Capitalism approach suggests that some foreign firms may actually be union-friendly, viewing unionization of their workforce as an essential ingredient of their business model due to the legitimacy that unions enjoy in their originating economies. The recent Volkswagen union election in Chattanooga is a well-publicized example of this, with the German automaker openly expressing its desire to set up a works council structure that if successfully implemented, will recognize the United Auto Workers union as the official representing agent of its workers (Chambers 2014).

Admittedly, VoC chiefly emphasizes the differences that endure between companies operating within their domestic, home market environments. It does less to predict whether or not foreign firms will carry labor relations approaches developed in their home country to the United States upon relocation. However, applied industrial relations scholars have tackled this question. “Forward diffusion” occurs as foreign firms utilize distinct personnel approaches upon relocation, traceable to their nation-of-origin (Ferner 1997, Edwards 1998, 2000, Guest and Haque 1996). For instance, American-owned firms display lower unionization in their European operations than do German and Swedish firms located outside their domestic economies, which tend to tolerate unions as an “employee voice” mechanism for their workers (Marginson 2008). In the United States, this indicates that firms lured from CME countries may be less combative toward unions, even as their American peers wage active resistance. Foreign LME firms might behave more like U.S. corporations and oppose unionization attempts in their American operations, as they share features of similar types of market economies.

But there is also a strong argument for American exceptionalism regarding the degree of union hostility exhibited in the U.S. economy. When compared to the United Kingdom, Canada and Australia, which are also classed as LMEs, the U.S. has historically had notably lower levels of union density than any of these countries (Visser 1996 in Hall and Soskice 2001).

Comparative research tracking the erosion of union membership levels over the past three decades indicates substantial differences between the U.S and Canada, which is arguably America's most comparable peer country. By the end of the millennium Canadian union density still managed to hold at approximately 33%, compared to levels lower than 10% in the U.S. private sector (Riddell and Riddell 2004).

These paltry union density rates are the consequence of fierce counter-campaigns that American businesses wage in reaction to unionization attempts. America offers an exceptionally hostile union environment (Kelly, Witko, Young 2013). The "union avoidance" industry, which utilizes a host of sophisticated legal and human resources strategies to thwart labor organizing, is a unique American creation (Bronfenbrenner 2000). Over the past decades expensive media campaigns, "captive audience meetings", and utilization of union-busting consultants have become standard tactics employed by U.S. management in response to labor organizing (Bronfenbrenner 2009, 2004; Martin 2008). This is the product of the particularly weak regulatory structure that U.S. labor statutes provide to safeguard workers' rights to join unions, as reviewed in Chapter 1. Research in comparative labor economics reveals that the United States rates lower than any other advanced country in regard to enforcement and practice of labor rights standards (Kucera 2002). Moreover, the U.S. business sector's hostility to unions is not limited to domestic operations. American companies display significantly higher levels of union avoidance in their overseas facilities than do subsidiaries with parents from Ireland, Canada, or

the U.K. (Marginson 2008). Comparatively, even those firms from foreign LMEs may be more tolerant to unionization than home-based firms in the U.S.

Ultimately, variation in labor relations among the world's advanced economies could have two important influences on American unionization. First, it suggests that foreign firms overall may operate with a more union-friendly approach than U.S. firms, and that unions have a better chance in organizing in their facilities as a result. Secondly, it suggests that firms from CME countries may be the most favorable to union organizing among the group of foreign-owned firms, due to the particularly strong legitimacy that unions enjoy in these firm's home countries.

Foreign firms and union outcomes in the U.S: A first analysis

In this section I conduct a simple bi-variate analysis to offer empirical support for the non-negative impact that foreign nationality of firms has on American unionization outcomes. I highlight two ways to analyze quantitative data in regard to this hypothesis. First of all, at the macro level, one can examine the association between aggregate amounts of foreign direct investment and state level union density levels. This approach, using states as the unit of analysis, considers how overall totals in investment relate to union membership share in the state workforce overall. The macro-level perspective also allows us to better consider questions related to convergence. Do states with higher levels of FDI show similar low unionization levels? Also, do states with the highest relative amounts of FDI show a consistent tendency to lose union members?

Macro-level FDI to states has already been considered as a factor impacting union density (Hansen 2006). However, FDI can be measured in different ways. The U.S. Bureau of Economic

Analysis tracks inward FDI in various forms. The value of FDI stocks, which measures the amount of assets attributable to foreign majority-owned affiliates in the United State is one metric most commonly used. Another approach to quantifying inward FDI is to measure the number of jobs in the U.S. economy offered by foreign-owned affiliates. I use the latter variant throughout my analysis because the jobs figure relates more directly to the dependent variable of union density, which is itself a percentage of the state workforce. Moreover, to account for the variation in the overall size of the state labor force, I use the percentage of private sector jobs in foreign-owned subsidiaries, as supplied by Brady and Wallace 2000, updated for recent years.

As a preliminary analysis of whether or not FDI is associated with macro-level state union density I offer **Table 9**. The first ten states listed on the table are those in the top quintile (the “Top 10”) of percentage of FDI jobs in the state labor force for 2004, the most recent year in my macro-level dataset. (I also supply data for Tennessee, for interest.) I have calculated the top quintile mean, as well as the mean for the rest of the states for FDI, total and private sector union density, and change in total and private sector union density between 2004 and 2005. The Top 10 comparison to the remainder of states shows that in both measures of union density, the mean union density is higher in high FDI states than in the remainder of states. Moreover, in both private sector and total union density, the Top 10 states showed a mean gain, while the remainder of states show a mean loss in density. I also conducted t tests to evaluate whether the difference between the Top 10 and the remainder of states was significant on these measures. In all tests, I could not reject the null hypothesis that there was not a significant difference between groups. These early findings suggest that foreign direct investment is not related to *lower* union density levels; in fact the numbers reveal that higher levels of FDI jobs in the state labor force coincide with *higher* levels of union density. However, given the failed t-tests between group means, I fall

Table 9. Top Quintile of US States in FDI Jobs, 2004

State	FDI Jobs as % of Employment	Private Union Density (2004)	Private Density Change (2004-05)	Total Union Density (2004)	Total Density Change (2004-05)
South Carolina	6.64	2.60%	1.50	3.10%	-0.80
New Hampshire	6.53	4.80%	-0.80	9.90%	0.50
Connecticut	6.22	7.30%	0.30	15.30%	0.70
Delaware	6.16	7.70%	-0.70	12.40%	-0.50
Massachusetts	5.72	7.70%	-0.30	13.50%	0.40
New Jersey	5.49	11.60%	0.20	19.80%	0.70
Hawaii	5.42	16.20%	0.70	23.50%	2.40
Rhode Island	5.34	8.80%	-0.40	16.40%	-0.40
North Carolina	5.16	1.60%	0.20	2.80%	0.20
Maine	4.74	5.90%	-0.30	11.30%	0.60
Top Quintile Mean	5.74	7.42%	0.04	12.80%	0.38
Remainder of States Mean	3.16	6.98%	-0.03	10.99%	-0.03
Tennessee	4.69	4.9%	-1.60	6.7%	-1.30
*FDI Jobs data from Brady and Wallace 2000 and updates.					
**Union Density data from Hirsch and MacPherson 2001 and updates, www.unionstats.com .					

short of demonstrating that FDI has a statistically significant impact in either direction on state level union density. In any case, the “race to the bottom” premise - convergence toward lower state unionization as FDI rises- receives no support. Of course, a full multivariate analysis is warranted to provide stronger support for the validity of these findings, and this will be presented in Chapter 4.

A second way to analyze quantitatively the question of how foreign firm ownership impacts union outcomes in the U.S. is to use the individual union recognition elections as the unit of analysis. This approach looks for the association between the nationality of the business where a unionization attempt occurs and whether the union won or lost the recognition election. There are a handful of studies of micro-level union election data from previous decades, but their findings present a puzzle. One concluded that that foreign firm nationality has no significant impact on unionization election outcome, (Sanyal 1990), another that foreign firms elections have lower pro-union vote share than American firms (Greer and Sherarer 1981), and another that foreign firms are less likely to result in union victories than American firms (Bronfenbrenner 2000). But due to the data noted earlier, that average union membership levels in foreign firms is higher than in American firms, these findings should be not be taken as the final word.⁸

One of the unique contributions of this dissertation is my construction of an original data set, tracing union recognition election outcomes for recent years (2005, 2007, and 2009). These elections are reported and posted on the National Labor Relations Board’s website monthly, and are available for at least the most recent two decades. The fifth chapter of this dissertation

⁸ Moreover, there has been little analysis to account for differential impacts of firms from foreign countries, either individually or in groups. Most of the research has simply looked at the “foreignness” of the business, rather than clusters or classes of foreign firms, such as the LME/CME distinction.

presents a detailed multivariate regression analysis of this data set, along with a detailed description of the case selection methods utilized to construct it. For now, I wish to introduce some preliminary descriptive statistics from this data set, to shed light on how firm nationality relates to frequency of pro-union votes. In addition, I present data on union vote share in the elections. Please note that in Table 10 that follows only union elections with 50 or more eligible employees have been included.

Table 10 breaks down union elections by three categories of firm nationality – FMNC (Foreign Multi-national Company), USMNC (American Multi-national Company) and Domestic (companies with operations solely based inside the United States). The multi-national and domestic distinction is important because multi-national operations by definition are more capital-mobile. These firms can present a more credible threat to offshore existing operations as a response to unionization drives than can domestic firms, which lack existing overseas facilities. Threat of closure is a major scare tactic used by union-avoiding firms (Bronfenbrenner 1997). Unions have even at times shifted to public sector and service industry organizing to sidestep the “exit” threat often wielded by U.S. owned multi-nationals (Gapasin and Bonacich 2002, 182). My presentation of the data accounts for the possible impact of capital mobility threat by listing win rates for union elections according to separate ownership categories. FMNCs actually posted the highest win rates, with almost 60% resulting in union wins, even given their capital-mobile operations. USMNCs show the lowest rate with about 37% of elections in this category resulting in success for the union; while Domestics, as expected, posted a higher share of union wins (about 47% of elections) than multi-national American firms. Still, FMNC is the only category with union victories in the majority of cases. The vote share data parallels the statistics on election outcomes, indicating that FMNCs had the highest mean percentage of the three groups

Table 10. NLRB Union Election Outcomes, Years 2005, 2007, 2009

<u>Frequency of Election Outcomes</u>				
	<i>Win</i>	<i>Loss</i>	<i>Total</i>	<i>% Wins per Category</i>
Foreign Multinationals	128	86	214	59.8%
U.S. Multinationals	92	157	249	36.9%
Domestic	245	272	517	47.4%
All Firms	465	515	980	47.4%
<u>Mean Union Vote Share*</u>				
Foreign Multinationals			58.2%	
All American Firms			50.5%	
U.S. Multinationals			45.7%	
U.S. Domestic			52.8%	
All Firms			52.2%	
Total N		980		

* F= 19.38 (p<.00) for foreign firms compared to all American firm. ANOVA analysis confirms that means for the Foreign and All American groups are significantly different.

F= 18.18 (P< .00) for the three way comparison of FMNC, USMNC, and Domestic categories. ANOVA analysis confirms that the group means for vote share are not all equal. Bonferroni, Scheffe, and Sidak multiple comparison tests each provide support that the difference between means are significant for all three groups (p<.05).

Source: NLRB Election Reports

at 58%. Moreover, a variety of multiple-comparison means tests confirm that the FMNC average vote share is significantly higher than the average vote share for both USMNCs and Domestics. A multivariate analysis is needed to draw more accurate conclusions about the impact of corporate nationality on union organizing success in the U.S., but these descriptive numbers reveal initial support for the argument that foreign-owned firms present an opportunity for union organizing, as opposed to an obstacle.

The models I present in the next three chapters will allow for firm nationality and FDI to be analyzed alongside state economic development strategy and for possible interactive effects of these variables. In this chapter, I offer a brief comparison of descriptive statistics from three example states as an introduction of how foreign ownership operates in a federalist framework to influence state unionization outcomes.

Table 11 repeats the data on the percentage of union elections won by unions, the total number of potential new union members eligible to vote in unionization elections, and the number of new workers successfully unionized for years 2005, 07, and 09 for three illustrative states, as was provided in Chapter 2.⁹ It adds numbers specific to elections held among the subset of foreign-owned firms for comparison. Important labor force characteristics are also listed for each state to provide context for interpreting the unionization data. Results indicate that in Missouri foreign firms account for thousands of attempted and successfully unionized workers, while in both South Carolina and Tennessee, attempted new and won union members total only in the hundreds. Tennessee, notably, has a labor force size roughly equivalent to Missouri's, with a much smaller number of newly unionized workers. South Carolina has a smaller state labor force size, but the latest numbers indicate that it has a larger number of

⁹ These numbers are inclusive of elections with less than 50 eligible employees.

Table 11. NLRB Union Election Outcomes for Selected States (2005, 07, 09)

	Missouri (Entrepreneurial Focus)	South Carolina (Locational Focus)	Tennessee (Dual Focus)
<u>All Firms</u>			
Win Rate	57% of 147 elections	71% of 21 elections	56% of 48 elections
Employees eligible to vote for unionization	8808	1209	3492
New members unionized	6088	957	2633
<u>Foreign Firms</u>			
Win Rate	70% of 27 elections	100% of 6 elections	66% of 9 elections
Employees eligible to vote for unionization	2839	574	760
New members unionized	2165	574	391
Market Economy Impact	LME firms- 13 wins CME firms - 6 wins	LME firms -6 wins CME firms- 0 wins	LME firms - 2 wins CME firms - 4 wins
<u>State Labor Force Characteristics</u>			
Size of state labor force*	3,042,539	2,119,888	3,018,429
Union density **	10.8%	3.6%	5.5%
Foreign-owned firm jobs, 2011***	88,300	114,100	123,900
Foreign-owned firm share of state labor force, 2011***	3.90%	7.50%	5.40%

* Bureau of Labor Statistics. Average of monthly labor force totals for Jan 2005- Dec 2009.

** Macpherson, et. al, www.unionfacts.com. Average of annual union density percentages for 2005-2009.

*** Taken from Organization for International Investment on-line database. This is the best available data. Jobs numbers are based on the latest publicly available data from the Bureau of Economic Analysis. Accessed 7.18.2014

employees working for foreign-owned firms than does Missouri. Thus, the difference in Missouri's higher numbers of newly unionized workers does not appear to be related simply to the size of its labor force. To the extent that unions do organize in South Carolina, foreign-owned firms have a higher union win rate than American firms do. In fact, all of the FMNC union drives in South Carolina produced pro-union outcomes, even though there are few of them. In Tennessee, like the other states, the majority of elections at foreign-owned firms are successful for unions, although they are few in number.

These descriptive statistics introduce two hypotheses that I will test in the next two chapters regarding the relationship of firm nationality to unionization outcomes. 1. *State economic development policies have impact on the ability of unions to organize successfully in both foreign and American firms, with locational strategies having a negative impact, and entrepreneurial strategies having a positive impact.* These descriptive statistics reveal that the states engaging heavily in locational development may demonstrate less new member growth and union organizing activity than in states with an entrepreneurial development approach. 2. *Foreign firms, regardless of the state economic development strategy policy used, will have higher unionization success than domestic and multi-national American firms.* This is consistent with the higher success rates observed in the subset of foreign firm elections in all three states.

I also supplied some descriptive information in the table regarding the impact of market economy of origin of foreign multi-national firms with union elections. The Varieties of Capitalism approach suggests that U.S. firms, embedded in our Liberal Market Economy, are likely to display more hostility than firms that originate in other advanced countries (since the market economy of at least some of these countries is the union-friendly Coordinated Market Economy). This is supported by the comparison of win rates of US and Foreign firms. However,

VoC also suggests that the foreign-owned firms that would contribute the most union victories would be those originating from CMEs. The descriptive profiles here indicate that in two of the states, LME-originating firms contribute more victories than do CME-originating ones.

Tennessee is an exception with four CME firm wins. Of course, the number of observations shown is are too small to draw solid conclusions about market economy origination as a predictor of union election outcome. A more complete multivariate analysis, as conducted in Chapter 5, will examine market economy impact in greater detail. These numbers do paint a picture of the U.S. as an exceptional case in terms of unionization. U.S. firms appear to be less advantageous organizing environments than even those foreign firms headquartered in other LME countries.

Chapter Summary

Foreign investment and firm nationality are key factors that must be considered in the examination of the how opportunities to unionize vary between the U.S. states. Since foreign investment is such a significant part of our domestic economy and our labor market in particular, it could have a substantial influence on state labor union outcomes. This chapter has reviewed some of the perspectives commonly-held by scholars on how foreign investment may impact unionization outcomes in a competitive federalism framework. My findings here indicate that FDI does not appear to be driving the American states in a common direction of declining unionization. While most states have lost union density over the past decade, there is not sufficient evidence to show that inward FDI is the force behind that decline. States continue to show variation in their labor relations approaches and union density rates, often revealing that states with the higher levels of FDI are the more unionized ones. This chapter also considered

how ownership nationality of a firm impacted the relative chances of a union drive resulting in a win for labor. Early analysis shows that union victories occur more, not less frequently in foreign-owned subsidiaries than in American-owned firms, both those with multi-national and wholly domestic operations. Moreover, the variation in labor-management relations that countries display suggests that foreign firms may operate with less resistance than American firms due to higher levels of legitimacy and collaboration that unions experience in other market economies. Though it is still to be analyzed more thoroughly, the data in this chapter illustrates that American-owned firms offer less opportunity for union victory than do the foreign-owned firms from fellow Liberal Market Economies.

Chapter 4: A “Macro” Model of Unionization

Unionization as the factor of interest in this dissertation has multiple dimensions. One way to think about unionization outcomes is how “widespread” union membership is throughout the labor force. This is a “macro perspective” that considers the degree to which unions have been successful in recruiting a substantial share of workers in the economic system overall. Another way to assess the success of union outcomes is to consider unions’ ability to achieve official recognition as the agent of employees in the individual workplaces that they attempt to organize. This perspective understands unionization as an activity that recruits new members workplace by workplace. In this “micro” approach union outcomes are not evaluated according to their impact on the mass labor force, but rather their ability to successfully achieve their intended purpose – new organizing – on a case by case level.

At the outset it should be acknowledged that the factors that influence union outcomes from a macro-perspective may not necessarily be the same ones that impact union outcomes at a micro level; or factors that influence the former in one way may conceivably affect the latter differently. For this reason I offer a coupled approach to examine the impact of economic development policy and foreign ownership on unionization outcomes. The dual examination will present a fuller picture of how these critical factors influence state unionization levels.

In this chapter I will empirically test for the macro level impact of economic development policy and foreign investment on the union density (share of unionized workers) of the state workforce. A state’s orientation toward economic development policy has ramifications on the long-term evolution of its economy’s industry composition, which could in turn create more or less opportunity for unions to grow their labor force share. Additionally, aggregate levels of FDI

may create more competition in the overall economy between firms which could impact opportunity for unions to increase the percentage of union workers.

Thus, state union density levels will vary both cross-sectionally (across states), and annually (for each state), with case-year as the unit of analysis. The set of individual cases for each year is consistent; that is, each panel is composed of the 50 American states. This examination of macro union density outcomes requires a methodological approach that is appropriate for analyzing longitudinal, panel data. It must also control for the impacts of other critical variables, such as right-to-work status, party in power, and degree of state policy liberalism, that theoretically affect labor union strength.

Methods

OLS (ordinary least squares) regression is the standard approach for statistically analyzing data to assess the individual independent impact of multiple independent variables on an outcome of interest when that outcome is measured with interval-level data. Union density, in particular the *change* in union density, generally qualifies as interval level data. The change in union density, since it is expressed as a percentage point increase or decrease, may vary continuously from -100 to 100%. Prior examinations of the change in union density as the dependent variable handle it as an interval-level measure (Kelly and Witko 2012).¹⁰

However, the efficacy of standard OLS regression results rests on assumptions about the underlying data being analyzed, which can be problematic for its application to the analysis of

¹⁰ Some researchers claim that a quasi-MLE Bernoulli model (see Papke and Wooldridge 1996) or a “beta” MLE model (see Mullahy 1990 in Papke and Wooldridge) is necessary for examining dependent variables that are fractional or percentage-based, because such variables are only capable of ranging from 0 to 1. However, my analysis uses the annual change in union density as the dependent variable, which can be positive or negative and thus is not constrained to the range of 0-1.

longitudinal panel data. One serious issue in using OLS with times series data is the problem of ‘serial correlation’ – that is, the error of an observation at one point in time is correlated to the errors of historical observations of that same case in the past. What this means in the context of yearly state union density percentages is that, for example, the error of an observation for Tennessee in year 2003 is associated with the errors of observations for Tennessee in the years prior to 2003. When serial correlation is present and the assumption of independent errors is violated, use of OLS regression can result in “inefficient” standard errors of the coefficient estimates, which make significance testing less accurate (Box and Tiao 1975). In particular, use of OLS on time series data may lead to flawed models that report significant relationships between variables, when in fact the relationships are NOT significant (Berman 2002). Model estimations with inefficient standard errors could also result in significance tests that fail, when in fact a statistical relationship does exist between variables.

There are a number of ways to deal with serial correlation in time series data to make the application of regression analysis feasible. One approach, regarded as the “old fashioned” method by some analysts, corrects the regression model of serial correlation by using modified standard errors, with subsequent testing for the presence of any remaining serial correlation (Beck 2001, Box and Jenkins 1970). Another approach is to directly capture the actual dynamics of the change relationship over time, which will be discussed shortly.

An additional concern about the independence of observations assumption in longitudinal panel data is that correlation is also present due to multiple observations from the same unit. In the case of my data set, unit effects may be present due to multiple yearly observations from each of the fifty states. If only one set (year) of cross-sectional data for the states was present the correlation between cases from the same state would obviously not be a factor, but with time-

series panel data this is a problem. Error correction modeling, which I will use, may include adjustments in standard error estimates to correct for unit-related correlation. I will utilize panel corrected standard errors in my models to address the dual problem of serial and panel-related correlation.

Perhaps the most serious problem that crops up in time series data is the threat of “spurious regression” results, related to regressing one non-stationary series on another (Granger and Newbold 1974). Non-stationary time series are those which do not have a tendency to revert to an equilibrium mean over time. In some cases of non-stationarity, the series’ variance is variable and dependent on time; while in other cases the variance is constant. The most pernicious problem involves the former situation. In such a case two *unrelated*, non-stationary series analyzed through OLS may generate models which erroneously report a significant causal relationship, when there is not one in reality. Regression of such unrelated series upon one another is a flat violation of OLS regression and should be avoided.

However, in the latter case a slightly different problem arises. These series include a deterministic trend that *is* constant and independent of time, so there is in fact a tendency for both series to return to an equilibrium when disturbed. However, the equilibrium for the outcome variable is a moving target that is dependent on the value of the explanatory variable. In this situation, where data series are “co-integrated,” models that account for causal effects on an outcome variable by including lagged values of the explanatory and outcome variables are inconclusive. In the presence of two or more co-integrated series, standard lagged dependent variable (LDV) models are likely to find no significant relationship between variables, when in fact there is one (Engle and Granger 1987, Freeman 1983). Thus, searching for causal relationships between two non-stationary and also co-integrated series is not a violation of time

series regression analysis, but the activity requires special modeling strategies beyond standard LDV inclusion to arrive at accurate results about significance.

In the case of both spurious regression threats and co-integration challenges, tests are needed to detect variables comprised of non-stationary data. Moreover, upon identification of non-stationary data, analysis is needed to determine if the data is co-integrated, which requires adjustments to the method of analysis, or non-related, which makes it inappropriate for analysis in the same model.

I use an error correction model (ECM) strategy to address the problems of serial correlation, unit effects, and non-stationarity. Such models are based on a theoretical interpretation that an observation at a given moment is actually a dynamic function of observations at previous moments (Keele and Kelly 2006, Beck 1985). ECMs are widely regarded as an appropriate model for fitting data with co-integrated series (Ostrom and Smith 1992, De Boef and Keele 2008). Error correction is a necessary condition of co-integrated data since both the outcome and explanatory variable do tend to revert back to an equilibrium when disturbed, in contrast to non-stationary random series which do not exhibit an error correction process. Moreover, the estimation of an ECM reveals whether or not an error correction process is significant, which helps to distinguish non-stationary co-integrated series from non-stationary random series. One additional benefit of ECMs is their flexibility. Although they are capable of modeling co-integrated data accurately, their use is also appropriate with stationary data that has no co-integration (DeBoef and Keele 2008). Since they assist in the detection of “prohibited” non-stationary series and can adequately accommodate co-integrated or stationary series, they are a good fit for almost all time series data analyses.

