

PRISONS AND COMMUNITY DEVELOPMENT: THE EFFECTS OF PRISON
PRIVATIZATION ON EMPLOYMENT GROWTH
IN RURAL U.S. COUNTIES

By

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To the Faculty of Washington State University:

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Nobody operates in a vacuum. Sociologists, of all people, seem to recognize this best. This thesis in particular has demonstrated to me that academic work is collaborative; the name that appears on the cover of this thesis reflects only a fraction of the effort involved in making it possible. Buried a little deeper, beyond the front cover, anyone who flips through this thesis will find that there are actually four authors; the members of my committee – Greg Hooks, Tom Rotolo, and Clay Mosher – and myself. While all the members of my committee have been essential, Greg Hooks has been particularly involved. Not only has Greg allowed me the use of his dataset (which later in the thesis I somewhat disingenuously claim to have compiled myself), but he has also spent a good deal of time helping me to wrap my head around the data and my research topic. In short, Greg offered the one-on-one experience I had pictured and hoped for before coming to graduate school.

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Abstract

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Recent studies that have examined the economic impacts of prisons on their host communities have found new prisons to be ineffective at expanding the local job base; in some cases prisons are even associated with a decline in employment growth. Drawing from this research, as well as from research in the area of prison privatization, I argue that a focus on the dynamics of privatization can help illuminate some of the nuances of this association. To this end, I make use of a dataset that compiles detailed economic data and includes information on prison location and type. Using a panel design and two-stage least squares regression (2SLS) I conclude, in concert with previous research, that building a new prison, overall, is likely to impede the employment growth of the host community. Turning to the effects of privatization, I conclude that prisons in states that have undergone some degree of privatization of their facilities have a negative influence on employment growth while prisons in states with only public prisons have no discernable impact, positive or negative, on employment growth.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
ABSTRACT.....	iv
LIST OF TABLES.....	vii
INTRODUCTION.....	1
LITERATURE REVIEW.....	3
Prisons, Communities, and Economic Development: Previous Research and Debates.....	3
The Conventional Wisdom.....	3
Mounting Evidence Contradicting the Conventional Wisdom.....	5
Private Prisons and Economic Contexts: A Look at a Potentially Confounding Dynamic.....	8
The Push for Prison Privatization: A Brief History.....	10
What Does the Literature Say About Privatization and Employment Growth?.....	13
The Effect of Privatization on Labor.....	14
Statewide Economic Climate of Competition.....	15
HYPOTHESES.....	17
DATA AND METHODS.....	18
RESULTS.....	32
DISCUSSION.....	44

CONCLUSION.....47

BIBLIOGRAPHY.....50

APPENDIX

 A. List of States with Private Prisons and States with Only Public Prisons.....55

LIST OF TABLES

1. Change in Employment in Wayne County and Ingham County, MI and Whitman County, WA (1997-2004 w/o construction).....	23
2. Dependent Variable log Transformation	24
3. Means, Standard Deviations, and Data Sources, by Privatization Status.....	34
4. 2SLS Regression Coefficients for Predictors of Employment Growth in Rural Counties Between 1997 and 2004, by Privatization Status.....	38
5. 2SLS Regression Coefficients for Predictors of Employment Growth in 2247 Rural Counties Between 1997 and 2004.....	41

INTRODUCTION

As the prison population increased during the “war on drugs” years of the 1980’s and 1990’s, rural counties increasingly became the “hosts” of new prisons (Beale 1997). At the start of these expansion years siting new facilities proved to be difficult as “Not in My Backyard” (NIMBY) opposition thwarted the efforts of prison developers (Shichor 1992). In reaction to this opposition a series of “impact studies” emerged, “in attempts to surface ‘truths’ in the decision-making processes...Government agencies also hoped such research would provide ammunition with which to fight the negative publicity surrounding the battle to keep prisons out of most communities” (McShane, Williams, and Wagoner 1992). Contributing to what I later refer to as “conventional wisdom,” these impact studies often touted positive economic impacts and demonstrated that prisons pose little risk to non-economic concerns such as crime rates or escapes. Overall, these findings effectively undermined NIMBY opposition and actually fueled competition among community leaders who wanted to “win” a prison and prosper from its supposed contribution to employment growth.

Challenging the notion that prisons contribute to employment growth, several activist and academic scholars conducted the first comparative analyses that utilized large samples and statistical controls. Each of these studies has found that prisons in fact do not contribute to the economic well being of host communities, and in some cases they impede growth. These studies have expanded our understanding of the impacts of prisons on local areas and our understanding of community economic development in general; they also have been useful to the activist community. Yet on the whole these studies do not consider the possible effects of prison privatization. This is an important

omission for several reasons: 1) Governments have become increasingly reliant on private prisons to meet the rising demand for incarceration. 2) In the same way that community leaders extend taxpayer funds to public facilities, they also allocate funds to private facilities under the guise of economic development. 3) Proponents and opponents of prison privatization have very different understandings of the effects of privatization, yet there is little empirical evidence available to adjudicate either of their claims. This is in part due to the methodological issues that plague comparative case studies. 4) Some scholars assert that the effects of privatization permeate throughout an industry, which cages even publicly run facilities into an economic climate of competition. There is some debate over the outcome of such an economic climate, but the potential impacts for a host community should not be overlooked.