The ECM equation estimates the change in the dependent variable (ΔY) caused by a change in X, rather than the actual value of Y given a value of X. Thus, my model's dependent variable is the *annual change in state private union density*. ECMs estimate two coefficients for each independent variable – a differenced value and a lagged value. The coefficient on the differenced value of X (the annual change in the X variable), applies to the initial impact of the change in X to the change in Y, which occurs entirely at one point in time (Kelly and Witko 2012). But as pointed out earlier, this approach also models the dynamic nature of the change relationship, accounting for how it endures and eventually decays over time (Keele and Kelly 2006). The coefficient on the lagged value of X applies to the impact of X on the change in Y that is felt over this longer time span. In my model if the value of a differenced or lagged independent variable coefficient estimate is negative, the variable has an independent effect of decreasing the annual state private union density. If the value of an independent variable coefficient estimate is positive, the variable has an independent effect of increasing the annual state private union density.

Finally, the ECM model also includes a lagged dependent variable as an explanatory variable (that is, on the right side of the equation). Its coefficient gives the “error correction rate”, which quantifies how the change in X impact on Y decays over its duration. A failure to obtain significance on the lagged dependent variable suggests that an error correction process is not occurring, which is a clue that data is non-stationary and not co-integrated. The ratio of the coefficient of the lagged independent variable to the error correction rate provides the long run multiplier (LRM), which is the total long-term impact that a change in X has on Y. Thus an examination of the coefficients on both the lagged dependent and lagged independent variables

sheds light on the dynamics of the change relationship. Error correction modeling reveals that change is a process that unfolds over time, as well as a discrete event.

Data and Measures

The data set for my macro-level analysis is derived from Nathan Kelly and Christopher Witko's time series regression of state income inequality (2012). Kelly and Witko used total state union density as an independent variable in this study, with additional "power resource" indicators such as state policy liberalism, partisan composition of Congress, and President's party also tapped. In my examination, I use Kelly and Witko's governmental power resource independent variables, as well as several control variables used in their dataset. However, I add a number of independent variables which are central to my study that were not included in their analysis; namely, economic development policy activism and foreign direct investment jobs. For my dependent variable, I use state union density in the private sector, rather than total union density.¹¹

The source of the state private sector union density data is from Hirsch, Macpherson, and Vroman 2001 (and updates). The researchers derive their union density percentages from Current Population Survey and Bureau of Labor Statistics data tracked since 1964. The Hirsch et al data sets include percentages for national-level union density, as well as disaggregated figures for each of the fifty states, in addition to industry and occupational grouping. Moreover, they also develop separate state level measures of both private and public sector unionization. The Hirsch et al data program is one of the most comprehensive sources of longitudinal union density data

¹¹ Thank you greatly to both Nathan Kelly and Christopher Witko for use of their data set.

available for social science researchers and has been made accessible for a wide audience on the website unionstats.com.

The years of study for my analysis are 1983 to 2004. I use these years because they correspond to the same range of years in which my dependent variable and key independent variables, *entrepreneurial policy activism* and *locational policy activism*, are available. The interval-level measures of economic development policy come from the two separate indices for locational and entrepreneurial policy developed by Martin Saiz, discussed at length in chapter 2. Saiz's coding was based off the attributes of economic development incentive programs as cataloged in the *NASDA State Incentives Guide*, a comprehensive list of incentive programs published periodically in years 1983, 1986, 1991, 1994, 1998, 2002 to 2006. Since the catalog was not published every year, Saiz's indices are only available periodically, in the years the NASDA guide was also available. Clearly, this creates a problem of missing data for all years in between. I do not wish to lose data for those years, since the state union density figures and other key independent variable measures are readily available. Thus, I use interpolated data for the missing years on both indices. The interpolations are based on a linear estimation approach.¹²

¹² The Saiz indices are well-respected in social science and economic development literatures as measures for tracking temporal change in development policy, despite their intermittent availability (Hanley and Douglass 2014, Gray and Hanson 2012, Saiz 2001a, 2001b, Hart 2008). A recent examination called the Saiz measures “a particularly rigorous” typology (Hanley and Douglass 2014), while also acknowledging some drawbacks. However, previous use of these measures have been mostly for descriptive purposes. Saiz does use them in regression analyses, as measures of both independent (2001a) and dependent (2001b) variables. While Saiz refers to these analyses as “pooled time-series models”, he does not include corrections for serial correlation and does not model the dynamics of the causal relationship. Instead he simply controls for “unit effects” by including dummy variables for each year of observations. My project attempts to offer an examination of the dynamic change relationship between development policy and union density. While I do use interpolated values for some years due to the lack of available annual values, my use of error correction modelling offers a more complete time-series analysis than is possible without the inclusion of annual interpolations.

My other critical independent variable is *inward foreign direct investment* for each state. As discussed in Chapter 3, FDI is measured in various ways. The U.S. Bureau of Economic Analysis tracks the number of jobs in the U.S. economy offered by foreign-owned affiliates, as well as the amount of assets (including inventory, facilities, machinery, and revenues on hand) owned by foreign-owned affiliates. I use the jobs figure because it complements the key dependent variable of private sector union density, which is derived from the number of jobs that are unionized. Of course, the size of the state labor force is going to impact the number of FDI jobs possible in a workforce. (In other words, low-population states will necessarily have low numbers of FDI jobs.) To correct for this, I use the percentage of state labor force jobs attributable to foreign-owned subsidiaries, as calculated by Brady and Wallace 2000 and updated for recent years. Like the union density measure, this percentage-based indicator accounts for the share of the workforce associated with the factor of interest, as opposed to a flat count of workforce jobs.

An important control variable to test for the impact of left governments as a power resource to increase unionization is *state government liberalism*. This was the key explanatory variable in Kelly, Witko, and Young's analysis of variations in state union density (2013). The liberalism variable measures left power in state governments by accounting for ideology and policy liberalism of the state's national level legislators, weighted by partisan control of the state legislature (Berry et al 1998 with updates). Researchers recognize that using Democrat party control of state legislatures alone is a poor proxy for the collective ideological orientation of the state legislature, since many Democrat leaders, especially in the South, have historically been rather conservative and not necessarily pro-labor (Kelly, Witko, and Young 2013). Higher levels

of state government liberalism are predicted to be positively associated with the annual change in union density.

I do include partisan variables for national government to control for *Democratic President* and percent *Democrats in Congress*, to account for the historical shifts in national-level party in power over time. Given the federalist structure of the United States political system, both national-level governments and state level governments impact the conditions that unions must organize within. Unlike legislatures at the state level, partisanship of Congress at the national level is a fair indication of ideological orientation; national-level party platforms do support the identification of Republicans as a center-right, pro-business party and Democrats as a center-left pro-labor party (Kelly and Witko 2012). Higher values of both of these variables are associated with greater Democratic control and are predicted to be positively related to unionization.

Indicators to account for general economic conditions that could impact unionization levels are included. *State unemployment rate* (Bureau of Labor Statistics) is anticipated to be negatively related to the change in union density, as labor surplus is sometimes a confounding factor in organizing unions. The alternate view is that increased concerns among workers about job certainty could actually motivate more interest among them to join unions. Still, in times of high unemployment unions could lose existing members or face decreases in the number of potential new members, so I predict that unemployment will have a negative impact on unionization. High levels of the *state economic growth rate* (Bureau of Economic Analysis) is expected to increase unionization, because a growing economy likely creates new jobs, which could grow the ranks of labor.

I include a variable to account for the size of the state *manufacturing sector* (Bureau of Economic Analysis 2014), expecting to find that positive changes in the manufacturing share of the state economy will result in higher union growth rates, as union recruitment and wage bargaining efforts historically have been most successful in the manufacturing sector. This variable also controls for union loss as a result of de-industrialization in states that originally had high levels of manufacturing. These states potentially have more union jobs to lose, given the legacy effect of heightened union recruitment in the manufacturing sector during the more successful years of the labor movement. Related to this, I also included a variable for the original private sector union density of the state in 1983, the lag of the first case-year of my study. High unionization in the past may entail a positive legacy effect on current levels of unionization, and if so, this variable will control for it.

I include two variables related to demographic characteristics of the state population as controls. The variable for the proportion of *non-whites in the state population* (US Census) is provided to account for the past finding that people of color, particularly blacks, are more likely to be union members, than are whites. I also add a logged variable for the total *state population*. Since we know from research that unions have struggled to obtain membership gains overall (see Chapter 2), we would expect that the higher the growth rate of the state population, the lower the total share of unionization in the labor force. While population increases may actually have the effect of increasing the number of union members, unions are less likely to maintain their *percentage share* of total workers in states which are growing population-wise.

Finally, I include a dummy variable indicating the presence (coded 1) of a right-to-work law to control for the impact of state labor relations policies on union membership levels (Department of Labor. Also see National Right to Work Committee, www.nrtwc.org.) If the

typical argument is correct, the presence of such a law will be significantly related to losses in union members. In the case of the time-series error correction model being estimated, the independent variables are expressed as the impact of the change of the independent variable (the differenced form of the predictor variable) on the impact of the change of the dependent variable (the differenced form of the dependent variable). Thus a positive change in “right-to-work” status means a change from having no such law to adopting one. The adoption of a RTW statute is expected to result in a negative change in union density.

Table 12 on the following page is provided for reference, listing the basic form of the variables used to estimate the model, along with the measure specification and the data sources for each. Again note, ECMs estimate coefficients for both the differenced and a lagged version of each variable. Differenced versions of the variables will represent the annual change in the variable from the previous year. Lagged versions of the variables will use the value of the variable in the previous year.

Analysis and Results

Since this analysis is conducted on time series data, it can be assumed that autocorrelation is an issue. Still, I conducted tests for detecting autocorrelation in panel data to confirm. Wooldridge tests for autocorrelation on the key variables in the model – *Private union density*, the two economic development policy variables, and *Inward FDI* - each indicated the presence of autocorrelation. Clearly, a modeling strategy that accounts for serial correlation is in order. Due to concerns over co-integrated data I conducted Levin-Lin-Chu tests on the key

Table 12. Basic Form of the Differenced and Lagged Independent Variables Used in the Macro Model

Variable	Measure Specification	Data Source
Dependent Variable		
State Private Sector Union Density	Workers who are members of unions as a percentage of the state private sector workforce.	Method of calculation and estimation is presented in Hirsch et al 2001. Years 1983-2004. Downloaded from www.unionstats.com .
Key Independent Variables		
Entrepreneurial Policy Intensity	Interval level index based on coding of state economic development program attributes ranging from approximately 0 to 3 for intermittent years. Missing years interpolated.	Methodology for constructing the index is presented in Saiz 2001. Attributes coding based on data gathered by the National Association of State Development Agencies in 1983, 1986, 1991, 1994, 1998, 2002 and Miles Friedman and Partners LLC in 2006.
Locational Policy Intensity	Interval level index based on coding of state economic development program attributes ranging from approximately 0 to 3 for intermittent years. Missing years interpolated.	Methodology for constructing the index is presented in Saiz 2001. Attributes coding based on data gathered by the National Association of State Development Agencies in 1983, 1986, 1991, 1994, 1998, 2002 and Miles Friedman and Partners LLC in 2006.
Inward Foreign Direct Investment	Private sector jobs in foreign-owned affiliates as a percentage of the state private sector workforce. Varies from 1-100.	Calculations provided courtesy of Brady and Wallace 2000 and updates. Based on data from the Bureau of Economic Analysis. Years 1983-2004.

Table 12 Continued

Variable	Measure Specification	Data Source
Control Variables		
“Right-to-Work” State	State that prohibits union shops either by state constitutional amendment or “right-to-work” statute. “Right to work”= 1. No prohibition of union shops = 0.	Department of Labor, National Right to Work Committee. Years 1983-2004. *Note: this variable had variation in only three years for three states.
State Government Liberalism	Interval measure based on ideological scores of state’s Congressional representatives, weighted by partisan control of the state legislature. High levels of this measure indicate “Left” state governments.	Berry et al 1998, and updates. Years 1983-2004.
Democrat President	Partisanship of President during the case-year. 1= Democrat. 0= Republican.	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004.
Democrats in Congress	Percentage of Democrats in both houses of Congress during the case-year.	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004
State Unemployment Rate	Annual average state unemployment rate, as a share of the workforce. Ranges 0-1.	Bureau of Labor Statistics. Years 1983-2004.
State Economic Growth Rate	Annual percentage growth rate in gross state product.	Bureau of Economic Analysis. Years 1983-2004.
Manufacturing Sector	Manufacturing sector share of gross state product. Ranges 0-1.	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004
Non-white Population	Share of non-whites in state population. Ranges 0-1.	Based on U.S. Census data. Provided courtesy of Kelly and Witko 2012. Years 1983-2004.
State Population	Log of the total state population.	Based on U.S. Census data. Provided courtesy of Kelly and Witko 2012. Years 1983-2004.
Original Private Sector Union Density	Workers who are members of unions as a percentage of the state private sector workforce for year 1983 (first year of study).	Method of calculation and estimation is presented in Hirsch et al 2001. Year 1983 only. Downloaded from www.unionstats.com . *This variable was not differenced or lagged in the models due to lack of variation.

variables as well as the critical control variable “*Right to work*.” The LLC test looks for the presence of a unit root in a variable’s data across all panels. A rejection of the LLC null hypothesis means that some or all of the panels have stationary data. Each variable tested rejected the null, except the “*Right-to-work*” variable. Therefore, at least some of the panel data for the dependent and key independent variables are stationary. A subsequent Hadri test for each variable, with a null hypothesis that all panel series are stationary, was also rejected. This suggests that co-integration of data for the major variables may be present for some, but not all panels. In any case, the error correction model strategy is appropriate for analyzing both co-integrated and stationary panel data. This feature of flexibility supports the ECM use with the given data.

The results of the ECM regression analysis appear in **Table 13**. The negative lagged dependent variable with $p < .001$ indicates that the error correction process is significant, suggesting that autocorrelation has been properly mitigated by the LDV inclusion. The LDV coefficient estimate suggests that the remaining deviation from equilibrium in the time lags that follow the immediate shock to the variables will correct at a rate of about 16% in each lag (Best 2008). I also predicted residuals from the ECM and tested them for presence of a unit root. A Levin-Lin-Chu test rejected the null that all panels have unit roots. This provides indication that the residuals are in fact stationary. Residuals with a unit root are an indication of the spurious regression problem, while stationary residuals from a model indicate either stationary or co-integrated data. While I did not run a diagnostic fixed effects model, the use of the LDV and panel corrected standard errors is regarded an acceptable fix for the “unit effects” problem (Keele and Kelly 2006). Therefore, I conclude that utilizing the ECM has addressed most of the major problems associated with using time series data in regression models.

Table 13. ECM Results for Annual Change in State Union Density (1984-2004)

Variables	Coefficient Estimates
Lag Private Density	-0.158*** (0.0250)
D. Locational Policy Activism	-0.334 (0.397)
Lag Locational Policy Activism	-0.202 (0.139)
D. Entrepreneurial Policy Activism	0.0463 (0.303)
Lag Entrepreneurial Policy Activism	-0.184** (0.0901)
D. State Policy Liberalism	0.124 (0.198)
Lag State Policy Liberalism	0.145 (0.119)
D. Democratic President	-0.122 (0.0886)
Lag Democratic President	0.106 (0.0716)
D. Percent Democrats in Congress	0.0296*** (0.00933)
Lag Percent Democrats in Congress	0.0278*** (0.00784)
D. State Unemployment Rate	1.740 (4.123)
Lag State Unemployment Rate	0.386 (2.593)
D. Gross State Product Growth	1.194* (0.665)
Lag Gross State Product Growth	1.707* (0.946)
D. Inward FDI	0.225*** (0.0684)
Lag Inward FDI	0.00928 (0.0206)
D. Nonwhite Population	-2.840 (13.11)
Lag Nonwhite Population	0.453 (0.332)
D. Manufacturing Share of GSP	1.690 (2.105)
Lag Manufacturing Share of GSP	0.0878 (0.428)
D. State Population (log)	-2.761 (3.292)
Lag State Population (log)	-0.0774** (0.0373)
D. "Right-to-Work" State	1.464*** (0.457)
Lag "Right-to-Work" State	-0.0638 (0.0639)
Initial Private Union Density (1983)	0.0979*** (0.0196)
Constant	-0.292 (0.726)
Observations	1,050
R-squared	0.155

Standard errors in parenthesis. *p<.1, **p<.05, ***p<.01

As for hypothesis testing, the model reveals some interesting findings about economic development and its impact on unionization. I hypothesized that locational development strategies would most likely have a negative impact on union density. However, the model provides little indication that locational policy activism has either a short term or long term impact, either positive or negative, on the annual change in state union density. As for *entrepreneurial policy activism*, I tentatively hypothesized that it would have a positive impact on union density due to its “quality jobs” focus. However, this hypothesis came with some reservations due to the existence of competing theories.

The model results indicate that higher levels of entrepreneurial policy actually have a negative long-term impact on union density - that is, it causes union density to fall, given the negative coefficient and $p < .05$ on the lagged independent variable. Yet entrepreneurial policy appears to have no short-term impact on union density due to the finding of no significance on the differenced form of the entrepreneurial policy variable. This lack of impact in the short-term is not an unreasonable finding, as economic development policy tends to address economic processes as a long-term strategy. Nonetheless, the negative sign on the lag suggests that entrepreneurial strategies to build “quality” jobs may in fact fail to produce union jobs. The innovation economy promoted by entrepreneurial development appears to either 1. lower overall demand for unionization due to better pay and working conditions, or 2. produce workers who are less inclined to join unions as a matter of individual preference.

Moving to *Inward FDI*, I find support for Susan Hansen’s argument that international capital mobility does not necessarily impede worker standards. At a short term basis, FDI-created jobs appear to have a positive impact on union growth, given the significance level of the differenced coefficient. It is important to remember that this variable was measured as the share

of FDI employment in the total workforce, not the flat amount of FDI jobs. Given this specification, the results suggest that foreign ownership itself, not simply the creation of additional jobs by foreign companies, initially creates opportunities for union growth, at least in the short term. I will explore this possibility at greater length in the next chapter. At the very least, I find little support that inward FDI is the main culprit for the longer-term erosion of unions, which has been argued by proponents of the neo-liberal convergence perspective.

Interestingly, “*right-to-work*” is found to be unrelated to long-term unionization levels, given the lack of significance on the lagged value. However, the differenced term yields a somewhat puzzling positive and significant finding. Again, the differenced value captures a change in the RTW status of a state. As addressed in the first chapter, there are only three states in my data set that adopted a RTW law during the period under analysis, and there were no states with a RTW law that moved to abolish it. Upon examination of each of these three cases, in the year the state adopted RTW, union density did in fact increase. However, in two of these cases – Texas and Oklahoma - union density fell in the following year. In Idaho, union density continued to grow in the year following the RTW law adoption.

These few cases appear to be idiosyncratic. It is difficult to theorize a general argument for how adoption of a RTW law would produce a short-term positive effect on private sector union density. However, it may be that in these particular cases adoption of RTW initially provoked greater worker demand for unions and subsequent labor mobilization to confront the heightened management and government attacks on employment protections and labor rights. In any case, given the results on the lagged *RTW* variable, in the long-term the independent statistical impact of RTW adoption appears to be insignificant, concurring with findings of at least one previous study (Moore 1998). My results here suggest that other economic and

employment-related policies, such as development strategies, have been more important indicators of long-run union growth potential during the late 20th century than have been “right-to-work” statutes.

As for the governmental partisanship and ideology variables, there are a few conclusive findings. *Percent of Democrats in Congress*, a national-level variable, does reveal the expected positive relationship to unionization, both in the short and long-term; while *Democrat President* appears to have no impact. Higher levels of state government liberalism do not appear to have a statistically significant influence on unionization. My findings come from a dataset including years that both pre-date and post-date significant policy devolution to the states in 1994 (See Kelly and Witko 2012 for more on this). My inclusion of “pre-discretion” years may explain why the general policy liberalism of state legislatures is not significant in my model. In those years where the national government retained control over more aspects of economic policy, which is about half of the years included in my dataset, the policy-ideology of state legislators appears to have exerted limited influence on economic outcomes.

Looking at the economic and demographic controls, only growth in *state gross product* and *state population* yield significant findings. Growth of the state economy (GSP) is positively related to union growth in both the long and short-term as expected, but it is only statistically significant at the 90% confidence level. Unemployment appears to have no significant impact, nor does manufacturing percentage of GSP. This is somewhat surprising, since the manufacturing sector has been a primary arena of unionization in the past. However, the variable is expressed as manufacturing’s share of the entire GSP, rather than the rate of growth or decline of the GSP for the sector- which may be more meaningful to union success. The size of the state population is related to negative union density growth in the long term, as expected. Non-white

proportion of the workforce was not found to be significant. Finally, the original value of union density in the first year under examination was associated with union density growth, indicating that net of other factors, union density levels in the past are associated with ability of unions to successfully organize workers in future years.

As mentioned earlier, in an error correction model the overall long term impact on the dependent variable (the enduring causal relationship that lasts over more than one time period) is actually a function of both the coefficient of the lagged independent variable and the error correction rate, which is given by the coefficient of the lagged dependent variable. The ratio of these two coefficients is the long run multiplier (LRM)- which is the total impact the independent variable has on the dependent variable over all time periods in which it endures. If both the lagged independent variable and the lagged dependent variable are highly significant, generally the LRM is as well. **Table 14** provides the LRMs of lagged independent variables with $p < .05$ in the model, as well as the coefficients of significant differenced variables. Since this is not a standard OLS linear regression model, the lagged dependent variable coefficients can not be interpreted as producing a simple unit-for-unit linear change effect, but the total long-term impact can be evaluated by calculation of the LRM. In the table I report the substantive impact of a one unit increase of X on Y. If the variable has a significant lagged dependent variable the long run multiplier effect on Y is given. If only the differenced independent variable is significant only the immediate impact of a change in X on Y is listed. Note that the coefficient on the differenced independent variable does have a unit-for-unit impact. A change in X of 1 unit produces an initial shock to Y equal to the coefficient of the differenced variable. The long-term impact of entrepreneurial policy is perhaps modest, but still statistically significant. A one unit annual increase in the entrepreneurial activism index would result in a

Table 14. Effect of Significant Independent Variables in the ECM (p<0.5)

Variable	Short Term Impact of One Unit Change in X on Y	Long Range Multiplier Impact on Y
Entrepreneurial Policy Activism	Not sig	-1.164
Percent Democrats in Congress	.0296	.1759
Inward FDI	0.225	Not sig
Log State Population	Not sig	-.4899
Right-to-Work	1.464	Not sig

long-term multiplier effect of a little over a percentage point decline in union density, occurring in portions over multiple time periods. Saiz's index ranges from 0-3. A change of one unit on Saiz's entrepreneurial index would be analogous to a state moving from the lowest level of entrepreneurial policy use to a slightly-below-average level of use relative to the other states.

Discussion

The finding that entrepreneurial policy has a significant negative long-term impact on state private sector unionization suggests that strategies which promote job growth in higher-skilled and innovation sectors do not necessarily complement labor union mobilization. A simple explanation for this is that labor mobilization is best characterized as a mostly reactive process that occurs when workers demand higher wages and working conditions *because* management refuses to grant them. However, when companies voluntarily supply higher wages to attract scarce workers – those with special skills and higher productivity potential - the need for union representation is reduced. Collective action generally occurs only when the benefits of solidarity

outweigh the costs of solidarity (Olson 1965). Highly-skilled workers, as suggested by the “skills-biased technical change” argument, may see no need for collective action to enhance their own wage potential because they exert sufficient leverage in wage bargaining individually. Companies need them, see them as assets, and are happy to accommodate their wage demands. If this is the perspective of companies promoted through entrepreneurial development strategies, unionization may simply be unnecessary to satiate higher-skilled workers in entrepreneurial-active states.

Furthermore the fact that unions could actually compress the wage spectrum between the highest and lowest paid workers may lead some higher-skilled workers to believe their wage potential actually drops if unions have power (Pontusson et al 2000, Hornstein et al 2005). They may find “working union” to be of little utility, since their work is widely regarded as valuable in today’s knowledge economy. My results suggest that the “quality jobs” that entrepreneurial policy attempts to produce are not analogous to the solid blue-collar manufacturing jobs of yesteryear. Today’s “quality jobs” may better be described as elite jobs that cultivate a particular way of thinking in the employees that work them. Entrepreneurial employees are likely to be more comfortable operating individually, rather than in unity with other workers to advance their interests. In addition to lowering the perceived need for unions, entrepreneurial policy may actually produce a different breed of workers whose individual value systems are incompatible with principles such as solidarity-building and collective mobilization, which are necessary for union growth.

On the other hand, locational policy adoption, independently, does not appear to lead to a “race to the bottom” in terms of union power. This may be because in states that pursue the lower-wage strategies characteristic of locational incentive programs, private sector unionization

was already “at the bottom” by 1984, so there was little additional loss to be experienced. The economics-based argument that increased competition from newly relocated businesses could tighten profit margins and decrease opportunity for union rent-seeking was not confirmed by the findings. Nor was there evidence to suggest that locational policies increase demand from workers for unionization due to cuts in wage and working conditions. Though there is convincing evidence that locational approaches do lower wages and erode public revenues (see Chapter 2), apparently, union growth and decline rates are affected more significantly by other factors.

FDI was shown to have no impact on long-term union decline, confirming the findings of the preliminary bivariate analysis I conducted in Chapter 3. Susan Hansen (2006) has argued that international openness is not necessarily a threat to wages and working conditions, as is often suspected. State policy choices, she contends, are what really matters. My results here complement her findings, at least in part. Granted, my measure of international economic openness is specific to inward investment, and it does not address the competitive pressures from foreign trade or outward FDI. Moreover, my dependent variable is unionization, whereas Hansen was largely concerned with globalization’s potential impact on wage rates. Still, my findings here do indicate that state choices about economic development strategy have more impact on union decline than does increased competition due to heightened levels of foreign investment.

Moreover, the significant positive short-term shock that increased shares of FDI-generated employment has on unionization casts additional doubt on the economics-based argument that increased competition limits union rent-seeking potential. Apparently, increases in employment share by foreign-owned subsidiaries exert some positive effects on union membership. This may be related to the fact that in many cases FDI shares increase due to

foreign acquisition of existing businesses. Some labor relations research suggests that a union's likelihood to successfully organize a facility increases when there is a change in operations or ownership (Bronfenbrenner and Hickey 2004).

The positive short-term impact of FDI to unionization may also occur because foreign-owned companies are in fact more amenable to unionization than are U.S. companies.

Volkswagen once again provides an interesting example. When VW moved to Chattanooga in 2008, it immediately began plans to form a “work council” structure, similar to the one operating in its home-country facilities. This cooperative management-labor approach was regarded by the company as a successful and proven business strategy. Prominent Tennessee politicians, many of them noted business leaders, were less enthusiastic about VW's tolerant union position. As noted in Chapter 2, the union election in Chattanooga was lost, despite VW and union efforts, but a subsequent “card check” agreement has cleared the way to union representation, in any case (See Chapter 2 for reference).

This however is just a single example of how foreign nationality of firms may provide opportunity for unions to grow. Moreover, it is an exceptionally nuanced case, with idiosyncratic features that may not be generalizable over the entire population of attempted union campaigns. In the following chapter I will present a “micro-level” multivariate statistical analysis of individual union election contests for recent years in order to better examine the causal relationship that foreign ownership has on the ability of unions to organize worksites. I will also analyze the impact that economic development strategy has at the micro level. The findings in this chapter suggest that only entrepreneurial policy significantly relates to union decline at the macro-level. Does this negative effect also hold when looking specifically at newly

attempted union organizing drives? The following chapter will address union outcomes from this perspective.

Chapter 5: A “Micro” Model of Unionization

In the previous chapters I analyzed the impact that economic development policy and foreign direct investment has on state level unionization outcomes from a “bigger picture” macro-economic perspective. This approach emphasized over-time change occurring in the share of unionized workers in the private sector workforce of each state. Overall, I found that while all states lost private sector union density in the long-term, cross-sectional variation existed when examining annual change in union density and basic level of union density. I found, somewhat surprisingly, that increases in entrepreneurial development policy played a role in the long term decline of unions. I also found that “right-to-work” status had no significant long term impact on unionization during the years of study. Moreover, growth in foreign direct investment had a positive impact on the annual change in macro-unionization.

Clearly much of the macro-story emphasizes the longer-term erosion of unionization that occurred from previous decades, while the marginal annual growth in unionization that occurred in some states is secondary. Yet it is critical to point out that despite the decline in unionization from a macro-perspective, attempts to organize unions in individual workplaces continue to occur even in a day and age unfavorable to labor activism. Thousands of union elections are conducted each year in the private sector labor force, with many others occurring in public sector worksites. In fiscal year 2009, 1,339 union elections occurred in private sector worksites throughout the country, and 915 of these were union victories. This added about 36,000 new union workers nationally after accounting for member losses due to union decertifications (NLRB 2009a). Clearly, when digging into the more granular-level data unionization is not just “yesterday’s” story.

Despite the gains that union organizing makes each year, union member loss from plant closures and downsizing of existing unionized facilities also occurs, meaning that nationally, union membership hardly ever experiences net annual growth (Farber and Western 2001)¹³. Thus Labor is commonly depicted as a dysfunctional, aging dinosaur when viewed from the “big picture” perspective. Nevertheless, when unionization is conceptualized as an ongoing activity (that is, labor organizing), rather than a status (membership shares secured in the labor force), it is harder to discount the relevance of unions. Labor organizing continues to be a frequent, important social and political activity.

To put this in perspective: the number of worksites with successful union elections in 2009 was approximately equivalent to the average number of new churches organized yearly in the last decade of the 20th century (915 for unions versus about 1,000 for churches) (U.S Census referenced by Francis Schaeffer Institute 2015¹⁴). Prominent scholars have shown that church participation is not as widespread as it was in the early 20th century (Putnam 2000), but nonetheless, social scientists do not deny the important role that church-going continues to have in shaping American political outcomes from the micro-level. State leaders evaluate the efficacy of economic development activities similarly - from an individual-level perspective. Most political assessment of the benefits of economic development occurs at a case-by-case level. Elected leaders frequently laud one more new factory recruited in-state or one more new innovation business launched. As discussed in Chapter 2, state leaders are hard-pressed to

¹³ Year 1999 was an exception. It actually experienced a net growth of 265,000 union members nationally (Bronfenbrenner and Hickey 2005). However, even with the growth in the number of members, union density – members as a percentage of the workforce still slipped (Hirsch and MacPherson 2001).

¹⁴ I used 1990-2000 numbers for church membership due to availability of data.

quantify the macro-economic benefits of economic development activities over the long-term, but they continue to engage in them anyway. Because of this continued engagement both politicians and political scientists alike consider economic development policy an important political factor to study.

The same is true when evaluating union outcomes. Micro-analysis is important to this study because despite union density declines in recent decades, I must account for the fact that unions continue to attempt to organize workers, and workers continue to both embrace and reject their attempts. Proper analysis of unionization outcomes requires an investigation of the dynamics of labor mobilization at the “ground-level.” What factors impact whether or not an individual unionization attempt will be successful, especially in a day and age in when broader union density growth is so difficult?

In this chapter, I focus primarily on firm nationality as a factor impacting unionization success. This is an individual-level variable, unique to each worksite. In Chapter 3 I offered some preliminary analysis suggesting that foreign ownership of firms, in addition to macro-level state FDI, presented favorable conditions for union organizing. I also discussed how the market economy type of the country from which a firm originates may theoretically impact its propensity to tolerate union organizing in its facilities abroad. In this chapter, I will conduct a full regression analysis to address these research questions.

The before mentioned research questions are largely economic in nature. I also want to account for macro-level factors in the state political system that impact unionization success at the micro level. I will control for the influence of state development policy on likelihood of a

union to successfully organize a worksite, along with state citizen and government political ideology. “Right-to-work” status will also be included as a policy-related control variable.

Data and Methods

This chapter examines the results of individual union certification elections conducted by the National Labor Relations Board (NLRB) to recognize a union as the official representative of employees. The union elections are drawn from three years - 2005, 2007, and 2009. These years were tapped because first of all, at the time I began this study 2009 was the most current year available. I added other years to increase N. Each additional case added to the set involved considerable research in coding on some variables. After coding observations for these three years the dataset included over a thousand cases, which provided sufficient N for accurate statistical testing. These years of coding (2005, 2007, 2009) offer some variation in Presidential administration (Bush versus Obama), as well as state of the national economy (years of growth and recession).

The unit of analysis for my examination is union contest. (An election is conducted by the NLRB allowing eligible employees to vote either for or against the union – hence, my use of the term “contest”). There is no time series component to this examination. I pooled observations from three years to increase the number of observations, not to evaluate the factor of interest over repeated points in time. In fact, the observations only exist at one point in time- the year when the worksite experienced the certification election. Under current U.S. law, labor unions do not have to re-certify in an election once officially recognized unless there is a specific de-certification election requested by covered workers, which does not often occur. As a result, the

observations from each year in my data set involve an entirely different set of cases. This is not longitudinal panel data.

I made several types of exclusions to the total list of NLRB elections. First of all, I excluded the non-profit sector, because my key factor of interest is nationality of corporate ownership, which is irrelevant to non-profit organizations. Many hospitals, charity agencies, and educational/arts facilities are excluded. If I found evidence that a hospital or other association was run for profit, the case was included. I also excluded any election contest which covered less than 50 workers. This was a large number of elections- in fact the majority, because most elections take place in very small bargaining units, though these elections do not necessarily cover the largest share of workers. This is common practice from prior union election research. The well-respected Bronfenbrenner study from 1999-2000, referenced in Chapter 3, utilized this approach to make the project more feasible; thus I also adopted this exception for efficiency. I also excluded multi-union elections, when several different unions were vying for representation simultaneously, and union decertification elections. Such cases are only a small number of elections, and they originate from qualitatively different circumstances than the majority of elections, such as particular episodes of worker dissatisfaction or claims of fraudulent union operations by management¹⁵. In this study, I wanted to capture the dynamics related specifically to new organizing, so these idiosyncratic cases are not included. It is also critical to point out that my dataset of election contests does not include public sector worksites. Government employees are covered by entirely separate labor laws than are private sector employees. State and local government employees are subject to individual state level labor relations laws which vary

¹⁵ See Dwarkin and Fain 1989 and Sandver and Ready 1998 for a discussion of multi-union election outcomes.

considerably (Sanes and Schmitt 2014, Valetta and Freeman 1988) rather than the NLRB certification process, which is consistent across all states. Moreover, the data on state public sector union elections is not as available as is the data from the NLRB, and my focus in this dissertation is on private sector union organizing in any case.

OLS regression is not appropriate for this analysis, because the dependent variable, union contest result, is a dichotomous nominal-level variable, expressed as either a union win or union loss. All observations for y will be either 1 or 0, meaning that y does not vary continuously (no values can be < 0 or > 1 or even between 0 and 1). If one attempted to use OLS with this dependent variable, errors would not be normally distributed and would be heteroskedastic, which would render significance testing inaccurate. Moreover, OLS assumes that y is a linear function of x , meaning that the regression coefficients generated are interpreted as producing a linear unit-for-unit change. But OLS coefficient estimates that are interpreted linearly with a dichotomous dependent variable can yield y values (the predicted probability of $y=1$) *outside* the range of 0 to 1, which is in reality impossible (Williams 2015, based on Aldrich and Nelson). Thus, OLS should not be used with a binary dependent variable.

My data requires a strategy that can produce coefficient estimates that express the predicted probability of $y=1$ (that is, a union win) as a non-linear function of x , limited to a range of 0 to 1 (0 to 100% probability). Bivariate logistic regression is a method that accomplishes this, modeling the impact of x on the probability that $y=1$ as an S-shaped curve. Differences in the x variables in the middle of the range of observations have more of an impact on the predicted probability of a union win than do differences at either the higher or lower end of the range (Williams 2015). This ensures that coefficient estimates will be less biased. It also shores up the

efficiency of the standard error estimates to increase the validity of significance testing. I should point out that my particular dataset requires additional fixes to ensure more accurate standard error estimates beyond the use of standard logistic regression. This will be discussed shortly. For now, I will move forward to describe the individual variables and measures used in the logistic regression model.

Measures

As already noted the dependent variable is *Union Win*. The NLRB election report lists all contests as a “Win” or “Loss” for the union. A win is defined as 50% plus 1 of eligible employees casting a “For” vote for the union. *Union Win* is coded 1=Win and 0=Loss. Basic descriptive statistics for this variable were provided in Chapter 3, Table 10, indicating that the dependent variable demonstrates variation. There were 980 contests, with 465 union wins, 515 union losses, and an overall union win rate of 47.4%.

The key independent variable in the micro-level analysis is *Foreign Multi-national Company (FMNC)*. I am most interested in the difference between foreign-originating firms and American-firms overall, in order to examine whether or not U.S. businesses are particularly hostile to union organizing attempts, and foreign firms in general, are less so. Therefore the baseline for comparing the *FMNC* variable is all U.S. firms. These include both wholly domestic American firms and U.S.-owned multi-national firms with production facilities abroad. Chapter 3, Table 10 lists the descriptive statistics for each of these groups. *FMNC* worksites posted higher rates of wins than did domestic firms, U.S. multinational firms, and all U.S. firms in aggregate. I expect *FMNC* to be positively related to the likelihood of a union win.

The NLRB reports do not provide the nationality of the firms where union elections take place. It only provides the name of the business site. Therefore, firm nationality had to be researched and coded for all observations. Firm nationality is actually a rather complex characteristic, and it can be difficult to ascertain. First of all, larger firms are owned by multiple shareholders, sometimes with a mix of foreign and domestic ownership. Moreover, companies are often subsidiaries of other parent firms, and although they may do business under a “domestic” firm name, they could in fact be owned wholly or partly by another U.S. or foreign-based multi-national entity. In order to determine ownership, I traced all election worksites to level of the highest parent company. Additionally, most franchise situations were coded by the parent firm nationality, if a parent could be traced by the name given on the NLRB election reports.

Several sources were used interactively to make the most accurate determination possible regarding firm ownership and nationality. First of all, I conducted an individual internet search on every contest worksite name, which was listed by firm name on the NLRB reports. Most firms identified and described their parent-firm owner, if they had one. I researched the annual reports and corporate history information provided on the company websites to determine the actual year the parent acquired the company, because firm ownership frequently changes hands. For example, if I was coding firm nationality for a union election contest that occurred in year 2005, I looked for an explicit reference on the firm website that it was in fact owned by the listed parent firm in that year. Often, if the ownership changed hands in recent years, the name of the previous controlling firm would be listed. Once I located a year-specific name of a parent company I cross-referenced this name to the Uniworld *Directory of Firms*. Uniworld provides two separate catalogs— one for multinational firms headquartered in the U.S that operate in

foreign locations, and another for foreign firms operating in the U.S. I examined both catalogues per appropriate year for a listing of the parent company name. If the parent was listed in the American guide, I coded firm nationality as U.S. multinational; if in the foreign guide, I coded it as a foreign multi-national and also recorded the specific country-of-origin. However, in most cases the business name (or parent name, if applicable) was not located in either guide. I coded these cases as U.S. domestics. Occasionally, I would attempt to code nationality for a company that had no website or provided no ownership history on its website. The first case was often due to the firm having gone out of business or having changed names. In each of these situations, I conducted a broader internet search looking in the state and city papers where the worksite was located for news stories that contained company expiration, acquisition, or creation details. In a handful of cases, about 20 or so, I could not locate any information at all about the company, and hence, I tossed these cases out of the dataset. In most cases, using the collaborative strategy of firm website research, Uniworld directory cross-check, and occasional on-line media search, I was able to make a reliable, year-specific assessment of firm nationality.

If a company self-described itself as a subsidiary of a parent firm, I assumed the parent as primary-interest owner, under the rationale that if the firm openly acknowledges the parent-firm identity, that parent firm likely had the controlling or majority interest. In the event that I was able to also locate the parent firm name in the Uniworld guide, it was given that the parent firm had a 50% plus ownership stake, as the Uniworld guide uses majority ownership as a criterion for listing the firm. Once I had coded all union contest sites as FMNCs, US MNCs, or domestic firm, I collapsed the US MNC and domestic categories together. This yielded a bivariate independent variable coded 1=Foreign-owned firm and 0=American-owned firm.

I also created dummy variables indicating the market economy of the country-of-origin of all foreign firms to use in an alternate model. This was done to pursue the hypothesis that the market economy type from which a firm originates, as developed in the Varieties of Capitalism paradigm (Hall and Soskice 2001), impacts management attitudes toward unionization. Hall and Soskice contend that firms in coordinated market economies (CMEs) have less contentious relationships with unions than do firms in liberal market economies (LMEs) due to the specific institutional capacities that market economies provide for unions.¹⁶ It is not entirely clear how management labor relations approaches in a home-country will translate to subsidiaries located abroad. Assuming that management adopts the same attitudes toward labor in its foreign worksites, foreign firms from CMEs could be expected to engage in less resistance to U.S. union organizing attempts than do foreign firms from LMEs. In my data set the *CME Firm* variable is coded 1=CME. Firms headquartered in liberal market economies outside of the U.S. are coded 1 for the variable *Foreign LME*. The omitted group (U.S. firms) serves as the base group for comparison.

I included the same Saiz indices that appeared in the macro-model as key variables indicating *entrepreneurial policy activism* and *locational policy activism* to explore the impact that economic development policy may have on micro-level union election results. Admittedly, this variable is measured only at the state level. I used the indices values for the state in which the contest worksite was located, listed on the NLRB reports, for year 2006. This is the most recent year the indices values are available, and the closest year to observations tracked in the micro-level data set. I begin by offering the same initial hypotheses about economic development

¹⁶ See Chapter 3 for a complete discussion.

policy as were offered in the macro-analysis. I expect locational policy in the state of the election contest to be negatively associated with likelihood of a union win in that contest. Entrepreneurial policy impact is harder to predict. The indication that entrepreneurial policy promotes firms that views labor as an asset, not a cost, suggests that unionization attempts may have more likelihood of success in entrepreneurial-activist states, because there may be less resistance from firms in the event that the workers desire union representation. The macro-level model results from the previous chapter revealed that entrepreneurial policy activism actually had a negative impact on mass state union density numbers. However, the factors that explain macro union density may differ in how they impact the probability that an individual worksite will vote pro-union. I tentatively begin with the hypothesis that entrepreneurial policy will enhance likelihood of a union win at the individual level of analysis.

I use other state-level control variables, some of them also used in the macro-level data set. *State government liberalism* is provided as it was in the previous chapter to control for leadership ideology of the state government. *State unemployment rate* appears to control for economic circumstances, as the observations are taken from years both preceding and during the Great Recession. I include the *right-to-work* status of the state where the contest occurs because the prohibition against union shops in RTW states may impair unions' ability to convince workers that union membership will actually give them more power. I include *state union density* in this model as an independent variable, because the ability of unions to secure members in the greater state economy could also impact workers' perceptions of the power of unions. Additionally, I included *industry union density* (measured at the national level) for the NAIC industry sector code of the worksite listed on the NLRB reports in the year of the union contest. Union organizing may be more successful in industries such as utilities and transport/

warehousing that have higher levels of unionization than other industry sectors, such as finance and food service.

Ideally, I would include an individual level variable in this model that accounts for the ideological attitudes of those workers directly eligible to vote about unionism. If workers making a decision about representation are conservative and/or have a negative personal assessment of the labor movement overall, they would be less likely to join unions. Though in this model I emphasize the level of hostility of firm management toward unionization as the primary factor, the individual ideology of workers themselves also must be accounted for. One can not assume that if the firm refrains from union retaliation, all workers will individually prefer union representation. Alas, there is no individual level data available indicating the personal opinions that workers in contest worksites have toward labor unionism. I can however, provide a state-level proxy for worker support for unionism by including Berry's citizen ideology index in the model. This measure was developed as a companion to the Berry et al government liberalism scores used in the last chapter. The *citizen liberalism* measure assesses the level of citizen left-ideology for each U.S. state by weighting Congressional ideology scores (partly based on labor union policy coding) along with the partisan voting percentages of elections in that state. I use this measure for the years 2005, 2007, and 2009 corresponding to the state where the contest occurs to proxy for workers' union sentiment.

I include two other control variables measured at the individual level: *union power* and *bargaining unit size*. *Union power* is a measure of the level of resources available to the union organization that is attempting to organize the worksite. Unions vary in resource levels, quality of staffing, and their reputation of effectiveness. Small, independent unions unaffiliated with

national and international unions are less likely to have the money, staff, and technical skills to carry out a successful organizing attempts. Big international unions, such as the Teamsters or Service Employee International Union have more assets available to conduct longer, more strenuous organizing campaigns. Union power is measured as the total assets (in \$ millions) reported by the highest-level of the union (that is, at the international or national level) as listed on the Office of Labor and Management (OLMS) report, a yearly publication of the U.S. Department of Labor. All U.S. unions and labor associations of sufficient size are required to report their financial assets each year to OLM. I use the international level of the union organization to measure assets because much of the organizing activities of unions is directly provided or heavily supplemented by the highest level of the union. Local union branches affiliated with large international unions have access to the skills and resources that their national-level unions offer. Union power is predicted to have a positive impact on unionization.

Finally, I included the log of the *bargaining unit size*, as listed on the NLRB election reports, to account for the lower probability of success for unions in large worksites. The NLRB pre-determines the number of employees eligible to vote in a union contest, known as a bargaining unit, prior to the election being held. It is likely more difficult to successfully organize a large group of workers, rather than a relatively small one; thus as the bargaining unit size increases I expect to find a negative association to union wins.

The accompanying **Table 15** supplies a summary of all variables used in the model, along with measure specification, and the data source.

Table 15. Variables Used in the Logistic Regression Model

Variable	Measure Specification	Data Source
Dependent Variable		
Union Win	Binary variable indicating if union won the NLRB certification election contest. If > 50% of the employees voting indicate “For”, union wins. (Win=1; Loss=0).	National Labor Relations Board (NLRB) Monthly Election Reports for 2005, 2007, 2009. Accessed at https://www.nlr.gov/election-reports
Key Independent Variables		
Entrepreneurial Policy Intensity	Interval level index based on coding of state economic development program attributes ranging from approximately 0 to 3 for year 2006. This is the closest available year corresponding to the union election contests analyzed.	Methodology for constructing the index is presented in Saiz 2001. Attributes coding based on data gathered by Miles Friedman and Partners LLC in 2006.
Locational Policy Intensity	Interval level index based on coding of state economic development program attributes ranging from approximately 0 to 3 for year 2006. This is the closest available year corresponding to the union election contests analyzed.	Methodology for constructing the index is presented in Saiz 2001. Attributes coding based on data gathered by Miles Friedman and Partners LLC in 2006.
Foreign Multi-national Firm	Binary variable indicating if union election worksite was a subsidiary of a foreign-owned corporation. (1=Yes; 0=No. If 0 the worksite is either a domestic U.S. firm or is owned by a U.S multi-national firm.) See Table in Appendix for full description of how firm nationality was determined.	NLRB Election Reports, individual firm websites and Uni-world Business Publications, Inc. <i>Directory of American Firms Operating in Foreign Countries</i> Years 2005, 2007, 2009 (18 th -20 th editions) and <i>Directory of Foreign Firms Operating in the United States</i> Years 2004, 2006, 2008 (12 th -14 th editions). Media stories on Internet for selected cases.
Control Variables		
“Right-to-Work” State	RTW status of state where contest worksite is located. “Right to work” state= 1. Union shops allowed= 0.	Department of Labor, National Right to Work Committee. Years 2005, 2007, 2009.

Table 15 Continued

Variable	Measure Specification	Data Source
State Citizen Liberalism	Interval index based on ideological scores of state's Congressional representatives according to ratings by AFL-CIO and Americans for Democratic Action and vote distribution of citizens in Congressional races. High levels of this measure indicate "left" citizen ideology.	Berry et al 1998, and updates. Years 2005, 2007, 2009.
State Government Liberalism	Ideological orientation of state government in the state where contest worksite is located. Interval measure based on ideological scores of state's Congressional representatives, weighted by partisan control of the state legislature. High levels of this measure indicate "Left" state governments.	Berry et al 1998, and updates. Years 2005, 2007, 2009.
State Unemployment Rate	Annual average unemployment rate in state where the contest worksite is located. Expressed as a percent.	Bureau of Labor Statistics. Years 2005, 2007, 2009.
State Union Density	Annual average union density (all sectors) in the state where the contest worksite is located. Expressed as a percent.	Industry sector is listed on NLRB reports (NAIC Code). Union density numbers from Bureau of Labor Statistics. Years 2005, 2007, 2009.
Industry Union Density	Annual average union density of the industry sector corresponding to the work performed in the contest worksite. Expressed as a percent.	Industry sector is listed on NLRB reports (NAIC Code). Union density numbers from Bureau of Labor Statistics. Years 2005, 2007, 2009.
Union Power	The total assets in millions of dollars of the inter(national) union attempting certification in the election contest.	The union name is identified on the NLRB reports. Assets for union (international level) comes from Department of Labor's Office of Labor and Management Services public disclosure site (http://www.dol.gov/olms/). Years 2005, 2007, 2009.
Bargaining Unit Size (Log)	Number of employees in the bargaining unit experiencing the election contest, logged. A bargaining unit is defined by the NLRB prior to the union election as the total number of employees eligible to vote in the election.	NLRB Election Reports 2005, 2007, 2009.

Analysis and Results

By implementing a logistic regression estimation methodology I aim to address concerns about the efficiency of the standard errors given the non-normal, heteroskedastic residuals as the result of using a binary dependent variable. But the selection of cases in this dataset prompts additional concerns about the independence of observations assumption. First of all, some of the independent variables used in my model are state-level measures, such as the development policy and liberalism variables, rather than individual-level. Therefore the errors of observations per each *state* will be correlated, and the standard errors estimated could be inefficient. There is also a concern due to the presence of multiple observations from the same *companies*. Under NLRB organizing rules, the individual worksites of companies, rather than the entire workforce of the company, are subject to certification. Unions typically organize bargaining units one work site at a time rather than across the firm's entire national workforce. This is certainly the case in my dataset. One entity known as First Student, a school-bus contractor, experienced a very large, nation-wide union campaign lead by multiple transport unions. First Student had about 90 individual worksites experiencing their own separate union elections. While First Student appeared more often than any other firm in my data set, additional companies supplied multiple union contest observations, including Durham School Services, First Transit, Waste Management, and Wackenhut.¹⁷

A widely-used approach to deal with the violation of independence assumption that occurs when there are multiple observations supplied from the same unit is to employ clustered standard errors (Zorn 2006). This strategy simply estimates adjusted standard error calculations

¹⁷ A complete list of companies experiencing election contests in the dataset can be found in **Appendix 1**.

to mitigate Type 2 error. Hierarchical modeling strategies, handy for estimating models that have variables measured at multiple levels of analysis, have also come into vogue recently (Gelman and Hill 2006), but when used with logistic regression this is a tedious approach which complicates coefficient interpretation. I choose to use the clustered standard error strategy in this analysis due to ease and straight-forwardness.

I have two units –state and firm- that need to be accounted for in the estimation of the robust (clustered) standard errors. In a nested situation, an analyst simply needs to cluster on the highest common level where multiple observations occur.¹⁸ However, the data situation here is not nested. Clustering the standard errors on the state unit does nest within a common unit all instances of multiple observations occurring in the economic policy variables, the right-to-work variable, the government and citizen ideology variables, and the state union density variable. However, the multiple observations from individual firms are not nested within each state. Some of the bigger organizing drives listed in the dataset include union election worksites spread throughout the nation. FirstGroup, for instance experienced union election contests in about 28 states.

To address the need for clustered standard errors on two units – state and firm – I use a calculation methodology developed by economists Cameron, Gelbach, and Miller (2006). Their estimation strategy for non-nested multi-way clustering is applicable not only to OLS, but also maximum-likelihood modeling such as logit and probit. I use Guan and Peterson’s logit2 program, an ado file developed for use with the STATA software package, to estimate the logit

¹⁸ For instance, if a data set contained multiple observations per state and per county, clustering would only be necessary on the state unit, because all observations for a given county are “nested” within the same state.

regression model. Guan and Peterson first applied their ado file to models which clustered on time and firm units, but Cameron et al provide examples of how two-way clustering is appropriate in a cross-sectional, non-longitudinal design (such as my own). The researchers confirmed that use of more robust standard errors improved estimation in their models with a Monte Carlo analysis (Cameron et al 2006).

I conducted an additional diagnostic to assist with model estimation. Since I use Berry's state government liberalism and citizen liberalism scores as independent variables in the same model, I was moderately concerned that multicollinearity might present an issue. Berry et al. did use similar, though not identical data to estimate these measures, and moreover, high correlation between the ideological policy scores of legislators and the citizens that elect them seems plausible, simply on its face. I estimate Variance Inflation Factor (VIF) and tolerance scores specific to logistic modeling strategies for all variables as a check. Scores generated did not indicate a high degree of multicollinearity between variables. The VIF generally indicates how much of the inflation of a variable's standard error could be caused by collinearity. A base-line of 1 indicates the complete absence of inflation due to collinearity. VIF readings produced were less than 3 for all variables, with *citizen liberalism* and *right-to-work* showing the highest readings. *State government ideology* had a VIF of only 1.74. Tolerance, which indicates how much collinearity that a regression can tolerate, ranged from .34 and .38 for *RTW* and *citizen ideology*, respectively, to .97 for *union power*. UCLA's Institute for Digital Research and Education suggests that a tolerance $<.1$ and $VIF > 10$ is the "red flag" threshold. Using this as a guide, I conclude that multicollinearity does not pose a serious concern.

The results of the logistic regression analysis are provided in **Table 16**. In the first column I estimate my primary model, which emphasizes the impact of foreign firm nationality as the key independent variable. In the second column I present a supplemental model that considers the impact of the market economy type, as developed by Hall and Soskice, that substitutes variables for *CME Firm* and *Foreign LME Firm* in place of *Foreign Multi-national firm*.

Turning to the first model, *Foreign Multi-national Firm* is positive as expected, indicating that foreign nationality is associated with greater likelihood of a union contest win. Entrepreneurial policy activism is also positive, suggesting that at the individual level of analysis, this economic development strategy is associated with favorable opportunities for labor organization, in contrast to the results from the macro-model in the earlier chapter. However, in the case of both foreign nationality and entrepreneurial policy the level of significance only meets the 90% confidence level. This offers marginal support for my original hypotheses for each variable. Locational policy is signed negative, as expected, but it is not significant at the 90% confidence level; thus it appears to have little impact on the likelihood that union contests are wins for labor.

A number of control variables were associated with greater likelihood of union wins. State unemployment rate had a positive association with union wins, which is perhaps counter to the conventional wisdom that unemployment creates negative conditions for union organizing. However, if workers experience greater workloads or wage and benefits cuts due to company concerns over labor costs, which is often the case during times of layoff and lean staffing, this

Table 16. Logistic Regression Results for Union Win

<i>Variable</i>	<i>Model 1</i>	<i>Model 2</i>
Foreign Multinational Firm	0.5543* (0.2943)	--
CME Firm	--	-0.1753 (0.3947)
Foreign LME Firm	--	.7701** (0.3110)
Entrepreneurial Policy Activism	0.3441* (0.2015)	0.3546* (0.2068)
Locational Policy Activism	-0.0035 (0.3131)	0.0246 (0.3214)
“Right-to-Work” State	-0.0769 (0.3617)	-0.0804 (0.3740)
State Union Density	-0.0246 (0.0184)	-0.0259 (0.0186)
State Unemployment Rate	0.0955*** (0.0295)	0.0883*** (0.0274)
Industry Union Density	0.0068 (0.0119)	0.0022 (0.0116)
Citizen Liberalism	0.0198* (0.0102)	0.0186* (0.0101)
State Government Liberalism	-0.0068* (0.0036)	-0.0062* (0.0037)
Union Power	0.0004* (0.0002)	0.0004** (0.0002)
Bargaining Unit Size (Log)	-0.180** (0.0888)	-0.1771* (0.0909)
Constant	-1.211 (0.778)	-1.131 (0.789)
Observations	980	980
Wald chi2	33.32***	39.88***

Clustered standard errors in parentheses.

***** p<0.01, ** p<0.05, * p<0.1**

may prompt more demand for workers to organize. Some research shows that unionization is higher in regions that experience the most unemployment, because workers view union membership as a form of insurance against arbitrary job loss in particularly tight labor markets (Booth 1984, Blanchflower et. al. 1990). The result may also be an indication of a more general, endogenous association of unionism with higher sustained levels of unemployment. Economists argue that unionization increases unemployment because rents extracted by labor unions allow less surplus available to firms for expansion of their labor force, and there are few individual incentives for laid-off union workers to shift to new employment in a non-unionized environment (Alvarez and Shimer 2014, Nickel and Layard 1999, Summers 1986).

Citizen left ideology is associated in the model with positive impact on union wins, which is expected, though at only the 90% confidence. The association between left ideology among citizens (a proxy for direct worker attitudes toward unionism in principle) has a straightforward impact on worker preferences to personally support organization of their own workplaces. *Union power* is also positively associated with likelihood of a union win, indicating that union organizations with more assets and resources are better equipped to wage successful union organizing campaigns.

State government liberalism appeared to have a negative association to the likelihood of union wins, which appears counter-intuitive. It is sensible to predict that union election contests in states with left-leaning government leadership would offer more favorable political conditions for labor organization, assuming that liberal leaders are more sympathetic to Labor. Still, many of the indicators associated more directly with pro-labor sentiment in elected officials were already controlled for in the model through the *citizen ideology*, *right-to-work*, and economic

development variables. Additional “left” policy preferences of elected leaders captured by the state government liberalism variable include leaders’ support for environmentalism, pro-immigration, and civil liberties policies which do not always clearly align with pro-unionism. This may explain the negative impact of heightened liberalism of government leaders. One other variable, *bargaining unit size*, showed a negative relationship to likelihood of a union victory. This was predicted since larger groups of employees face increased barriers to collective action (more “free-riding”, more coordination and solidarity-building challenges) than do small groups (Olson 1965).

Neither density variable – state union density or industry union density- had significant impact in the model. Nor did “right-to-work”. Apparently, the individual assessments that workers make to join a union are not determined heavily by their evaluation of the success of unions more broadly in the overall labor force. Worker decision-preferences are more focused on the potential that unionism has to improve their individual workplaces, rather than its power status in the greater macro-economy or political environment.

It was noted earlier that logistic regression coefficients can not be interpreted as a straightforward linear change in y as a result of a change in x . The coefficient on each independent variable in a logistic model indicates that a one unit increase in x produces a coefficient unit increase in the *log-odds* of y , which is difficult to conceptualize. The standard approach to interpreting the substantive impact of logistic regression coefficients is to compute the predicted probability of $y=1$ (a union win) at different values of an independent variable, holding the other variables constant at their means (Long and Freeze 2005). **Table 17** shows predicted probabilities for the *FMNC* and *Entrepreneurial Policy* variables generated using Scott

Table 17. Predicted Probability of Union Win for Key Independent Variables (Model 1)

Variable at Different Values	Predicted Probability
Foreign Multi-national Firm	
American Firm (FMNC=0)	.444
Foreign Firm (FMNC=1)	.581
Entrepreneurial Policy Activism	
At minimum value (.67)	.370
At mean value (1.9)	.473
At max value (3.0)	.567
* Predicted probabilities were generated using the spost13.ado program for STATA. See Long, J. Scott and Jeremy Freese 2005.	

Long's `spost13` program for Stata. The probability of a union win in a foreign firm is 58%, versus only 44% in an American-owned firm, holding the other variables at their means. The probability of a union win increases from about 37% at the lowest value generated for entrepreneurialism, to about 47% at the average value, to about 57% at the maximum value, when holding the other variables at their means.

Returning to **Table 16**, in the second model I focus on the impact of the market economy from which foreign firms' originate, rather than foreign nationality more generally. The *CME* variable indicates a negatively signed, but insignificant coefficient estimate, offering no support for the prediction that foreign firms headquartered in countries with coordinated market economies (such as Germany, Sweden, and Denmark) offer more favorable unionization targets. Though I highlighted the Chattanooga Volkswagen organizing drive several times in this dissertation as an illustration of a CME firm tolerant to unionization, this does not hold generally for the CME firms in my dataset. The organizing attempt at VW is probably best analyzed as a special case, not generalizable to the wider population of union elections. Interestingly, the *Foreign LME* variable in my model does have a significant positive impact on likelihood of unionization. It is important to remember that this variable is being compared against a baseline of U.S.- owned firms, which was the omitted group variable. The significant result on *Foreign LME* is likely due to the high rate of success in the British-owned FirstGroup school bus organizing drive. This drive supplied nearly 100 observations in the data set, therefore the U.K. as a country-of-origin is heavily represented. However, these results do not provide clear evidence that LME market economy type of a firm favorably impacts likelihood of a union win, because the U.S. is also a liberal market economy, and I found in Model One that union victories are less probable in U.S. owned firms.

Discussion

The results of the regression analysis suggest that foreign-ownership of a company worksite experiencing a union election increases likelihood of a union victory. It is interesting that among foreign firms, companies from liberal market economies, which generally have combative labor relations approaches similar to the American system, demonstrated higher likelihood of union victories. The failure to find support for the corresponding hypothesis - that firms from “pro-union” coordinated market economies are more likely to unionize - casts some doubt on the application of the varieties-of-capitalism (VoC) paradigm to the prediction of unionization outcomes. Varieties of capitalism does illustrate how different national political systems vary in their ability to view unions as constructive institutions within the overall business environment. This is supported by my findings that American firms are significantly less likely to unionize than are foreign firm. But VoC also emphasizes the similarities between clusters of countries. Firms from foreign Liberal Market Economies, such as the United Kingdom and Canada, would be expected to display contentious labor-management dynamics similar to U.S. firms according to VoC. Yet my analysis suggests that U.S. firms show heightened levels of union-avoidance when compared broadly to all foreign firms, especially those originating from other liberal market economies.

My results support the view that union opposition is best attributed to American exceptionalism and a U.S. business model that is particularly at odds with unionization (Kelly, Witko, and Young 2013, Logan 2006). My individual level analysis indicates that increased entry of foreign firms into the U.S. economy provides unions with more, rather than less favorable targets for organizing. This is consistent with the earlier findings in the macro-level time series regression showing that FDI shares of employment had a short-term positive impact

on private union density growth. The confirmation of a positive relationship at both levels of analysis provides considerable support that inward foreign investment does not run counter to American labor movement goals.

A more puzzling finding is that entrepreneurial development policy had a positive impact on unionization outcomes in my micro-level analysis, but a negative impact on long-term unionization at the macro-level. Entrepreneurial policy seems to affect overall demand for unionization among workers differently than it affects company behavior in response to individual unionization attempts. Growth of a “wealth economy” where workers enjoy higher wages and better benefits is likely to reduce the perceived need for unions because the most important functions of unions involve the protection of worker wages, working conditions, and job security (Bennett and Kaufman 2011). Entrepreneurial policy attempts to produce an economy where the market itself generates higher wage potential and job quality, essentially offering a substitute for the organizational advocacy provided by unions.

Still, at the same time entrepreneurial policy encourages creation of firms that value labor as an asset, which is important in the particular cases when workers do desire collective representation. The population of labor organizing campaigns manifests a certain “selection out” effect prior to a union election actually being conducted. Union organizing will actively occur in those worksites where conditions for unionization success is best. The most successful unions are strategic in the campaigns they choose to pursue (Bronfenbrenner and Hickey 2004), and unions are averse to taking on a campaign if there is little indication that it can succeed (Farber 2001, referenced in Farber and Western 2001). Therefore, NLRB election contests are more likely to materialize in situations where there is both a unique desire among the employees for organizing

(micro-level demand for unionization) AND the overall legal and business environment presents favorable conditions for victory. In the relatively improbable event that workers actually demand unionization, unions will succeed when the policy environment presents them with the best odds of success. Entrepreneurial development lures and promotes firms that are more likely to accommodate employee demands. When employees in an entrepreneurial state do demand unionization, they are less likely to encounter push-back from management and could benefit from a more favorable legal environment for organizing.

Understanding that entrepreneurial policy impacts unionization at the macro and micro levels differently helps to explain some of the anecdotal evidence discussed in Chapter 2 that suggests entrepreneurial policy and unionization are compatible, both in principle and at times in practice. Though entrepreneurialism does not apparently incite mass demand for unions in the labor force, it does promote more cooperative relationships between labor and management. Since entrepreneurial development programs sometimes condition eligibility on firms recognizing worker protections and collaborating with unions (see the Labor Relations Provisions table in Chapter 2), it discourages the “union-busting” activities typical of most U.S.-owned companies during episodes of labor organizing. All of this indicates that entrepreneurship is associated with higher odds of successful unionization, when analyzed at the individual level of analysis.

“Right-to-work” status showed no significant impact in these micro-level models, similar to the finding in the macro-model regarding its impact on long-term union density. This may be because the motivation to vote in support of union representation is not equivalent to a willingness to pay union dues. A worker could vote for union representation, and then

subsequently “free-ride” and opt out of dues payment once a union is recognized by the NLRB. Such a scenario is plausible and even predictable as a means of individual utility maximization. It increases benefits to an individual worker due to protections s/he will receive under a union contract, while avoiding the dues-extraction costs of union membership. RTW’s impact at the micro level is probably most salient in its reduction of the number of attempted union elections. Open shop environments offer less potential returns to labor unions even in the event of winning a union election. Previous research has shown that union organizing effort is reduced in states that prohibit union security clauses (Ellwood and Fine 1987). The descriptive comparison in Chapter 2 and 3 also showed that organizing attempts were fewer in RTW states such as Tennessee and South Carolina than in union-shop Missouri. Nonetheless, my findings in Model 2 indicate that likelihood of union success in the election contests that do occur is not significantly impacted by state RTW status, concurring with the findings of at least one other individual-level analysis (Martin 2008).

Conclusion

This chapter reaffirms the discoveries of the previous chapter that the impact of right-to-work as a policy determinate of unionization is overemphasized. Entrepreneurial economic development strategy has a more notable impact on changes in state union density as well as union election results, though its impact on each is qualitatively different. Entrepreneurial policy depresses the union share of the private sector workforce over time, but it actually enhances chances of union victory in an NLRB election. Locational economic development strategies do not appear to influence either the union density of a state or the likelihood that union organizing

attempts will succeed. Foreign investment and firm ownership had a consistent positive impact on unionization at both the macro and micro levels, indicating that at least one aspect of international economic openness – increased entry of foreign companies into the country - does not hinder labor movement power.

The next chapter will offer an analysis of how economic development policy and unionization impacts the quality and equity of state economies. I will shift focus from unionization as the dependent variable to examine how it impacts state level income inequality. I will also consider economic development policy as a factor affecting inequality directly, as well as how it conditions the relationship between unionization and inequality. This will push my research toward an assessment of both the empirical and normative implications of development policy and its impact on labor movement goals.

Chapter 6: Unionization, Income Inequality, and State Economic Development Strategy

*Please note: a version of this chapter is currently being reviewed for publication in **State and Local Government Review**. Some sections of text in this chapter bear close resemblance to the manuscript sent to SLGR.*

Previous chapters have noted how policy devolution to state governments in a federalist system, coupled with the growing openness of the U.S. economy has peaked scholarly interest in state programs to promote economic development. I discussed the body of research that analyzes state economic development impact on job growth and inward investment (Brace 1993, Atkinson and Andes 2010, Saiz 2001a) and the lack of conclusive evidence that development policies deliver net employment gains. Chapter 2 noted the relationship of development strategy to public sector spending, indicating that locational strategy activism adversely impacted the availability of revenues for education and social programs (Burkdull and Tuman 1999, Hansen 2001). I highlighted the “race to the bottom” premise, and the evidence showing that development policy may encourage competitive bidding for investment among rival states at the expense of regulatory protections (Saiz 2001b, Hanson 1993, Peters and Fisher 2004). Most of the original empirical analysis in this dissertation focuses on the effect of economic development and foreign inward investment on unionization outcomes in the private sector, revealing that entrepreneurial policy reduces union density but increases likelihood of union victory in certification elections, while foreign investment benefits both union density growth and union contest wins. In this chapter, I shift focus away from unionization as the outcome variable to consider how it, along with economic development programs, influence income distribution in the state economies.

Even though scholarship on economic development is prolific, there is less attention given to the distributional consequences of these policies. Laura Langer's 2001 article is one of the few economic development studies that analyzes income inequality as the dependent variable. She finds that demand-oriented strategies aimed at producing higher skilled jobs and emerging industry sectors decrease income inequality, while more traditional supply-side strategies that attract outside investment by cutting factor costs increase inequality. She also finds higher overall levels of economic policy activism to be associated with increased inequality.

There are several reasons to revisit her findings. First, Langer's study was a policy-intensive investigation, but it did not include other political variables such as ideological or partisan composition of government, nor did it include unionization as a key control. The inclusion of these classic "power resources" variables is essential to estimate a fuller model of the factors that influence income distribution. Secondly, since Langer's pioneering study new measures have been developed to more comprehensively track variation in economic development strategy (Saiz 2001a) and market-based inequality (Kelly and Witko 2012), which can help refine model estimation. Third, Langer's dataset ended in the early nineties, just before the Republican take-over of Congress in 1994. The period following 1994 is generally regarded as the time when the federal government accelerated the delegation of traditional policy roles to the states, which also included critical aspects of economic development. State development policies were likely to have even more impact on economic outcomes post-1994 (Kelly and Witko 2012); thus including data from these years in an updated examination is advantageous.

An important way to analyze the state-level variation in income inequality levels is to consider how political resources of social classes –that is, partisanship and ideology in government and unionization in the labor force - may impact redistributive outcomes. Recent research on this subject emphasizes political and governmental institutional factors, such as union density and left liberalism of state legislators, as drivers of distributional consequences (Kelly & Witko 2012). However, policy variables are still important to the examination, as specific economic development programs are likely to be the mechanisms through which politicians affect economic outcomes. Policy features are also likely to be influenced by the level of participation of key organized interests, such as labor unions, who could lobby allies in government to create policy that secures benefits for their members. Including unionization and state government ideology along-side important policy factors will produce a more comprehensive model to explain distributional differences across states.

This chapter works from the premise that both development policy and power resources matter. First, it revisits Langer’s original research question: do various types of economic development policies increase or decrease inequality? My results indicate that contrary to Langer’s findings, entrepreneurial strategies to development increase inequality after controlling for unionization and left governments, while locational strategies have no significant impact. I suggest that this is due to a “skills premium” effect that is exacerbated by entrepreneurial development approaches. I find a significant independent effect that private sector unionization has in the long-term and left government has in the short-term in decreasing inequality.

Secondly, I consider how entrepreneurial development policy conditions the ability of unionization to effectively abate inequality. I have already shown how entrepreneurialism

decreases macro-level private union density over time, a finding which matters to proponents of unionization in particular. But even for scholars disinterested in the decline of labor unions as organizations, there is a bigger associated issue regarding the *role* of unions in the economic system. Does development policy confound unions' abilities to deliver an economy of widely-shared wealth? I find that entrepreneurialism interacts with unionization to hinder its equity-inducing capacity. Entrepreneurialism undermines unions as a power resource for lower-income and working-class citizens.

Economic Development Policy Variation and Distributional Consequences

Langer's study of state level inequality levels operationalized its major independent variables in multiple ways. First, it questioned if overall economic policy activism in a state was associated with rising or declining income equity. Over the last three decades states have proactively pursued business relocations and new capital growth through a wide variety of government-sponsored programs, ranging from tax incentives to job training to public-private venture capital firms (Brace 2002, Gray and Lowery 1990, Eisinger 1990, Peterson 1995). The priority that state governments placed on implementing development policy pre-dated the age of devolution as competitive pressures between states to lure businesses accelerated during the eighties, and it continued to increase at a fast clip after the Republican "contract with America" in 1994 (Saiz and Clarke 2012). However, some states have been more active in strategic development of their economies than others. Langer found that higher levels of economic policy activism were associated with rising levels of income inequality in her analysis. This suggests that over all, state development efforts place low priority on the equity outcomes of job growth and increased investment and focus more on sheer number of jobs or investment dollars secured.

Even though she concluded that economic development activism in general is related to higher inequality levels, Langer's main research question addressed the difference in outcomes from use of various types of development policy. Recognizing that economic development policy tools are abundant (NASDA 2002, Friedman and Associates 2006), and that states engage in a wide and varied mix of these programs, she contended that type of development strategy utilized could result in divergent distributional consequences. A number of scholars have compiled economic development typologies, categorizing strategies according to their approach to labor relations, capital accumulation, regulatory enforcement, and degree of state interventionism (Gray and Lowry 1990, Leicht and Jenkins 1994, Grant et. al. 1995, Saiz 2001, Langer 2001). Langer's approach to classifying development policy draws mostly on Peter Eisinger's contrast of supply-side and demand-side strategies during the early to late eighties (1989), as do the Saiz measures used in previous chapters.

To review, supply-side policies advocate maintaining a low cost business environment, usually by promoting a base of cheap, available labor with reduced tax burdens (Eisinger 1989). Job credit tax exemptions, subsidized worker training, state sponsored loan guarantees for construction, and accelerated depreciation of industrial machinery are examples of incentives provided according to this low-cost, "business friendly" strategy (Schweke, Rose, and Damson 1994). On the other hand, demand-side policies prioritize new capital growth, rather than capital relocation as the key to economic development. These strategies focus on creating a wealth-generating economy often by state support of high tech, finance, "green" energy, or communications industries. Public-private venture capital funding, business incubation through state higher education institutes, and research and development partnerships are features used in the entrepreneurial, demand-oriented approach (Langer 2001).

Langer hypothesized that the quality jobs focus of the entrepreneurial approach, with its goal of overall wealth accumulation in the economy to fuel demand, would have a negative impact on inequality levels (that is, it would lower inequality). Conversely, she predicted that supply-side programs would increase inequality, due to their promotion of lower wages for workers and the subsequent reduction of public revenues available for education and social programs. The results of her time-series, cross sectional regression analysis supported these hypotheses, causing her to conclude that the propensity of a state to use demand-side strategies (entrepreneurial) over supply-side strategies (locational) was associated with reduced inequality over the years 1976-1994.

Since Langer's emphasis was on the policy impact of development strategy to determine distributional outcomes, she did not include other standard political variables in her analysis, namely ideology or partisanship of state government leaders. While she did include some national policy-related variables, such as spending on social programs, Langer opted to leave out national government partisanship and ideology variables. Nor did she include unionization levels in her analysis. Her examination is to date one of the few to explicitly examine reasons for variation in state levels of inequality with a development policy-centric focus.

Power Resources Theory, Unionization, and Inequality

While American politics researchers, including those interested in federalism and state-level government, often emphasize policy impacts when formulating research questions about socio-economic outcomes, literature from the comparative politics sub-field frequently utilizes sociological perspectives. Scholars of the "power resources" school view economic outcomes

from a class-analytic perspective, contending that they are a function of the access that different social classes have to mobilize for political and economic change. Left governments, voted in by working and middle class citizens, are the key political factor that lower classes access for reducing economic inequality. Moreover, unions, which organize workers into a cohesive political force, are needed for strong Left governments to be elected. Unions also give workers a direct route to influencing economic conditions in the market through wage and benefits bargaining. Thus, unions and left-leaning parties are essential factors to consider in understanding variation in wage inequality (Korpi 1989, Huber, Ragin, and Stephens 1993; Miles and Quadagno 2002).

This examination focuses primarily on the role of unionization in influencing state levels of inequality, while also controlling for left governments. Beyond the general association that the power resources theory (PRT) draws between unionization and income equality, a more detailed discussion of the mechanics of this relationship is in order. Unions' impact on the income distribution can be conceptualized through two distinct processes – the political route and the labor market route. First of all, as PRT emphasizes, unions politically lobby for social and economic policy that has broad impact on inequality levels in state macro-labor markets. Unions are sometimes disparaged as “monopolistic” and “special interest” organizations (Brugiavini et al 2001), but history reveals that the policy agenda pushed by unions has wide effects throughout the entire labor force. Unions have been the major organizational interests lobbying for national and state minimum wage floors (Freeman and Medoff 1984), Davis-Bacon prevailing wage requirements (Whittaker 2007), and over-time pay protections (AFL-CIO 2015). Such laws help union members, but more importantly they push up the wage floor for workers in general, regardless of union membership. Through their lobbying efforts, unions essentially pay the

collective action costs needed to accomplish economy-wide pay increases for the low-wage workforce, which is mostly non-union and politically unorganized (Olsen 1965). Unions and the left parties they politically support are also key actors in passing non-transfer economic policies that provide for industrial safety regulations and public education producing healthier, better-informed workers. Such programs arguably have the effect of raising the wage-earning potential of lower-income citizens (Kelly 2005). American unions pushed for the passage of direct redistributive policies, such as Social Security, the Affordable Health Care Act, and welfare programs, which provide resources to union and non-union workers, as well as people outside the labor force. Analysts acknowledge the tension apparent in the broader social “welfare-enhancing” functions of unions and the more narrow “rent-seeking activities” of their members (Brugiavini et al 2001). Nonetheless, Labor’s political mobilization is understood to be an essential condition for the growth of welfare states and broadly redistributive policies (Huber, Ragin, and Stephens 1993). Unions work to decrease inequality in the overall labor force through their political efforts.

The other route by which unions decrease inequality is directly through the market. It is generally accepted that an important effect of collective bargaining is the compression of the wage spectrum observed in the labor force. Numerous studies empirically support this view finding that historically, union contract bargaining benefits the wage position of lower-skilled, lower-educated workers more than higher-skilled workers. Since unions historically raise the wages of workers near the bottom of the income distribution into the middle-income strata, researchers conclude that unionization mitigates wage inequalities (Card 2001, DiNardo and Fortin et al 1997, Hirsch and Schumacher 1998). Unionization does cause differences in average wage rates between union and non-union workers in comparable occupations because union jobs

generally pay premium wages over non-union ones. However, positive spill-over effects also elevate non-union wage rates when institutional protections for unions are strong (OECD 2012). Mishel (2012) found that non-union employers in industries with substantial union densities often pay employees higher wage rates than they would absent the presence of unions, both to stave off the threat of organizing drives and to offer competitive wages to attract workers. Another study found that the upward pressures exerted by unions on total non-union wages were “almost as large as their impact on total union wages,” even though union workers still enjoy a wage premium over non-union workers (Walters and Mishel 2003). Moreover, multiple studies trace the rise in male wage-earner inequality during the Reagan years to the decline of unionization (Card 2001, DiNardo and Fortin et al 1997, Freeman 1993).

Unionization also has significant compression effects on the wage spectrum within firms, with union firms displaying less dispersion between the highest and lowest paid occupations than is observed in non-union firms (Card 2001). Unions likely promote wage compression between different occupations as a tool for solidarity-building, as well as a utilitarian strategy of meeting the wage demands of the maximum number of members (Freeman 1982). Analysts have even found that higher rates of unionization are associated with lower levels of executive pay within firms and that unionized companies tend to employ fewer managers (DiNardo, Hallock et al 1997).

Even given the evidence for union wage compression, arguments abound that unions do not operate out of a mission to promote broad equality. This view depicts unions as self-interested entities existing mainly to advance their members’ interests and regards any positive externalities generated by union advocacy as un-intended consequences. From an empirical

frame of reference this is an artificial distinction, because real-world effects, not organizational intent, are the primary factors of interest in empirical studies. Using a normative frame of reference, the contention that unions do not act out of a desire to foster greater social equality is more noteworthy. However, unions do express that their mission is to achieve an economy of shared prosperity, claiming to coordinate and organize as a labor movement, not just a union movement. Consider these words posted on the national website of the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO), a major political coalition of U.S. labor unions:

“No matter what type of job workers are in, by building power in unions, they can speak out for fairness for all working people in their communities and create better standards and a strong middle class across the country (AFL-CIO 2015).”

Taking this vision statement on face value, the goal of unions is to build an economy of widely-shared wealth. Pay fairness and broader income equality across both the union and non-union sectors of the labor force is the expressed objective of American unions.

The application of power resources theory to explain levels of inequality in the economies of the American states is the important theoretical contribution offered by Kelly and Witko’s recent 2012 analysis. Unionization and left-leaning state governments are associated with lower levels of state economic inequality, not only after taking state and national redistributive spending into account, but also on pre-transfer, or “market conditioned” income inequality (2012). However, their exploration of the policy routes which allow unions and governmental actors to impact market inequality needs further development. While the authors find some limited evidence that state minimum wage laws negatively impact pre-transfer

inequality following “devolution” in 1994, they do not account for the role of economic development strategy as a policy variable which could influence market-conditioned inequality.

Kelly and Witko base their study on the assumption that unionization influences inequality by acting as a *working class* power resource. Its upward pressure on wages is expected to occur mainly for workers in the *lower* levels of the income distribution, thus reducing overall levels of wage inequality. As already noted, this view has been confirmed by studies looking at industry-level and national-level labor force inequality prior to the 1990’s (Pontusson, Rueda and Way 2002, Card 2001, 1998, Dinardo and Fortin et al 1997, Freeman 1993). However, given the severe erosion of union density across the American states in the past two decades, mostly in industrial sectors (Hirsch, MacPherson et al. 2012), there is cause to question the effectiveness of unions as articulators of lower-class interests more recently. Evidence in **Figure 3** suggests that through the 1990’s union membership growth (in terms of net number of members) occurs in the professional-skills sector, and even in management positions (Bureau of Labor Statistics, 2012). Meanwhile, we see only a modest increase in union membership in the fast-growing service sector, where a large number of America’s lower-paid workers are concentrated, and a precipitous erosion of representation in the declining manufacturing sector (referred to as “operators, fabricators, and laborers” and “precision production” in the graph), which was once the anchor of the working-class trade unionism. The assumption that American unions provide a power resource to lower-skilled or “blue collar” workers, at least in the recent years following deindustrialization, demands rethinking.

State economic development policy could also factor significantly into the fortunes of workers in the lower tiers of the income distribution. States only have partial authority in re-

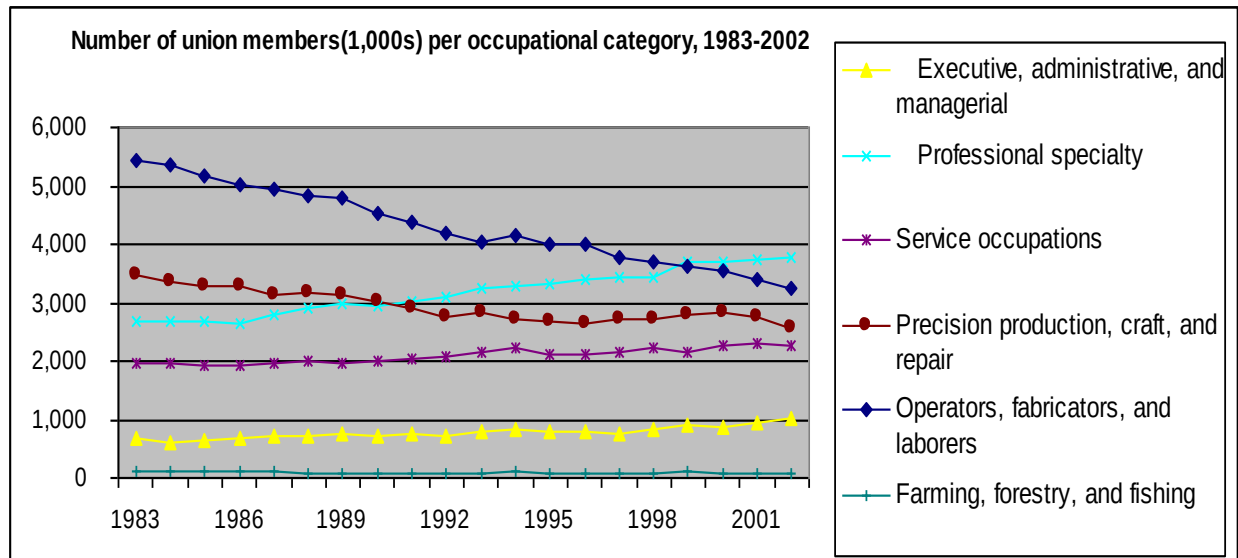


Figure 3. Number of Union Members per Occupational Category, 1983-2002

Source: Unpublished data provided by request from the Bureau of Labor Statistics in October 2012

distributive and labor relations policy making (Kelly and Witko 2012, Peterson 1995, Witko and Newmark 2010), while economic development policy is largely within their discretion. As Eisinger and Langer contend, different economic development strategies have the potential to grow different skill and income classes of workers. This could threaten the ability of unions to act as a power resource to the lower-skilled working class, as certain development policies may erode the unionized share of lower-income workers in the overall workforce.

Interaction of Unionization and Development Policy in Impacting Wage Inequality

Theoretically, entrepreneurial policies will not necessarily equalize distributional outcomes, even though they may generate wealth in the overall economy. While Langer emphasized that these policies prioritize production of “quality” high-paying jobs, this could actually serve to exacerbate inequality levels between workers at different skills-levels, as professional and high-tech workers could command a “skills wage premium”, especially if there is no sufficient countervailing force to place upward pressure on lower-skilled employees wage rates (Greenspan 1996, Berman and Bound 1996). While quality jobs may increase productivity and surplus for governments to use for redistributive purposes, they may also disperse wage rates paid across the labor market skills spectrum. Moreover, professional and “knowledge economy” employees may be more assertive and individualistic in their approach to wage bargaining, demanding premium wages above those made by their peers, while lower-skilled workers are more likely to accept the wage rates that prevail, without demanding individual premiums (Pontusson, Rueda, and Way 2002).

Thus, the equalizing impact of entrepreneurial policy as posited by Langer depends on the power of strong working-class labor unions to maintain higher wage rates for lower-skilled workers and to ensure that such workers are beneficiaries of the emerging sectors nurtured by entrepreneurialism. If industrial or lower-paid service sector unions have an active political voice in entrepreneurial policy development, they may be able to lobby for projects which include a role for “blue-collar” labor. But if unions are weak and locked out of entrepreneurial strategies, economic development efforts to produce high-paying jobs are likely to magnify the income differences between low and high-skilled workers. We have already seen that entrepreneurial policy has a negative impact on unionization as the dependent variable, suggesting that overall unions are not active players in entrepreneurial policy-making. The erosion of labor union strength from such policies probably weakens the capacity of unions to safeguard income equality in the state economy.

So far, I have failed to find a significant impact of locational policy on unionization, but what about its effect on income inequality? On first glance, locational policy does seem likely to increase inequality because it attempts to lure already developed industries, usually manufacturing-based, by suppressing wages for the lowest-skilled workers. Cutting wages at the bottom end of the income distribution would seemingly increase inequality. However, if locational approaches lure jobs to places where few employment opportunities exist for lower-skilled workers, which is also an aim of these strategies, they may have an equalizing impact on distributional outcomes, even while maintaining stingy wage rates. Low wages provide more opportunity than no wages, adherents of this approach would claim.

In summary, this paper concurs with Langer that placing economic development policy front-and-center is important to understanding variation in state level inequality. However, it also contends that power resources variables are necessary to include for two reasons. First, unionization and left governments need to be accounted for as key control variables, given the *independent* effect they may have on inequality outcomes. Secondly, unionization should be considered in light of how development policy, especially entrepreneurialism, interacts with it to affect distributional outcomes. Langer's examination was straight-forward in characterizing entrepreneurial policy as more equalizing, and locational policy as less so. I contend that the distributional impact of these strategies also interacts with the presence of unions as a key power resource.

Methods

I will first test hypotheses which consider economic development variables along with inclusion of power resources variables to specify a fuller model explaining variation in state level income inequality. I re-visit Langer's original hypotheses using updated data and variable measures to reconsider the direction and the significance of the independent effect of the two types of economic development policies, while controlling for the impact of unionization and left-leaning state governments.

H1: Greater use of locational policy will be associated with higher inequality.

H2: Greater use of entrepreneurial policy will be associated with lower inequality.

If entrepreneurial policy does in fact exacerbate the "skills premium" paid to higher SES workers, Langer's original findings about the equalizing effect of demand-side strategies will not

be supported. If I find support that either of these economic development strategies has a significant impact on income inequality, I will then explore the conditioning effect that these strategies have on unionization in impacting income inequality.

Of course that means that I am also testing for the independent effect of private sector unionization and left governments on inequality. Private sector unionization has declined greatly, and there is reason to question whether or not it still has any power to promote economic equality. While my main focus is on the equalizing capacity of unionization, I also test for the impact of ideological left governments as a second power resource factor.

H3: Increases in private sector union density will be associated with lower inequality.

H4: Increases in left state government liberalism will be associated with lower inequality.

The model estimation method for this study follows the same one used by both Langer and Kelly & Witko. Given that the data for the model is both cross-sectional (different states) and time series (different years), the model must adjust for autocorrelation so as not to violate the assumption of independent observations, critical to OLS regression. Use of panel corrected standard errors along with a lagged dependent variable is recognized to be an appropriate method for estimating over time change (Kelly and Witko 2010, De Boef and Keele 2008, Beck 2001). I employ the same error correction model (ECM) strategy as used in Chapter 4. To review, ECM equations compute the change in the dependent variable (ΔY) between time points, rather than the actual value of the Y given a value of X. ECMs estimate two coefficients for each independent variable – a differenced value and a lagged value. The coefficient on the differenced value applies to the initial impact of the change in X to the change in Y, which

occurs entirely at one point in time. The coefficient on the lagged value applies to the impact of X on the change in Y that is felt over a longer time span. It requires division by the coefficient of the lag of Y (the error correction rate), also included as a right-side variable in an error correction model, to assess the total long term impact of the change in X on the change in Y. As Kelly and Witko contend (2012), if either the differenced or lagged value of the independent variable is significant, then one can conclude that variable impacts the dependent variable.

Variables and Data

The data for this study also comes largely from Kelly and Witko's 2012 examination. This study utilizes their measure of household pre-transfer *market-conditioned inequality* as the dependent variable, for years 1983-2004. This is a Gini coefficient (ranging from 0-1) calculated from income figures of private earnings collected from the Census Bureau Annual Social and Economic Supplement. It leaves out any income earned through government programs such as Social Security, welfare, or disability. I am most interested here in examining state policy and unionization impact on market-based inequality, and states have limited influence in many national level transfer programs (TANF is an exception). Therefore, the use of the pre-transfer Gini, which measures the amount of market-based inequality existing in the state economy prior to the redistributive effects of national transfer programs, is more appropriate. Langer's approach used a post-transfer Gini as the dependent variable, so employing Kelly and Witko's measure is a new contribution I offer to the study of development policy consequences.

The key explanatory variables are state *private sector union density* (Hirsch et al 2001), *entrepreneurial policy intensity* and *locational policy intensity*. The economic development

variables are again measured with the Saiz' interval indices used in Chapter 4 and 5, each ranging continuously from 0-3. These take into account a wider range of programs used by states in their development efforts than did Langer's measures, which focused on a more limited range of 16 policy tools. Indices values span years from 1983- 2004, thus my examination includes observations from before and after devolution in 1994. I also include the *state policy liberalism* variable to measure left power in state governments, which accounts for ideology and policy liberalism of state legislatures, rather than simple partisan control (Berry et al 1998 with updates). This is provided, as was *private sector union density*, as a critical "power resource" control variable.

As did Kelly & Witko, I include national level governmental variables to control for *Presidential Party* and percent *Democrats in Congress*. Given the federalist structure of the United States political system, the partisanship of national leaders could impact state-level inequality outcomes. Even economic inequality that exists at a pre-transfer level is impacted by the federal government due to its capacity to fund and promote infrastructure, education, and other non-transfer programs, as well as to regulate industries and financial markets (Kelly 2005). Higher values of both of these variables are associated with greater Democratic control and are predicted to be negatively related to inequality.

Outside of power resources, economic development policy, and national level government indicators there are some additional state policy factors that I anticipate to impact inequality levels. Although this examination focuses on market-based inequality, rather than post-redistribution inequality, I do include a measure of *welfare share*, the fraction of state expenditures devoted to means-tested transfers, as a control variable. This is to consider the

conservative view that higher levels of social assistance could lead to more inequality in the market itself through less labor force participation. *Right-to-work* is also included to account for the common belief that adoption of RTW could lower wages for workers due to reduced unionization. Still, I found in Chapter 4 that only three states adopted RTW in my data set, and all of those actually saw a short-term increase in unionization. Thus, the results regarding RTW's impact on inequality could be idiosyncratic to these few observations. *State minimum wage* level, as tracked by Kelly & Witko (2012), is also included as a control variable, because many states require a wage higher than the base floor established by the federal government, which could help to compress the wage spectrum in those states by exerting an upward push on incomes at the lower end of the distribution.

Finally, I control for general state economic and demographic conditions that could be associated with inequality. *State unemployment rate* (Bureau of Labor Statistics) is anticipated to be positively related to inequality, and growth in *gross state product* is expected to decrease overall inequality. Proportion *non-white workforce* is expected to lead to more inequality. Minority workers tend to make lower average wages than whites potentially creating conditions for greater pre-transfer inequality. I also include variables to account for *manufacturing share of GSP*, as well as *government sector share of employment* (Bureau of Economic Analysis, 2012) to proxy for share of workers in government employment. Higher values of *government share* are anticipated to be related to less inequality as governments may have a more compressed pay spectrum with higher average wages than are observed in the private service sector. Higher values of *manufacturing share* could be related to less inequality because the manufacturing sector may pay better wages for lower-skilled workers than do service-sectors such as food service and hospitality.

Neither Langer nor Kelly and Witko accounted for international economic openness and its potential impact on inequality levels. The conventional argument is that globalization could lead to increased income disparities, since more mobile capital may exit if workers refuse to accept low wage rates and labor protections (Reich 1991); while Hansen's research found that international openness did not lower wages (Hansen 2006). While data on outward foreign direct investment (FDI) would be ideal to test this argument, only *inward FDI* jobs data is readily available at the state level (Bureau of Economic Analysis, Brady and Wallace 2000, updated). Thus I include percentage of total state employment attributable to inward FDI, as used previously in Chapter 4, to control for globalization impacts. If the common argument is correct, higher values of FDI jobs will be positively related to inequality. **Table 18** summarizes all variables, measure specification, and data sources.

Model and Results for Impact of Economic Policy Strategies on Inequality

The first model in **Table 19** tests H1, H2, H3, and H4 regarding the independent effect of the two economic development strategies and power resources on state inequality. The results do not confirm Langer's original findings that locational policy activism leads to more inequality, while entrepreneurial policy activism leads to less. My model, which contains power resource variables as key controls, indicate that locational policy has no significant impact on inequality, and that entrepreneurial policy has a positive impact on inequality in the long-term, given the significance level on the lag. Moreover, the independent effects of the power resources of private union density and left government liberalism have significant impact. Despite the

Table 18. Basic Form of the Differenced and Lagged Independent Variables Used in the Inequality Error Correction Model

Variable	Measure Specification	Data Source
Dependent Variable		
State Market-Conditioned Income Inequality	Gini coefficient (0-1) measuring average income inequality existent in the state economy before transfers from redistributive programs (Social Security and TANF, for example).	Method of calculation and estimation developed by Kelly 2005 using Census Bureau Annual Social and Economic Supplement data. Years 1983-2004. Provided courtesy of Nathan Kelly.
Key Independent Variables		
Entrepreneurial Policy Activism	Interval level index based on coding of state economic development program attributes ranging from approximately 0 to 3 for intermittent years. Missing years interpolated.	Methodology for constructing the index is presented in Saiz 2001. Attributes coding based on data gathered by the National Association of State Development Agencies in 1983, 1986, 1991, 1994, 1998, 2002 and Miles Friedman and Partners LLC in 2006.
Locational Policy Activism	Interval level index based on coding of state economic development program attributes ranging from approximately 0 to 3 for intermittent years. Missing years interpolated.	Methodology for constructing the index is presented in Saiz 2001. Attributes coding based on data gathered by the National Association of State Development Agencies in 1983, 1986, 1991, 1994, 1998, 2002 and Miles Friedman and Partners LLC in 2006.
State Private Sector Union Density	Workers who are members of unions as a percentage of the state private sector workforce.	Method of calculation and estimation is presented in Hirsch et al 2001. Years 1984-2004. Downloaded from www.unionstats.com .
Private Union Density* Entrepreneurial Policy (Used in second model)	Factor term of Entrepreneurial Policy and Private Sector Union Density.	Used to test H5 regarding the conditioning effect of entrepreneurial policy (z) on the impact of private union density(x) on inequality (y).
State Government Liberalism	Interval measure based on ideological scores of state's Congressional representatives, weighted by partisan control of the state legislature. High levels of this measure indicate "Left" governments.	Berry et al 1998, and updates. Years 1984-2004.

Table 18 (con'd)		
Control Variable	Measure Specification	Data Source
Democrat President	Partisanship of President during the case-year. 1= Democrat. 0= Republican.	Data provided courtesy of Kelly and Witko 2012. Years 1984-2004.
Democrats in Congress	Percentage of Democrats in both houses of Congress during the case-year.	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004
Welfare Share	Fraction of state government expenditures due to means-tested transfers.	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004.
“Right-to-Work” State	State that prohibits union shops either by state constitutional amendment or “right-to-work” statute. “Right to work”= 1. No prohibition of union shops = 0.	Department of Labor, National Right to Work Committee. Years 1984-2004. *Note: this variable had variation in only three years for three states.
State Minimum Wage	The minimum wage rate required for the majority of the labor force per state statute (different from the federal minimum wage). In states with no state minimum wage statute using the prevailing fed minimum wage, the value is 0.	Department of Labor, Wage and Hour Division. Years 1983-2004.
State Unemployment Rate	Annual average state unemployment rate, as a share of the labor force. Ranges 0-1.	Bureau of Labor Statistics. Years 1983-2004.
State GSP Growth	Annual percentage growth rate in gross state product.	Bureau of Economic Analysis. Years 1984-2004.
Manufacturing Sector	Manufacturing sector share of gross state product. (Ranges 0-1)	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004
Government Sector	Government employee share of employment in the entire state labor force.(Ranges 0-1)	Data provided courtesy of Kelly and Witko 2012. Years 1983-2004.
Non-white Population	Share of non-whites in state population. Ranges from 0-1.	Based on U.S. Census data. Provided courtesy of Kelly and Witko 2012. Years 1984-2004.
Foreign Direct Investment (FDI) Jobs	Private sector jobs in foreign-owned affiliates as a percentage of the state private sector workforce. Varies from 1-100.	Calculations provided courtesy of Brady and Wallace 2000 and updates. Based on data from the Bureau of Economic Analysis. Years 1983-2004.

Table 19. ECM Results for Annual Change in State Market Income Inequality

VARIABLES	(1) Base Model	(2) Model with Conditional Effects
Lag Market Inequality	-0.239*** (0.0360)	-0.242*** (0.0362)
Key Independent Variables:		
D. Locational Policy Activism	0.0101 (0.00829)	0.00992 (0.00827)
Lag Locational Policy Activism	0.00298 (0.00233)	0.00303 (0.00234)
D. Entrepreneurial Policy Activism	0.00646 (0.00577)	0.00636 (0.00577)
Lag Entrepreneurial Policy Activism	0.00342** (0.00166)	0.00104 (0.00220)
D. Private Union Density	-5.84e-05 (0.000626)	-6.36e-05 (0.000626)
Lag Private Union Density	-0.000272** (0.000137)	-0.000554** (0.000238)
Lag Entrepreneurial Policy * Private Density	--	0.000268+
	--	(0.000163)
D. State Policy Liberalism	-0.00843* (0.00431)	-0.00814* (0.00431)
Lag State Policy Liberalism	0.00773*** (0.00258)	0.00799*** (0.00256)
National Politics Controls:		
D. Presidential Party	0.00761*** (0.00242)	0.00740*** (0.00241)
Lag Presidential Party	0.00401** (0.00198)	0.00371* (0.00199)
D. Democrats in Congress	-0.00187*** (0.000277)	-0.00189*** (0.000277)
Lag Democrats in Congress	-0.000903*** (0.000225)	-0.000929*** (0.000227)
Additional State Policy Controls:		
D. Welfare Share	-0.0455* (0.0276)	-0.0446 (0.0276)
Lag Welfare Share	-0.0214** (0.0109)	-0.0200* (0.0110)
D. "Right-to-Work"	-0.0171** (0.00702)	-0.0169** (0.00701)
Lag "Right-to-Work"	1.51e-05 (0.00180)	0.000435 (0.00181)
D. State Minimum Wage	0.00323** (0.00150)	0.00316** (0.00150)
Lag State Minimum Wage	-0.00115*** (0.000437)	-0.00114*** (0.000436)

Table 19 (Con'd):

VARIABLES (Continued)	(1) Base Model	(2) Model with Conditional Effects
State Economic and Demographic Controls:		
D. Unemployment Rate	0.135 (0.0826)	0.128 (0.0828)
Lag Unemployment Rate	0.108*** (0.0402)	0.112*** (0.0403)
D.GSP Growth	-0.0488*** (0.0147)	-0.0480*** (0.0147)
Lag GSP Growth	-0.104*** (0.0206)	-0.102*** (0.0207)
D. FDI Jobs	-0.000476 (0.00123)	-0.000383 (0.00123)
Lag FDI Jobs	-0.000262 (0.000361)	-0.000211 (0.000364)
D. Non White Population	0.426** (0.177)	0.428** (0.176)
Lag Non White Population	0.00979 (0.00676)	0.00985 (0.00674)
D. Manufacturing Share of GSP	0.0666 (0.0436)	0.0666 (0.0434)
Lag Manufacturing Share of GSP	0.0236*** (0.00849)	0.0237*** (0.00847)
D. Government Share of Employment	-0.156 (0.229)	-0.153 (0.229)
Lag Government Share of Employment	-0.0351** (0.0160)	-0.0337** (0.0160)
Constant	0.160*** (0.0261)	0.164*** (0.0264)
Observations	1,049	1,049
R-squared	0.264	0.265
Number of statefip	50	50

Panel corrected standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1, + p=.101

severe erosion of the labor movement in the private sector, annual growth in private union density has a significant relationship to lower inequality levels, but only in the long term. The equity-generating role of unions is still relevant in a day of declining membership. State government liberalism appears to have a negative initial impact on inequality, but over time higher levels of Left-government strength increase inequality, according to this model. Kelly and Witko's original analysis found that left government liberalism was negatively related to inequality only after 1994 and only in the short term. My examination, with observations from before and after devolution, suggests that the cumulative long-term impact of state government liberalism does not necessarily lead to more equitable income distributions. Left state governments are not a particularly potent power resource for working class interests.

This finding flies in the face of expectations about how left policy liberalism should impact distributional consequences at the state level. It may indicate a recent shift among U.S. liberals toward the emphasis of cultural and social issue platforms over economic policies. Some political commentators claim that many aspects of economic growth entail a tradeoff between cultural enrichment and changing genders roles, which are supported by liberal policy positions, and the marginalization of the traditional family structure essential to working-class prosperity (Muller 2013). My findings may also be connected to recent trends in most post-industrial countries indicating that left parties have shifted to the center on economic policy, especially in the long-term as income inequality rises (Barth, Finseraas, and Moen 2014). The lack of response from state left politicians to enact redistributive policies during an era of rising income inequality may further wealth disparities in the market. Even when left party actives do demand redistributive policies, liberal politicians generally do not respond with economic programs unless the wider electorate also mobilizes around such demands (Pontusson and Rueda 2010).

This combination of conditions may not exist in most American states, especially in the long-term, resulting in state governments controlled by liberal leaders who fail to enact enduring left economic platforms, even while inequality continues to increase.

The national level control variables indicate that Democratic Congresses do decrease state level inequality overall, but a Democratic President, counter to expectations, has a positive impact on state level inequality in both the lagged and differenced terms. This is interesting, but in my data set only one Democratic President, Clinton, is represented, so there may not be sufficient variation to account for this finding.

Turning to the additional state policy factors, contrary to some claims from the Right, welfare generosity appears to reduce, rather than intensify market-inequality, although it is important to note that in the mid-nineties essential changes were made to promote labor force participation as a condition of receiving temporary means-tested assistance. In any case, states with higher shares of welfare spending as a part of their overall expenditures appear to have annual declines in pre-transfer inequality. Over the long-term RTW does not significantly impact state income inequality, but adoption of a RTW law appears, surprisingly, to lower inequality in the short term. Again, I attribute this mostly to the presence of only three idiosyncratic cases where RTW laws changed. One could speculate that the adoption of RTW in these three states (Idaho, Texas, and Oklahoma) equalized wage levels between union and non-union workers in the short-term, perhaps reducing between-worker inequality, but the long-term impact of RTW is nil. For most states RTW laws apparently had their critical impact on economic outcomes, both unionization rates and inequality, in the years when they were first adopted, and for most states that was over four decades ago. As for state minimum wage laws, I find that state minimum

wage laws do not reduce inequality in the short-term. My results suggest that their initial implementation actually raises inequality, but that over time they do have a significant impact in decreasing inequality. The initial short term increase in inequality is counter-intuitive, but I speculate that it could be the result of firms raising the wages of well-paid workers higher relative to the increases they give to low-paid workers to compensate for the overall elevation of the wage floor.

Some of the demographic and economic control variables conform with expectations. Unemployment raises long-term inequality, as does higher percentage of non-white residents in the short term; while higher rates of economic growth are linked to lower levels of inequality in both the long and short term. Interestingly, higher percentages of manufacturing as a share of GSP appear to be significantly related to increases in inequality. This was unexpected, as manufacturing is generally thought to provide better pay for workers than many low-skilled service sector jobs. Government employment shares were related to lower inequality in the long-term, suggesting that governments do compress the wage spectrum across different sectors of workers.

Finally, increases in inward FDI jobs do not demonstrate a significant relationship to state inequality levels, again confirming Hansen's findings that domestic forces, rather than international trade and investment, are at the heart of distributional outcomes in America. While I have shown that foreign-firm employment shares aid union membership growth in the short-term, this effect does not appear to matter when looking at changes in inequality.

Modeling the Conditioning Effect of Entrepreneurial Policy on Unions as a Power Resource

Since I find that entrepreneurial policy does exert a significant impact on inequality, I now move forward to test the hypothesis that it may also condition the equality-inducing effects of private sector unionization. I did find that private sector unionization still exerts a negative independent effect on inequality for the working classes. But in states with a heavy emphasis on entrepreneurial policy, there is less activity to grow jobs in sectors for the lowest-skilled employees, due to the promotion of positions for high-tech and professional workers. This could produce a “skills premium” effect that exacerbates inequality among different classes of workers and stymie union advocacy for lower-skilled employees in various ways. First, it could produce more jobs in non-unionized “white-collar” sectors, decreasing union membership shares in the workforce and lowering unions’ status to bargain for lower-skilled workers as a result. Second, it could motivate employers to redirect more of their surplus profits to raising wage rates for higher-skilled workers relative to lower-skilled ones or encourage them to downsize their less-skilled workforce. Third, it may even encourage unions to concentrate new organizing efforts in the professional and skilled-classes, since that is where more job growth occurs, as hinted at in Figure 3, and decrease advocacy for the working poor. As a result I offer the following hypothesis regarding the conditioning effect of entrepreneurial policy on unionization:

H5: Private sector unionization will have a negative impact on inequality in states with low use of entrepreneurialism, but not in states with high use of entrepreneurial policy.

The second model in **Table 19** tests the interaction of unionization with entrepreneurial policy. I created four pairs of interaction terms from these variables, composed of the lagged values, the differenced values, and the combination of lagged and differenced values for the two

variables. I list only the interaction term composed of the lagged values of both variables, as it was the only term with a high p value. (None of the interaction term coefficients were significant at 90% confidence, but the lag*lag term was nearly significant at $p=.101$.) It is necessary to take caution when interpreting the coefficients and significance levels on the separate constitutive terms making up the interaction term (Brambor et al 2006). For instance, in the second model the coefficient on the lag of *private union density* (the x variable) refers to its impact on *market inequality* (y) only when the lag of *entrepreneurial policy* (the z variable) is 0. The nearly significant coefficient of the interaction term provides some indication that *private density's* impact on inequality is in fact conditioned by entrepreneurial policy. *Private union density's* significance is likely to apply on some, but not all values of entrepreneurial policy. A graph charting x's impact across the range of values for the z-variable is needed to adequately assess the effect of entrepreneurial policy on inequality.

Figure 4 shows how the lagged value of union density impacts inequality at different levels of the lag of entrepreneurial policy. Values above the x axis baseline of 0 indicate where union density has positive effect on inequality, while values below the baseline of 0 indicate a negative effect. Significance is indicated where confidence intervals do not include the base line of 0. The line indicates that in the long-term unionization does have a significant effect in reducing inequality when the value of entrepreneurial policy is below about 1.25. However, as entrepreneurial policy use rises the impact of unionization on inequality becomes insignificant. At the highest values of entrepreneurial policy (over about 2), the association of unionization with inequality is actually positive, though insignificant. This finding suggests that entrepreneurial development policy acts as a roadblock to private sector unionism in equalizing distributional outcomes. Additionally, the histogram labeled **Figure 5** shows that roughly over

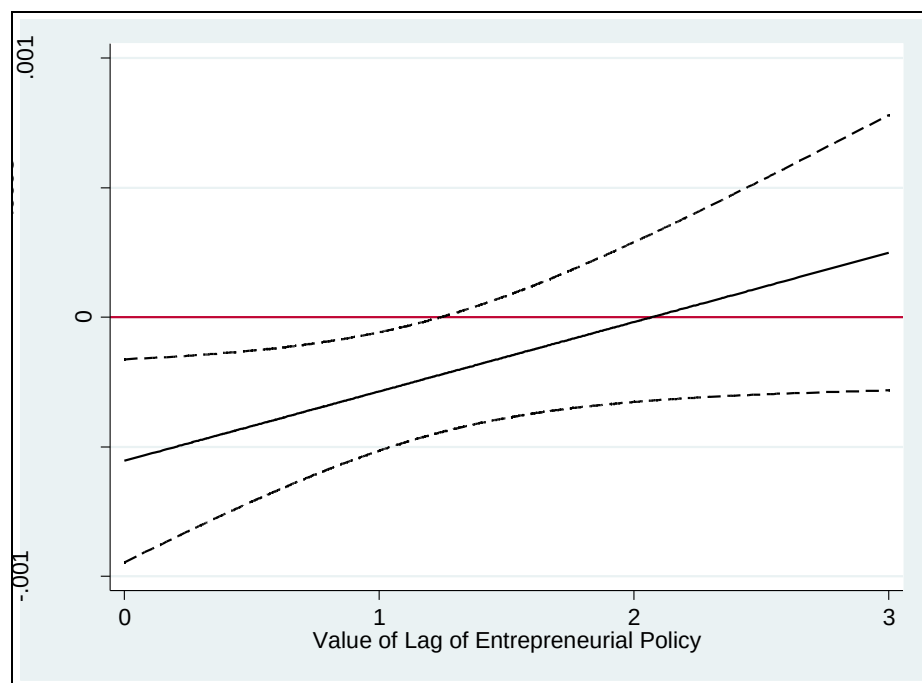


Figure 4. Lag Private Union Density Impact on Inequality, Conditioned by Entrepreneurial Policy

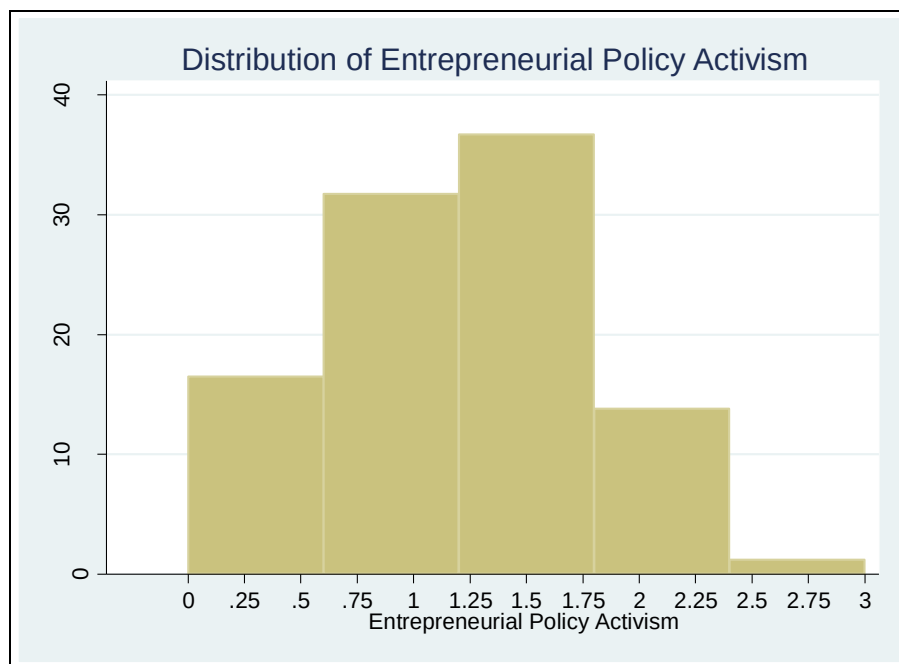


Figure 5. Distribution by % of Cases of Entrepreneurial Policy Activism

half of the observations in the data set have entrepreneurial policy values greater than about 1.25, confirming that the significance of this conditional relationship holds for a substantial number of cases in the model. Thus, H5 is supported and the interpretation of unions as an effective working class power resource in states which prioritize use of entrepreneurial development is not confirmed by these findings. Private sector unionization is rendered irrelevant as a force for promoting an economy of shared wealth in the presence of entrepreneurialism.

Discussion

This paper shows that power resources are important variables to be considered in models which attempt to explain variation in state income inequality. Overall, private union density exerts a significant negative impact on inequality over the long term, and state government liberalism appears to equalize income in the short term, though it increases inequality in the long run. Even in the United States, where our “left” party tends to operate as a centrist one, and union density levels are lower than almost anywhere else in the developed world, these power resources make a difference to distributional outcomes.

When I included power resources indicators along with economic development policy strategies as key independent variables, I did not find support for Langer’s findings. Namely, the impact of entrepreneurial policy appears to increase disparities in income rather than equalize the income distribution. Why are my findings about entrepreneurial policy counter to Langer’s? First of all, Langer examines inequality levels beginning nearly a decade earlier than those I use, and her series ends ten years prior to mine. These years pre-date the information revolution, the dot-com boom, and the expansion of investment and financial markets around the turn of the

millennium. Perhaps entrepreneurial approaches during the period she researched were geared toward growing new manufacturing and industrial sectors, areas where working class employees may have been more direct beneficiaries of skill and wage advancement. If entrepreneurialism generated more high paying *working-class* jobs during these years, it would likely have an equalizing effect on the income spectrum. In contrast, my data set includes the years of the information boom, when entrepreneurial approaches more likely supported the computing, communications, and high finance industries. A different breed of workers, equipped with specialized, technical skills in these emerging industries have been able to command a higher premium for their labor than the manufacturing workers of first-wave entrepreneurial policies.

The results of my analysis suggests that the “skills premium” exacted by higher-skilled professional workers, often the direct recipient of entrepreneurial development gains, may in fact be driving income inequality among the different skill classes of workers. It is important to note that while economics researchers endorse the view that skills-biased technical change among “knowledge economy” workers effects distributional outcomes, there are also studies that discount its role in increasing inequality (Lemieux 2006, Mishel and Bernstein 2003). While the “skills premium” thesis has been highly debated, its application to the findings here help to explain why entrepreneurial strategy aimed at producing “quality jobs” may be contributing to rising inequality .

Another reason that entrepreneurialism may lead to more inequality in the years I cover is that while it may create quality jobs, it may create less jobs due to productivity gains from better technology and skills advantages. Some noted experts claim that productivity gains could result in more joblessness for lower-skilled workers (Greenspan 1996). Unemployment is controlled

for in this analysis, but joblessness due to dropping out of the workforce or under-employment by working part time or temporary positions is not. My results here suggest that entrepreneurialism may fail to provide good job opportunities for the lowest-skilled workers, thus leading to more inequality.

An unexpected finding is that entrepreneurial strategies breed more income inequality in the market, because the stated intent of the programs is to offer a “high-road” approach to development (Eisenger 1989, Brace 2002). These programs concentrate on promotion of human resources and core assets in communities to promote industries from within and seek to avoid the worst consequences of inter-state competition for investment. Entrepreneurial policy advocates claim that it transcends narrow “zero-sum-game” thinking and encourages “win-win” solutions to development. However, its emphasis on generating more consumer demand could unintentionally foster economies of elitism. Recent media examples of price and rent inflation in the San Francisco Bay area, Boston, and other gentrifying centers show the frustration of lower-end consumers who are locked out of the wealth created by the Knowledge Economy. The recent “Google bus” protests in Oakland erupted as rental rates in working-class neighborhoods skyrocketed due to in-migration of affluent tech-workers (Berniker and Lipton 2014). Revenues from entrepreneurial expansion often bypass public schools, public transit, and other important services in the community, drive up the proximal costs of real estate, and increase inequality at least in the early stages of growth (Isenberg 2015, Jones and Kim 2013). While academic research on the association between entrepreneurialism and inequality is slim, effected citizens and politicians have taken notice. Presidential candidate Hillary Clinton has been quoted as depicting “Silicon” inequality as “bad for individuals, bad for our economy, bad for our democracy” (Quoted in Isenberg 2015). My research findings confirm this unfortunate “dark

side” to entrepreneurial development and indicate that more analysis is needed to fully understand its impact on economies.

As for the lack of impact from locational policy, it may be that the increased job growth in states that use these strategies does provide at least some sort of income opportunities to lower-skilled workers who would otherwise have none. I do not find, however, that inequality actually declines with greater use of locational policy, but apparently its use does not result in more income dispersion in most states. This may be because locational approaches lower wages for all workers, whether working or professional class, thus maintaining relatively low levels of income inequality between workers, but resulting in declining incomes for everyone, overall.

The confirmation of the hypothesis H5 suggests that although private sector unions act to decrease inequality in general, they may have lost their position as articulators of lower-class interests in states that actively engage in entrepreneurial development. Higher levels of entrepreneurialism appear to erase the equalizing effects that private sector unions have on income distribution. If inequality is in fact related to the “skills premium,” union success in representing lower income workers slips because of membership loss in sectors where unions once thrived. Private sector unions may also be shifting their scarce resources to advocate in the more premium-skills professional sectors. The union wage premium for organized workers relative to non-union workers (Pontusson et al 2002) may actually reinforce and magnify the skills wage premium in entrepreneurial-oriented states. In either case my results suggest that entrepreneurialism presents a challenge to the American labor movement in advancing the interests of the lower-skilled workers who need their advocacy the most. Unions need to retool their efforts to develop effective strategies for addressing the plight of lower-class workers in the

presence of an entrepreneurial policy environment, especially if they want to regain their reputation as a force of social justice for more equitable economic outcomes.

Conclusion

This chapter endeavored to sort out how power resources, economic development policy, and state level variation interact to impact income inequality in the United States. My findings in regard to entrepreneurial policy suggest that labor unions in states that utilize this approach have lost their ability to act as a power resource for the lowest-income citizens. A future direction of research would be to directly test how variation in the relative unionization levels of different occupational groups (varying among high-skilled and low-skilled) across the states impact income inequality levels. This chapter did not offer a direct test of this relationship due to lack of availability of data for each state on this variable at this time. However, the somewhat counter-intuitive finding that entrepreneurialism, with its “quality job” focus, reduces union power to abate income inequality indicates that unions have failed to effectively participate in this policy strategy for the benefit of the traditional working class. Moreover, as with its impact on unionization, I can not conclude that locational policy has a significant relationship to inequality levels. While locational policies probably do suppress wages and incomes given findings of previous scholarship (Hansen 2006), low-wage strategies do not appear to exacerbate inequality between classes of workers. Finally, this chapter does reaffirm the general independent effect of private sector unionization in reducing inequality, though this effect is significantly conditioned by the presence of entrepreneurial activism. It also found that the independent effect of left-leaning governments was to decrease inequality in the short term, although in the long term they appear to have a less equalizing effect.

The major lesson from this research project is that entrepreneurial development does not promote equality, and that the variables of unionism and state left government liberalism are necessary to consider when making claims about the impact of these policies on distributional outcomes. These socio-political factors need to be examined along-side important economic policy variables to uncover the reasons for state-level variation in income inequality.

Conclusion

Summary of Empirical Findings

In summary, the conclusions of this dissertation regarding its empirical research questions are:

- ***Entrepreneurial development strategies adopted by state governments do impact unionization and labor movement goals.*** The long term impacts of such programs are declining private sector union density and increasing income inequality. In spite of its “high-road” approach to economic growth, entrepreneurialism does not lead to more wealth generation or union advocacy for lower-income workers. However, entrepreneurial strategies are associated with more likelihood of union election victories in individual cases when labor organizing does occur, suggesting that entrepreneurial policies are not directly oppositional to union mobilization.
- ***Locational policies demonstrate no significant relationship to union decline or rising inequality, empirically.*** However, this does not mean that they assist union growth or equalize wealth in the economy. Nor does it mean that the principle underlying such policies - that labor is a cost-factor for business, rather than an asset - runs parallel to the mission of labor unions to advocate for lower-income workers.
- ***Foreign investment into states has not depressed private sector union density in recent decades or impeded union organizing.*** Increased FDI jobs as a share of the labor force actually had an immediate positive “shock” effect on union density. Foreign firms are more likely, not less, to contribute union wins in certification elections. International

economic integration is not necessarily bad for unions, and it does not cause more income inequality.

- ***Right-to-work laws have limited ability to explain union outcomes in the recent decades of this examination.*** Economic development policy and other variables better explain long-term variation in unionization during the years of this study.

Normative Perspectives on this Research

Now, in these concluding pages I will address more normative questions. In Chapter 1 I offered an alternate framing of my central research question, as follows: “*Is there an economic development strategy that actually aligns with the agenda of the union movement? Are some development strategies compatible with unions and their efforts to nurture economies of shared wealth?*”

Given the results of my original analysis I conclude that currently there are few, if any, state economic development strategies “in sync” with the labor movement. Outside of some unique programs, unions are largely irrelevant to economic development agendas in the states. There is some marginal evidence of Labor’s participation in a limited number of policies crafted by states with historically high rates of unionization, as identified in Chapter 2. However, for most states development policy-making ignores labor unions. A 1990 article by respected researchers Virginia Gray and David Lowry predicted that this would happen over 20 years ago. They found that among state “corporatist” policy-making institutions the higher education lobby had largely replaced Labor’s seat at the table alongside business interests and government

development agencies (Gray and Lowry 1990). My research findings confirm their prescient insight. Economic development programming seeks little input from unions, and protection for labor interests in state development strategies is spotty, at best.

Locational policy, defined as a strategy that seeks to lower factor-costs such as labor wages to entice inward location of businesses, had no significant effect on unionization or inequality in my models. Empirically, I found little association, either positive or negative, between this strategy and union goals. However, there is no indication that locational policy activism actually parallels labor movement goals in principle. A normative appraisal of this policy strategy suggests that its values are in fact at odds with unionization.

The largely negative impact that entrepreneurial development approaches exerted on unions and their goals is a somewhat surprising finding. I discovered that entrepreneurial policy's relationship to the fortunes of unions is rather nuanced. The underlying approach of entrepreneurial development policy and unionization in regard to employee relations seems to gel: labor is an asset, as well-off workers are thought to contribute more demand to the economy. Therefore, both factors are based around the notion that workers should be amply compensated as a means of economic growth. I find that pro-union election opportunities are enhanced in entrepreneurial activist states. But more importantly, I demonstrated that the longer-term impact of entrepreneurialism on the unionized share of the private sector labor force was negative. I offered an explanation for this: entrepreneurial policy substitutes for union wage negotiations in raising wage levels of workers. Entrepreneurialism decreases demand for union advocacy in the labor force, because "high-skilled" workers who are the beneficiaries of this policy approach are less inclined to need or want the collective action of unions overall.

Importantly, my models indicate that entrepreneurial policy use produces outcomes out-of-line with the union goal of wealth dispersion. Entrepreneurialism had an independent effect of exacerbating inequality levels, and it counteracted union abilities to mitigate inequality. Entrepreneurialism rendered private sector unions irrelevant as a force for promoting equality.

The overall picture of entrepreneurial policy is that it is a hindrance to working-class power, not because it offers direct opposition to the interests of lower-income workers, but because it allows higher-income workers to eclipse their share and role in the economy. There appears to be an unfortunate, counterintuitive trade-off between creation of higher-quality jobs for skills-privileged workers and the fortunes of lower-income citizens. The skills-bias of entrepreneurial policy promotes a situation where more “cream” can rise to the top, but it does less to address the needs of those who slip through the cracks. Entrepreneurialism does not appear to include unions as an articulator of lower-class interests in any serious way; but neither does it directly promote “union-busting”. It may even offer unions some opportunities for successful advocacy, if and when their efforts are channeled to advancing the interests of higher-skilled professional and management workers. Still, entrepreneurial policy has not promoted conditions for raising the fortunes of all workers in state job markets and the labor movement.

This view is a grim and negative appraisal of entrepreneurialism’s promise of wealth generation. Yet from a normative perspective, it would probably be mistaken to conclude that this strategy to development, one which avoids competitive bidding between states and values skill-development, is bad for the workforce. While the unfortunate unintended consequences of this approach do appear to be at odds with the labor movement’s mission to create an economy of widely-shared wealth, the foundational principles of unionization and entrepreneurial growth

strategies are not incompatible. If entrepreneurial policy can correct for some of its negative consequences by including working-class voices and the needs of lower-skilled citizens in its framework it may still be an instrument to nurture prosperity. Entrepreneurial policy strategies should not only emphasize opportunities for the most educated, skills-savvy employees. They must include solutions for dispersing the wealth that technical innovation generates in the economic interests of all classes of workers.

As for my secondary focus on FDI, I consistently found, across various units of analysis, that inward investment is not a roadblock to unionization. FDI jobs as a share of employment relate to increases in union density, and foreign firms are more likely targets for union organizing success than are American firms. The influx of management approaches from countries with less combative labor relations approaches than our own, which is practically every other highly-industrialized country, bodes well for union organizing in the private sector. Moreover, foreign inward investment does not increase inequality. This does not mean that all aspects of international economic integration benefit the U.S. labor force, as increased trade and outward investment may endanger union jobs. However, entry of foreign capital into our domestic labor market is a plus for union movement strength and does not hinder union goals regarding income equality.

Finally, my focus on economic development shows that “right-to-work” laws alone are insufficient for explaining unionization and inequality. My findings revealed no long-term impact of these laws, perhaps because the impact of most union shop prohibitions have run their course since their original enactment. I found positive associations between the initial shock-effect of RTW on both unionization and equality, which I conclude is idiosyncratic to the three

cases in this data set. I must note that in the most recent years, increasing numbers of “rust-belt” states have adopted these laws, and once data becomes available the effect of RTW should be revisited. RTW does not aid wealth-sharing or union advocacy in any meaningful way, but other economic policy statutes adopted by the states surpass these laws in generating significant effects.

Limitations and Directions for Future Research

There are a number of directions to take for future research on this topic, both to shore up the validity of the present findings and to expand understanding of the nature of the causal connections between development policy, unionization, and economic inequality.

First of all, to address the research question using unionization as the dependent variable, qualitative methods would enhance understanding of ways that entrepreneurialism can be reinforcing, instead of at odds with unionization. Entrepreneurialism is not in conflict with unionization in principle, as is the case with locational policy, but my analysis revealed that entrepreneurialism is deleterious to union power in practice. This was even after finding some anecdotal evidence of collaborative relationships between government development agencies and labor associations as a part of entrepreneurial programming. Better understanding of interactive relationships which condition the impact of entrepreneurial policy on unions is needed. Qualitative case studies could uncover and analyze the unique situations where the two forces actually reinforced one another. An emphasis on the exceptional cases that do not conform to the norm would illuminate how and under what circumstances development policy works in tandem with organizations representing the interests of lower-skilled workers. Qualitative research

designs could also examine “typical cases” more deeply to unpack why and how the “innovation industries” promoted by entrepreneurialism inhibit union growth.

There also needs to be more direct testing of the premise that skills-bias supplies the causal link between entrepreneurial policy and union decline. Tapping skills-bias as a theory to explain private sector unionization loss is reasonable on its face, but ideally one would test directly for how more activist use of entrepreneurialism leads to erosion of union density specifically in the “blue collar” industry sectors. Industry union density data is readily available (Hirsch and Macpherson 2001), but unfortunately not at a state level. Developing a way to directly test for how policy-induced skills-bias erodes the working-class in state economies would shore up the validity of this dissertation’s findings.

Given the recent adoptions in four states of “right-to-work” laws (Ohio, Michigan, Indiana, and Wisconsin), a new examination of the impact of these laws on unionization levels is necessary in the future. Since the changes were as recent as five years ago, I was not able to obtain accompanying economic development data and FDI jobs numbers to cover these years, which is why these cases were not included in this analysis. Clearly, RTW adoption is an important example of policy diffusion, however, and the effects of recent state adoptions need to be analyzed.

A fundamental improvement for exploring this research question is to find new and better measures to track locational and entrepreneurial policy activism. Given the periodic, every-fourth- year publishing schedule of the NASDA incentives guide on which the Saiz development variables are based many years had to be interpolated, which is not desirable. A number of scholars and think tanks have developed unique measures to track differing types of economic

development policies, as explained in Chapter 2. The Saiz measures I used are the best, most consistently available metrics. However, the last year available for coding was 2006, so even these measures are now dated. Given new standards and conditions endorsed by many states in recent years to their corporate incentive program (claw-back agreements, job quota guarantees, requirement of health insurance with new jobs) an updated measure, separating locational strategy types into two distinct classes - one for more conditional, strings-attached programs, the other for more business-accommodating programs - would be ideal.

Finally, an interesting supplemental examination would be to consider how differing economic approaches possibly impact public sector unionization. I focused on the private sector in this dissertation, but there may be a public sector effect as well. The causal linkages to the public sector are likely looser given that economic development policy aims to create new businesses, primarily. However, entrepreneurial policy strategies offer an expanded role of government agencies in engineering the industry-sector mix in the economy, which may have an effect on membership growth in public sector unions.

There are also a number of improvements and areas of future research regarding the relationship of economic development, unionization, and inequality. I posited that skills-biased technical change is the force that causes entrepreneurial policy to lead to inequality and that lowers unions' abilities to negate inequality. However, as with the first research question, I was not able to test for skills-bias directly as a factor leading to inequality through entrepreneurial policy activism. Development of better measures to directly account for skills-bias are needed to show that different policy types do in fact produce and exacerbate this bias, and that it has consequences on the income distribution.

Using more nuanced measures of inequality could be advantageous. I have used summary Gini coefficients for pre-transfer inequality, which measure the overall inequality that exists across the entire income distribution. Deeper examination of the inequality existing between specific quartiles of the wage distribution may better assess the degree to which “between-worker” inequality skews the income distribution. Also, in this project I left the impact on post-transfer inequality levels unexamined. Entrepreneurial policies may produce more market inequality, but they may also offer compensation mechanisms for this negative consequence through welfare redistribution, progressive tax structures, and re-training programs, which ultimately result in lower post-transfer inequality. Qualitative research designs could help to better establish the link between development policy strategies and accompanying social welfare provisions, as well as which industries targeted for development produce greater wage-gains for lower-income citizens. Certain types of entrepreneurial programming, like those aimed at “green energy” development or health fields may increase the needs for production and service workers as much as for professional-skills employees, and may benefit lower-income strata, in contrast to the information-technology and finance sectors.

The findings here demand the attention of government leaders in the economic development field and labor union officials, in particular. Governments and unions must recognize the role that development policies, especially entrepreneurial ones, have on distributional consequences and should be willing to work together collaboratively to promote the best distributional outcomes.

First of all, state government leaders must be responsible and willing to evaluate these policies’ broadly, according to their impact on all classes of citizens, rather than assuming that

wealth dispersion will occur “naturally” on its own. State performance managers should monitor the consequences of these programs on inequality, median household income, and poverty rates as frequently as they assess their impacts on number of jobs created and FDI attracted.

Governments should vigorously pursue claw-back provisions and job standards in the negotiation of locational incentives packages to ensure that the jobs created offer long-term employment opportunities with middle-class earning potential. When funding incubator businesses development officials would be wise to cultivate projects that have the potential to provide employment opportunities for less-skilled workers through job training, internship, and apprentice opportunities. Higher tech industries tend to be high-productivity enterprises that do not require as much human labor as low-tech enterprises, but incubator financing should still be targeted with the goal of skill-enhancement and employment for lower income workers in mind.

Unions must work to find a greater voice in the deliberation of economic development strategies if they want to remain viable. More well-organized unions in the upper Midwest and Northeast have had some success in appointing labor representatives to economic development advisory boards, and unions in all regions should prioritize this activity. Unions, especially those in the skilled-trades, should exploit their natural position as training providers, expanding apprenticeship and industrial certification programs and demonstrating the usefulness of these programs in entrepreneurial strategies. Unions must focus their lobbying and political action efforts toward economic development policies, as much as they do toward labor relations statutes. While unions should not ignore proposals to enact “right-to-work” and state collective bargaining prohibitions, fighting these policies is reactionary. If unions already served a critical, productive role in state development programs, it would be less politically advantageous for elected opportunists to attack them.

One additional prescription for unions suggested by this project is that they should target their organizing activities toward foreign-owned firms. These companies appear to be more willing to accept unions than are American-owned multi-national corporations. Building greater trans-national ties to the union movements in these firm's home companies also reinforces opportunities for American unions to successfully organize in their U.S.-located subsidiaries.

Development policies are the products of state governments; therefore their consequences should not be left to the whims of the market's invisible hand. Governments and unions need to be active, long-term stewards of these strategies to ensure an equitable and successful distribution of their benefits.

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Appendix

APPENDIX: Firms Experiencing Union Elections in the Micro-Model Dataset

MOST FREQUENTLY APPEARING FIRMS			
Worksite Name	Parent Firm, if Any	Firm Nationality	Number of Cases
First Student	FirstGroup	UK	90
Durham School Services	National Express Group PLC	UK	11
First Transit	FirstGroup	UK	7
Laidlaw Transit	Laidlaw International	US	7
Waste Management		US	7
Help at Home Inc.		US	5
Jacobs Technology	Jacobs Engineering Group Inc.	US	5
MV Transportation		US	5
Wackenhut Services, Inc.	G4S INTERNATIONAL (GROUP 4 SECURICOR)	UK	5
ALL OTHERS			
Worksite Name	Parent Firm, if Any	Firm Nationality	Multiple Cases Where Noted
178 Lowell Street Operating Company/ Lexington Health Care Center	HealthBridge	US	
3-V Inc.	3V Group Italia S.p.A.	Italy	
Cedar Hill Healthcare Center	HealthBridge Management	US	
A&A Electrical Company of Beaumont, Inc.		US	
A.T. Massey Coal Company Inc.		US	
AAA Residential Services Inc.		US	
ABC Professional Tree Service		US	
Acme Engineering		Canada	
ACPAC Packing (Acupac)	Outsourcing Services Group	US	
Adame		US	
ADT Security Services Inc.	Tyco International	US	
Advanced Life Systems Inc		US	
Advanced Student Transportation		US	
Advent Heating & Cooling		US	
AECOM Technology		US	
AEG Facilities	Anschutz Entertainment Group	US	
AFCO Steel, LLC of Arkansas	WW Steel	US	
AGAR Supply Company		US	
Ahern and Associates		US	
AHTNA Government Services Corp.	AHTNA, Alaska Native Corporation	US	

Air System Components	Tomkins PLC	UK	
Airgas		US	
Airport Ramada Inn	Ramada Worldwide, subsid of Wyndam Worldwide	US	
Akal Security Inc.		US	
The Glidden Company	Akzo-Nobel Paints	Netherlands	
Alamo Car Rental	Vanguard Car Rental USA	US	2
Alan Ritchey Inc.		US	2
Albert Eaddy/ Recana Solutions		US	
Albert Lea Select Foods	Hormel Foods	US	
Albertson's Inc.		US	
Howmet Castings	Alcoa Howmet	US	
Alden Rehab		US	2
All City Transporation Incorporated		US	
All Star Transportation		US	
Allen Freight Systems Inc	P.A.M. Transportation	US	
Allens		US	
Allied Construction Services, Inc.		US	
BFI/Allied Waste		US	3
Allina Health system		US	
Alta Dena Certified Dairy, Inc.		US	
Altamont Ambulance Service, Inc.		US	
Alutiiq Professional Services LLC	Afognak Native Corporation	US	2
Alyeska Pipeline Service Co.	Operates TAPS, which is owned by consortium of companies, BP has largest share	US	
Brighten Health	Brighten Health Group	US	2
AmCane Sugar LLC		US	
American Ambulette and Ambulance Service, Inc.		US	
American Bottling Company	Dr Pepper Snapple Group	US	
American Cooling Inc.		US	
American Fuji Seal Inc.	Fuji Seal International	Japan	
American Seafood Southern Pride	American Seafood Groups	US	
American Sugar Refining Inc.	Subsid of Florida Crystals, subsid of Flo-Sun	US	
ResCare		US	
Americold Logistics		US	4
Americsource Bergen		US	
Ames/True Temper	Castle Harlan Inc.	US	
Amicable Healthcare		US	

Angelica Textile Services	Angelica Corporation	US	
Anixter		US	
Apex Environmental		US	
Appalachian Precision Hardwood Flooring		US	
Archer Daniel Midlands		US	
Ash Grove Cement Company		US	
Asplundh Tree		US	
Associated Milk Producers, Inc.		US	
Apple, LLC (Retail Stores)	Apple Inc	US	4
ATC Vancom		US	
Atlantic Express		US	
Automated Health Systems		US	
Avalon Health Care of California	Avalon Health Care Group	US	
Avante At Inverness		US	
Aviall Services Inc.		US	
B&L Freight		US	
BAE Systems	BAE Systems, PLC	UK	
Bagcraft Papercon II, LLC	Packaging Dynamics	US	2
Balfour Beatty Community	Balfour Beatty PLC	UK	
Barton Protective	Allied Security LLC	US	
Baumann and Sons	ABA Transportation	US	
Baycrest Village	Farmington Centers	US	
Bayshore Health Care Center		US	
Beacon Information Technology & Staffing Services		US	
Bechtel BWXT, Idaho	McDermott International Inc	US	
Benchmark Assisted Living LLC		US	
Berry Plastics Corporation	Apollo Management and Graham Partners	US	
Beverly Healthcare-California Inc/Beverly Manor		US	
Bimbo Bakeries USA Inc.	Grupo Bimbo	Mexico	
Blossom Health Care Center	Compassionate Health Care	US	
Blount International		US	
Boars Head Provisions		US	
Bobwell Productions		US	
Boeing Company		US	2
Braden Sutphin Ink Company		US	
Bredero Price Company Inc.	BrederoShaw, subsid of Shawcor LTD	Canada	
Bonsal American	Oldcastle, arm of CRH plc	Ireland	
Bozzutos		US	2

BPA Amoco Chemical		UK	
Briarfield at Ashley Circle	Briarfield Health Centers	US	
Kindred Nursing Centers West LLC	Kindred Healthcare	US	
Bridgestone Firestone North America Tire LLC	Bridgestone Corporation	Japan	
Brighten Health Group		US	
Brightside Academy, Inc.		US	
Brinks Inc		US	
Bristol Hospital EMS, LLC		US	
Britt Haven Nursing Center		US	
Broadmeadow Healthcare LLC	Cadia Delaware Rehabilitation	US	
Brody Mining		US	
Brown's Crew Car of Wyoming, Inc.	RailCrew Xpress	US	
Bruister and Associates		US	
Brunner International		US	
Buckeye Technologies		US	
Budget Rent a Car	Cendant Corp.	US	2
Buffalo Air Handling		US	
Loomis Armored US, Inc.	Securitas AB	Sweden	2
Burritoville Systems Inc.		US	
C & D Security		US	
C. Martin Company, Inc.		US	
Cable Tech Inc.		US	
Cablevision Systems Corp.		US	2
Caesars Indiana	Caesars Entertainment	US	
California Almond Growers		US	
Cambridge Brands	Tootsie Roll Industries	US	
Caption Colorado		US	
Caraustar		US	
Cardinal Health 200, Inc.		US	
Carolina Power & Light	Progress Energy	US	
Carson Trailers		US	
Casa Chevrolet	General Motors	US	
Case Farms of Ohio Inc.		US	
Case Ready Meats Inc	Cargill Case Ready Meats, Precepts Foods LLC	US	
Casino Aztar Columbia Entertainment	Columbia Sussex	US	
Catelli Brothers Inc		US	3
CCL Custom Manufacturing	CCL Industrial	Canada	
CDC Systems Inc		US	

Celanese Corporation		US	
Centerpoint Medical Center		US	2
Central Maine Power Company	Energy East Corporation	US	
Central Parking System Inc.		US	2
Cereamic Protction Corporation of America	Protective Products of America	US	
BPB America Inc	Saint Gobain	France	
Cessna Aircraft Co.	Textron	US	
Morrison Management Specialists	Compass Group plc	UK	
Chenega Integrated Systems, LLC	Chenega Corporation	US	2
Chesterfield Health Services		US	
Chestertown Foods, Inc.		US	
Chestnut Ridge Transportation	The Trans Group	US	
Children's Home of Detroit		US	
Chinese Daily News	United Daily News Group	Taiwan	
Christie's Inc.	Christie's International PLC	UK	
Chugach McKinley Inc.		US	
ChurchDwight		US	
Cintas		US	
City Centurion Security Services		US	
Fred Meyer Alaska, Inc.	Kroger Company	US	2
Clarín		US	
Clarkston Specialty Healthcare	Fundamental	US	
Classic Party Rentals		US	2
Classic Residence Management Limited Partnership	Hyatt Hotels Corporation	US	
Claymont Steel		US	
Clearon Corp	Division of ICL Industrial Products	Israel	
Clinton Memorial Hospital		US	
Coastal Communities Hospital	Integrative Health Care Holding INC	US	
Coastal International Security	Akal Security	US	
Coastal Paper	Cellu Tissue	US	
Coca-Cola North America	Coca-Cola Company	US	
Cochran Electric, Inc.		US	
Coinmach Corp.	Coinmach Service Corp.	US	
Cole Haan		US	
Collins and Aikman		US	
Colonial Park Care Center		US	
Comcast		US	2
Community Education Centers Inc.		US	2

Compak	J Baker Industries	US	
Computer Sciences Corporation		US	2
Concept Packaging		US	
Connecticut Water Company	Connecticut Water Services	US	
Consolidated Container Corporation		US	
Consolidated Storage		US	
Continental Tire North America	Continental AG	Germany	
Cooper Tire and Rubber		US	
Coral Gables Hospital Inc.		US	
Core-Mark International, Inc.		US	
Coreslab Structures (Omaha) Inc.		Canada	
Cornell Corrections of Texas	Cornell Companies Inc.	US	
Costco Optical Lab 908	Costco Wholesale Corporation	US	
Covenant Care Ohio Inc. d/b/a Fairview Skilled Nursing and Rehab Center	Covenant Care	US	
Covidien Health Care	Covidien PLC	Ireland	
CPC Logistics Inc.		US	
Crash Rescue Equipment Service		US	
Crest Transportation Services, Inc.	Assist Ambulance	US	
Cristi Cleaning Service		US	
Cruiselink II		US	
CSC Applied Technology		US	
Daffy's		US	
Daiohs First Choice Services	First Choice	US	
Dairy Farmers of America		US	
Dakkota Integrated Systems	Joint venture of Rush Trucking LLC (US) & Intier Automotive Interiors, subsid of Magna (Canada)	US	2
Daley's Medical Transportation Inc.	Bud's Ambulance Service	US	
DANA Corp		US	
Danard Electric		US	
Dartmouth College - Hanover Inn		US	
Day & Zimmermann Hawthorne Corp.		US	
Deco Inc.		US	
DermaRite Industries LLC		US	
Thomas Built Buses	Subsid of Freightliner, owned by DaimlerChrysler	Germany	
Dillon's Bus Service		US	
Dimondale Nursing Care Center	NexCare Health System	US	
DISH Network		US	

DITTO Express		US	
DMI Industries	Otter Tail Corporation	US	
Doll Distributing LLC		US	
Dorman Products		US	
DTM Walnut Creek, Inc.	Hilton Hotels Corporation	US	
Duerr Tool & Die Co. Inc.		US	
Dunkin Donuts Distribution Center	Bain, Carlyle Group	US	
Durrett Shepphard Steel Co. Inc.	Reliance Steel and Aluminum Co.	US	
Dutch Manor Nursing Home & Rehabilitation	Capital Living and Rehab Centers	US	2
Dyncorp International	Veritas Capital, Dyncorp International Inc.	US	4
Eby-Brown Company LLC		US	
ECOLAB, Inc.		US	
Ecology Services Inc		US	
Eden West convalescent Hospital	Solnus Five	US	
Edens Corporation/RTS		US	
Edgewood Vista Senior Living Inc.	Edgewood Management Group LLC	US	
Educational Bus Inc.	Trans Group	US	2
Ohio Edison	FirstEnergy Corporation	US	2
El Paso Disposal		US	
Elbar, Inc.	Pat Salmon & Sons	US	
Elberta Crate & Box com		US	
Emerald Correctional Management LLC		US	
Emerald Polymer Additives LLC	Emerald Performance Materials	US	
Emergency Ambulance Inc.		US	
Enersys Delaware Inc.		US	
Engine Power Components		US	
Entergy Nuclear Northeast		US	
Entergy Operations Inc.		US	
Epworth Villa		US	
Equity Residential		US	
Erie Interstate		US	
Evergreen Health Care Center	Boulevard Health Consulting	US	
Evergreen Healthcare Management LLC	EHC Management	US	
Evergreen Properties LLC of North Carolina		US	
Exel Logistics	Exel Global Logistics	UK	
Extendicare Health Facilities, Richfield Health Center		Canada	
Fairhaven Health Systems		US	

Farner-Bocken Company		US	
Federal Mogul		US	
Felbro Inc.		US	
Ferro Corporation		US	
Fidelity Health Care	Premier Health Partners	US	
Filtrona Extrusion USA Inc.	Filtrona PLC	UK	
Firstline Transportation Security Inc	SMS Holdings	US	
Fitzgerald's Casino & Hotel	Magestic Star Casino LLC, ultimate parent is Barden Development	US	
Five Star Parking	L&R Group of Companies	US	2
Flight Safety Servies Corporation	FlightSafety Intl, a Berkshire Hathaway Company	US	2
Florida Power & Light	NextEnergy	US	
Fluor Industrial Services		US	2
Flying Food Group		US	2
Food Service of America	Services Group of America	US	
Foothill Waste		US	
FPL Energy	Nextera Energy	US	
Freda Custom Foods		US	
Fresh Direct UTF Trucking	Fresh Direct Holding	US	
Freshko Produce Services		US	
Pepsi Bottling Group	PepsiCo	US	
Fuel Systems LLC		US	
Fulton Precision Industries		US	
G.E. Holman	Holman Distribution	US	
Gainesville Rehab and Nursing Center LLC		US	
Garda CL, Atlantic, Inc.	Garda	Canada	
GCA Service Group		US	
General Cable Corp		US	
Geo Group Inc.		US	
Georgia-Pacific		US	2
Gibraltar Strip Steel, Inc.		US	
Givaudan Flavors Corp.	Givaudan	Switzerland	2
Global Expertise Outsourcing	GEO group	US	
Global Spectrum L.P.	Comcast	US	
GMH	GMH Community Trust	US	
Godin Grocery Inc.		US	
Golden Krust Caribbean Bakery Inc		US	
Golden Living Center	Golden Health Group	US	
Golden Oriental Foods		US	

Goodyear Tire and Rubber		US	
Grace Baking		US	2
Graham Packaging Plastics Products	Blackstone Group	US	2
Grain Processing Corporation	Muscatine Foods Corporation	US	
Gray Interplant Systems Inc.		US	
GreenWaste of Palo Alto, GCP		US	
Griffith Energy Services Inc.	CH Energy Group	US	
Gross School Bus Service Inc		US	
Gulf Chemical & Metalurgical	Eramet Group	France	
Hampton Corporation		US	
Hana Engineering		Korea	
Hanard Machine, Inc.		US	
Harborside Healthcare	Sun Healthcare Group	US	4
Harding and Hill Inc		US	
Hargrove Electric Company		US	
Bally's Park Place, Inc.	Harrah's Entertainment	US	
Haven Health Center		US	2
Haverford Nursing and Rehab Center	Platinum Health Care	US	2
Hawthorne House	First Atlantic Corporation	US	
HealthSport		US	
HearthstoneCarestone Assisted Living	Hearthstone Senior Services	US	
Heartland of Holly Glenn	HCR ManorCare	US	
Heidelberg USA	Heidelberger Druckmaschinen AG	Germany	
Henderson Enterprises, Inc.		US	
Hersey Meters	Mueller Company	US	
HGI-Lakeside Inc.	Herbst Gaming Inc.	US	
Highgate LTC Management, LLC	Northwoods Rehabilitation	US	
Highlands at Brigton	University of Rochester affiliate	US	
Hill's Pet Nutrition Inc.	Colgate-Palmolive	US	
Hilo Hawaiian Hotel	Castle Hotels and Resorts	US	
Hoboken Floors	HWF Holdings	US	
Hollingsworth Management Srvs	Hollingsworth Logistics North America	US	
Holman Contract Warehousing		US	
Holy Family Home	Catholic Sisters	US	
HomeLife Inc.		US	
Honeywell Technology Solutions	Honeywell International	US	
Howard S. Wright Construction		US	
HQM of Spencer County Inc.		US	2

HFS North America	HAVI Group	US	
HTH Corp		US	
Hudson News Distributors LLC	Hudson Group, subsid of Dufry AG	Switzerland	
Hydrochem Industrial Services Inc.	Aquilex Company, subsid of Harvest Partners	US	
IAP Worldwide Services	Cerberus Capital Management LP	US	
IKO Pacific Inc.	IKO	Canada	
Imperial Parking		Canada	
Imperial Sheet Metal	Imperial Manufacturing Group	Canada	
Industrial Hard Chrome/Bar Tech/ Fludi Power Manufacturing		US	
Industrial Specialists LLC		US	
Indyne Inc.		US	
Ingersoll Rand, Inc.		Ireland	
Inner City Nursing Home, Inc.		US	
Inter-con Security		US	2
Intercos America Inc.	Intercos S.p.A.	Italy	
International Paper		US	
Irby Construction	Quanta Services	US	3
Iron Mountain Record Storage		US	2
Ironwood Communications	Division of 180 Connect	Canada	
Irwin Telescopic Seating Company		US	
ITR Consession Company, LLC	Cintra Concesiones	Spain	3
J&M Precision Machining		US	
J.B. Hunt Transport, inc.		US	
J.F. Sobieski Mechanical Inc.		US	
J.P. Mascaro & Sons		US	
Jacaranda Manor Nursing Home		US	
Jaco Transportation		US	
JB Smith Manufacturing Co. Inc.	Anvil International, subsid of Mueller Water Products	US	
Jet Plastica Inc		US	
Jing Fong Restaurant Inc.		US	
Johns Mansville	Berkshire Hathaway	US	
Johnson Controls World Services		US	2
Joint Venture The Ride		US	
JP&D Digital Satellite Systems Inc.		US	
Jupiter Aluminum Corporation		US	
KABCO Pharmaceuticals Inc		US	
Kardex Systems Inc	KRI Group	Switzerland	

KDH Defense Systems, Inc.		US	
Kellogg Snack Division		US	
Kelly Box Packaging company		US	
Kerry Inc.	Kerry Group	Ireland	2
Kiessling Transit Inc.		US	
Kings Aire, Incorporated		US	
King's Country Shoppes Inc.	Kings Family Restaurants, Inc.	US	
Koch Foods		US	2
Koenig & VITS		US	
Kontos Food		US	
KOR Hotel Group/ Sheraton Delfina		US	
Kozy Shack Enterprises		US	
K-ply		US	
Kroger Limited Partnership		US	
Kronos Products, Inc.		US	
L-3 Communications	L-3 Communications Holdings Inc.	US	3
La Casa del Pueblo		US	
LaFarge North America	LaFarge S.A.	France	
Lakeside Transportation		US	
Lakewood Engineering	Jarden Corp	US	
Lakewood Manor North S.N.F.		US	
Lancaster Preferred Partners		US	
Laurel Baye Health care of Lake Lanier, LLC		US	
Lehigh Press	Von Hoffman	US	2
LeJeune Support Services LLC		US	
Lemont Nursing and Rehabilitation Center LLC		US	
Levitz Furniture		US	
Lexmar Distribution /LDI Trucking		US	
Life Care of Lawrenceville	Life Care Centers of America	US	
Lifestyle Support Services		US	
Locating Inc.	Subsid of Dycom Industries, inc.	US	
Lockheed Martin Services		US	2
Locust Grove Facility Operations		US	
Los Angeles Times Communications LLC	Tribune Company	US	
Lowe's HIW INC.	Lowe's company	US	
LP Sebring, LLC	Signature HealthCARE	US	
LuckyCab		US	
Lufthansa Technik Component	Deutsche Lufthansa AG	Germany	

Tulsa			
M & B Services		US	
M&M Restaurant Supply	Keystone Foods, owned by Lindsay Goldberg LLC	US	
Maac machinery		US	
Maid Brigade	Franchised to Alexandria Business Group	US	
Main Motors Sales Company Inc.		US	
Management & Training Corporation		US	4
Manning Construction Company Inc.		US	
Marina District Development Corp	Borgata Hotel Casino and Spa	US	
Marshalls Department Stores	TJX Companies	US	2
Massey Glass		US	
MasTec North America Inc.		US	2
Master Foods/Cal Can Foods	Mars Inc.	US	
Maui Coast Hotel	Coast Hotels	Canada	
MBM Food Service		US	
McCormick & Company		US	
McDonald Wholesale Co.		US	
McKenzie Drywall Finishers Corp.		US	
MDV	Nash-Finch	US	
Mecalux		Spain	
Med Star- Medicar	Universal Transportation LI?	US	
Medallion Foods		US	
MedCorp Inc.		US	
Medford Hamlet		US	
Medical Express Ambulance Service Inc.		US	
MedicWest Ambulance, Inc.		US	
Members Building Maintenance		US	
Mesker Door		US	
Metaldyne		US	
Meteor Sealing Systems LLC	Meteor Gummiwerke K.H. Bädje GmbH & Co. Kg	Germany	
Metro Disposal Inc.		US	
Micro Gauge	Mueller Industries	US	
Midstates Express		US	
Midwest Metal Products Company		US	
Millard Refrigeration		US	
Millennium Rail, Inc.	Watco Company	US	

Motor Wheel Commercial Vehicle Systems	Precision Partners Holdings	US	
Mountaineer Park, Inc.	MTR Gaming	US	
Moyer Packing Company		US	
Myer's Investigative and Security Services		US	
Nash Finch		US	2
NCR Corporation	ATT	US	
NeilMed Products		US	
Nestle Waters North America	Nestle Waters	France	
Netversant Solutions LLC		US	
New Era Cap		US	
New Page Duluth Mill		US	
NewStar Fresh Foods, LLC		US	
NGC Industries	National Gypsum Company	US	
Norbord		Canada	
North Miami Medical Center	RDC Healthway	US	
Northern States Power	Xcel Energy	US	2
Northwest Florida Facilities Management, Inc.		US	
Northwoods Rehab		US	
Norwalk Custom Furniture		US	
Norwood Hospital		US	
Nursing Unlimited Services Inc.		US	
OfficeMax Inc.		US	
Ohio Mattress Company Licensing and Component group	Sealy Corporation	US	
Oldcastle Retail Inc.	CRH PLC	Ireland	2
Olympic Steel Iowa, Inc.		US	2
Omnimold LLC		US	
Oncor Electric Delivery Company		US	
One Source Building Services, Inc.	ABM Industries Incorporated	US	
OPTERA, Inc.	Magna International	Canada	
ORCON Corporation		US	
Ouhu Publications Inc.	Sound Publishing	US	
PACON	VanHoff Companies	US	
Pactiv Corp		US	2
Palm Terrace of Lakeland	Cypress Health Care Management	US	
Pankl Aerospace	Pankl Racing Systems AG	Austria	
Park B. Smith		US	
Park 'N Go of Minnesota		US	
Park Place Center- Genesis	Genesis Health Care	US	2

Parking Concepts		US	
Parkway Regional Medical Center		US	
Parr Lumber Co		US	
Partylite Worldwide	Blyth inc	US	
Penske Logistics	Penske Corporation	US	
Pepsi Northwest Beverages LLC	Pepsi Bottling Group	US	
Petermann Ltd.		US	2
PHC-Elko Inc.	Life Point Hospitals Inc.	US	2
Philly Transportation		US	
Pilgrim Rehabilitation and Skilled Nursing Center		US	
Pilgrim's Pride		US	
Pivotal Staffing Services	Safer Foundation (Non-profit)	US	
PKL Services		US	
PM Beef Holdings LLC		US	
Polyone Corporation		US	
Pondera Medical Center		US	
Ponderay Newsprint Company	The McClatchy Company	US	
Portec Group International	PNC Equity Partners, subsid of PNC Financial Services Group	US	
Posterloid Corp.	Steelcase	US	
PPG Industries, Inc.		US	2
PrattWhitney	United Technology Corp	US	
Praxaire Distribution Inc.		US	
Precoat Metals	Sequa (US); owned by Carlyle Group (US)	US	
Preferred Rubber Company	Watermill Group	US	
Premeire Home Health Care		US	
Prestige Home Attendant		US	
Prime Care Health	Hunterton Care Center	US	
Metropolitan Home Health Care	Premiere Health Care	US	
Product Action		US	
Product International Action		US	
Progress Rail Services Corporation	Subsid of Caterpillar	US	
Progress Transit Company		US	
Publix Supermarkets		US	
Quality Underground Services Inc.	Q3 Contracting	US	
Quesos la Ricura		US	
Quest Diagnostics		US	
Quikrete Northern California Inc.		US	
R.J. Reynolds Tobacco		US	

R.W. Painting of WNY, Inc.		US	2
Race Track Operators, Ltd.	Hazel Park Racetrack	US	
Raley's		US	
Rams Specialized Security Service Corp.		US	
RathGibson		US	
RCN		US	2
REC Silicon	Orkla ASA	Norway	
Recticel Interiors North America, LLC	The Recticel Group	Belgium	
Red Mountain Entertainment		US	
Reliable Trucking	Conco Company	US	
Remington Arms Company		US	
Republic Services Inc.		US	2
Republic Parking Inc.		US	
Revelle Enterprises Inc	dba Pro Quo Books	US	
Revera Health Systems	Revera	Canada	
Rexnord Industries	RBS Global, Inc., Apollo Management LLP is majority equity holder	US	
RichLee Vans		US	
Ridgewood Manor		US	
RIH Acquisitions NJ	Resorts International Holding, affiliate of Colony Capital	US	
Rinker South Central Concrete Division	Rinker Materials Corp, subsid of CSR Limited	Australia	
River Ranch Fresh Foods, LLC		US	
Rockspring Development	AlphaNatural	US	
Roscoe Community Nursing Home		US	
Rossi Concrete		US	
Roundy's Inc.		US	
Rugby Manufacturing Company	TBEI Inc.	US	
Rural/Metro Corporation		US	3
Russell Transport		US	
Ryder System		US	
S& H Lone Star Electric	Lone Star Electric	US	
S&S Transit		US	
S. Bertram Inc.		US	
Sabra Blue & White Foods LLC	Strauss Group	Israel	
Safeway Transportation		US	
SAIA Motor Freight		US	
Saint Francis Extended Care, Inc.	Vintage Estates	US	

Saint Vincent Hospital	Vanguard Health Systems	US	
Saladino's Inc.		US	
Saputo Cheese		Canada	
Satellite Services Inc	SSI	US	
SCA Tissue, North America LLC	Svenska Cellulosa Aktiebolaget SCA	Sweden	
Sealed Air Corporation		US	
Sears Roebuck		US	
Secure Health LP		US	
Security Consultants Group Inc		US	
Sequoyah Electric, LLC		US	
Shepard Exposition Services		US	
Sheridan Broadcasting Company Inc.		US	
Sierra Pacific Industries		US	
Silver Lining Interiors		US	
Sioux-Preme Parking Co.		US	
Small Tube Manufacturing Corp	Three Rivers Capital	US	
Smart Pick Inc	Penny Transportation	US	
Smarte Carte Inc.		US	
SMG Saenger Theatre		US	
Smith Frozen Food		US	
Smithfield Packing Company	Smithfield Foods	US	3
Soaring Eagle Casino & Resort	Owned by Saginaw Chippewa	US	
Sodexo	Sodexo Worldwide	France	2
Solutia		US	
Solvay Chemicals		Belgium	
Somers Thin Strip	Olin Brass, under Global Brass and Copper	US	2
Spartech Plastics		US	2
Special Touch Home Health Care Services		US	
Spirit Trucking Company		US	
Southern Hills Medical Center LLC		US	2
Southern Nuclear	Southern Company	US	
Southern Ocean County Hospital		US	2
Springwood Nursing and Rehab LLC		US	
STA of Connecticut Inc	Student Transportation of America/ Student Transportation of Canada	Canada	
Staff Source		US	
Standard Register		US	

Staples		US	
Stericycle		US	
STS	Dycom	US	
Student Transportation of America		US	2
Summit Cold Storage		US	2
Sunnyview Convalescent Hospital	Longview Management Corporation	US	2
Sunrise Assisted Living at Fleetwood	Sunrise Senior Living INC	US	
Sunrise Convalescent Hospital		US	
Sunrise Mountainview Hospital		US	2
Superior Asphalt Company, Inc.		US	
Superior Farms		US	
Superior Laundry Services		US	
Supervalu Inc		US	
Sutphen Towers	Sutphen	US	
SVC Manufacturing		US	
Sverdrup Technology, Inc; SRC and ERC		US	
Swan Pointe Facility Operations		US	
Tasting Baking (Tasty Baking)		US	
Teck Cominco Alaska, Inc.	Teck Cominco, now Teck	Canada	
Tecstar LLC, Dixie Staffing, Kinder Staffing		US	
Teeples IGA, Browning MT	Teeples Markets	US	
Tendercare Nursing Home		US	2
Terex Telelect Inc.	Terex	US	
Tetra Pak Materials LP	Tetra Lavel International LA	Switzerland	
Adelphia Communications Corp.	TimeWarner bought in April 2005	US	
The Camp Recovery Centers, L.P.	CRC Health Group	US	
The Children's Place	The Childrens Place Retail Stores Inc.	US	
The Corey Steel Company		US	
The Dannon Company, Inc.	Groupe Danone	France	
The Point at Poipu	Diamond Resorts International	US	
The Waters of Three Rivers		US	
Tilton Terrace		US	
Timber Point Healthcare Center		US	
Tin Inc/ Performance Sheets	Temple-Inland	US	
TNI Partners	Tuscon Newspapers	US	
Todd Pacific Shipyards Corporation	Todd Shipyards Corporation	US	
Toll Bros Inc.		US	
Tolman Building maintenance Inc.		US	

Total Health Home Care Corp		US	
Totem Electric of Tacoma, Inc.		US	
Towne Bus LLC	We Transport	US	
Townsend Inc.		US	
ToysRUs		US	
Tractor Supply Company		US	
Trans Healthcare Inc.		US	
Transportation Solutions, Inc.		US	
Tree of Life Inc.	Royal Wessanen nv	Netherlands	
Tree Top Inc.		US	
Trend Western	Del-Jen, subsidiary of Fluor	US	
Tri-County Industries, Inc.		US	
Tri-Seal Holdings Inc.		US	
Tropicana Casino & Resort	Tropicana Entertainment	US	2
TXI Cement Co.		US	
Tyson Fresh Meats		US	2
Union Tribune Publishing Co.		US	
UnionTools Inc.		US	
United Natural Foods Inc.		US	
Upper Cumberland Electric Membership Corporation		US	
USF-Dugan	Yellow Roadway Corporation	US	
UTi Integrated Logistics, Inc.	Uti Worldwide (British Virgin Islands)	UK	
VAE Nortrak North America Inc.	Voestalpine AG	Austria	2
Valero Energy		US	
Valley View Manor Nursing Home		US	
Valmont Industries		US	
Vantage Management Services LLC	Vantage Building and Management Services	US	
Veolia Transportation	Veolia Environment	France	4
Verizon		US	
Veterans Transportation Services Inc.		US	
Vision of Elk River, Inc.		US	
Visteon		US	
Von Hoffmann Corp	Kohlberg Kravis Roberts	US	
Vonachen Services Inc.		US	
Vought Aircraft	Carlyle Group	US	2
VT Griffin	VT Group plc	UK	2
W.R. Meadows, Inc.		US	
W.W. Grainger Inc.		US	

Wackenhut Corporation	Group 4 Falck A/S	Denmark	2
Wagner Equipment Co.	Wagner formed a partnership with Barloworld Equipment LTD to service East Siberia	US	
Walgreens Distribution Center		US	
Walker International Transportation		US	
Walt Disney World Company		US	
Ward Trucking		US	
Warner Brothers Pictures		US	
Wauconda Healthcare and Rehab		US	
Wayne Bare Trucking		US	
Wellsville Namor		US	
Wenner Bread Products		US	
West Hills Medical Center		US	2
West Liberty Foods	Iowa Turkey Growers Association	US	2
West Side Corporation	Elder Group	US	
Western Refining Company		US	
Whemco -Steelcasting Inc.	Whemco	US	
White Engineering Surfaces Corporation		US	
Whittier Hospital Medical Center		US	
Whole Foods Market		US	
Wild Oats Markets Inc.	acquired by Whole Foods in Aug, 2007	US	
Willow Crest Nursing Pavillion, Lt.		US	
Wilson Trailer Company		US	
Wilt's Emergency Services and Transport, Inc.		US	
Winco Foods		US	
Woodman Food		US	
World Yacht		US	
Wynn Las Vegas, LLC	Wynn Resorts LTD	US	
Yakima HMA Inc	Yakima Regional Cardiac Center	US	
Yellow Enterprise System/Yellow Ambulance	Procarent	US	
Yonkers Racing Corporation		US	
York Linings International	York Forter Australasia Pty Limited (Austrialia), subsid of Beroa (Germany)	Germany	
Young Manufacturing Company		US	
YUHSIN USA LTD	U-Shin Group	Japan	
Inland Northwest	Darigold	US	
Aldworth Company, Inc. Dunkin		US	

Donuts			
The Avenue Nursing and Rehabilitation Centre	Capital Living and Rehab Centers	US	
FirstEnergy Nuclear Operating Company	FirstEnergy	US	
Akzo Nobel Surface Chemicals	Akzo Nobel	Netherlands	
National/Alamo Car Rental	Vanguard Car Rental USA	US	2
Alcoa - Excel Extrusions Inc.	Alcoa (in 2005)	US	
Quaker Oats-Gatorade Division	PepsiCo	US	
Cornell Abraxas Group Inc.	Run by the GEO Group	US	
Dixie Consumer Products	Georgia Pacific, subsid of Koch Industries	US	
GGNSC Glendale LLC	Golden Living Centers	US	
Boardwalk Regency Corporation	Harrah's Entertainment Inc.	US	2
Red & Tan Charters	Subsid of CoachUSA, subsid of Stagecoach Group PLC	UK	
Allied Waste and Urban Services of America		US	
Roswell Nursing & Rehab. Center	Cypress Health Care Management	US	
Voorhees Center	Genesis Health Care	US	
Priority Home Care	Premiere Health Care	US	
Sonaca NMF America	Sonaca SA	Belgium	
Sony DADC	Sony	Japan	
Sportsystems Gaming Management at Buffalo Raceway LLC	Delaware North	US	
U.S Foodservice	Kohlberg, Kravis, Roberts and Clayton, Dunbilier, and Rice (equity firms)	US	
International Converter	Packaging Dynamics	US	2
Tower Hill Nursing, LLC	Kindred Healthcare	US	
Pinkerton Government Services	Securitas AB	Sweden	
Certainteed Corporation	Saint Gobain	France	
City Market	Kroger company	US	
Detroit Deisel Corporation Canton Parts Distribution Center	Daimler AG	Germany	
Hilton Philadelphia Airport	Hilton Hotels Corporation	US	
The Crossing Nursing and Rehabilitation Center	Capital Living and Rehab Centres	US	
Edwards Electrical and Mechanical Inc	FirstEnergy Corporation	US	
Americanos USA, LLC	Greyhound, subsid of FirstGroup	UK	3
Vanguard Car Rental	Enterprise Rental Car	US	
Harrah's Imperial Palace Corporation	Harrah's Entertainment	US	

Freightliner LLC	DaimlerChrysler	Germany	
Cardinal Transportation	FirstGroup	UK	
Home Care of Washington	ResCare	US	
Securitas Security Services USA, INC	Securitas AB	Sweden	
Smith's Food	Kroger Company	US	
Greyhound Lines	FirstGroup	UK	

Vita

Sarah Young has spent over a decade working on the three interwoven tracks of her career: labor unions, academic research, and teaching. In 2000, she wrote her undergraduate thesis on the British Coal Miners' Strike of 1984, based on field research conducted in Swansea, Wales. She then went on to land a position as a labor educator training union stewards at the International Brotherhood of Teamsters in Washington, D.C., one of the most demanding and rewarding jobs of her life. She returned to academia after a number of years, earning her Masters in Public Administration at the University of Tennessee in 2008. Sarah continued for her doctoral degree and taught political science courses as a Graduate Teaching Associate for three years, concluding that she was actually pretty good at it. After detouring from her graduate studies in 2012 to work semi-full time and raise her son Patrick, born in 2013, Sarah vowed to complete her degree. She is joyous to be finishing the research she started four years ago. This dissertation unifies what she has learned from her previous career paths.

Sarah would summarize her most valuable discoveries from graduate school as follows:

- Labor unions are critical institutions throughout the community of nations.
- Middle-class economies are built by labor unions and the governments that labor unions support. Virtually every country that developed middle-class economies did so as a result of labor mobilization.
- Governments are guardians of the market and creators of economic systems. It is the duty of governments to make manifest a market that shares wealth to all.

She looks forward to continuing the exploration of these themes in the second wave of her career.