This research is intended to examine the effects of prisons on their host communities and is guided by an emphasis on the dynamics of privatization; my hope is to integrate two literatures that have not recognized one another very much, despite their interconnections. That is, while it is important for the prison siting literature to address the possible effects of privatization, it is also important for the prison privatization literature to move away from debates that focus primarily on “micromanagement” or “quality of service” issues; these debates, having mostly overlooked the external impacts of private prisons, have also limited their perspectives to data obtained from case studies. These case studies, while important, have restricted their ability to make general claims about the desirability of prison privatization. To address these points, I’ve developed two research questions: 1) What is the impact of a prison on a host communities’ employment

growth? 2) Is the contribution of a prison to employment growth different in states with private prisons as compared to states that only have public facilities?

To answer these questions I utilize a database that includes information on all adult Federal and State prisons in the United States as well as employment rates and other relevant economic controls, by county¹. Because prisons have most recently, and increasingly, been sited in rural communities, I focus on nonmetropolitan counties. Also, I exclude metropolitan counties because their large labor markets tend to conceal the employment effects of prisons (Hooks *et al.* 2004). To analyze these data and investigate these questions I conduct two-stage least squares regression analyses using a panel design.

PRISONS, COMMUNITIES, AND ECONOMIC DEVELOPMENT: PREVIOUS RESEARCH AND DEBATES

The Conventional Wisdom

During the past thirty years the rate of incarceration in the United States has expanded at an alarming rate. Disproportionately, the new prisons that have been built to accommodate this expanding population have been sited in rural communities, especially in communities that are struggling economically (Beale 1997). Publicly, community leaders espouse the economic virtues of this “industry” and promote it as a way to solve local economic problems; they even compete fiercely with other communities to “win” prisons by offering large, publicly funded subsidies for development purposes (Beale 1997; Glasmeir and Farrigan 2006; King, Mauer, Huling 2004). Early academic, policy,

¹ I owe much thanks to Greg Hooks who compiled this dataset and patiently helped me learn how to use it.

and journalistic literature in this area generally supported the economic claims of enthusiasts, contributing to a mounting conventional wisdom that embraced the supposed economic benefits of prisons. One proponent, echoing this conventional wisdom, notes that prison construction:

...creates demand for local goods and services; brings new residents to a recipient community; brings middle-class incomes and additions to the tax base; brings ancillary services to the host community that serve prison needs; often lends to services upgrades in support of the prison; can attract external government funds that improve local roads and utilities; and can lead to an increase in the local population base through the counting of prisoners in local and state censuses, thus helping communities of certain sizes to qualify for additional federal and state development and infrastructure funds (Doyle 2002: 5, as cited in Glasmeier and Farrigan 2007).

Foundational to this ideology were a series of government funded impact studies that were conducted to thwart NIMBY (not in my backyard) opposition to prison construction. The purpose of these studies were to “surface ‘truths’” about the effects of prisons on local areas and “provide ammunition” to governments to help counter this opposition (McShane, Williams, and Wagoner 1992). One highly cited example by Abrams and Lyons (1987) (funded by the National Institute of Corrections) found that prisons have beneficial effects on some economic measures, such as employment and income, and have no apparent negative effects on property values – a primary concern among NIMBY activists. The legacy of these impact studies probably cannot be understated. Though at first government agencies primarily used them to disseminate

these “truths” to rebuff bad publicity, several academic articles proclaiming the economic benefits of prisons also found support in these works (e.g. Carlson 1992; Carlson 1991; Sechrest 1992; Sechrest 1991; Shichor 1992). Indeed, the extent of the conventional wisdom became so entrenched that it led Hooks *et al.* (2004) to note that even opponents of prison expansion (e.g. Schlosser 1998) have conceded the point, even as they decry economic development plans rooted in human suffering.

Mounting Evidence Contradicting the Conventional Wisdom

Some proponents of prison expansion (e.g. Groot and Latessa 2007) still cling to these studies to bolster public policy that aims to pry open the doors of unwilling communities. A series of recent articles by scholars in sociology, geography, and economics, however, have challenged this conventional wisdom, targeting the findings of early studies such as the Abrams and Lyons piece. McShane, Williams, and Wagoner (1992), for example, focus on methodological issues. After examining a number of impact studies, these authors concluded that several of the studies suffer from seriously flawed methodologies, which probably have produced biased findings. Elucidating this point, Hooks *et al.* (2004) criticize Lidman, Poole, and Ropert (1988) for drawing conclusions based only on the perceptions of community business leaders and real estate agents. Besides the obvious sampling bias inherent in such a study, methodologists have noted that there is frequently a disjuncture between subjective interpretations of reality and objective conditions.

Recent scholarship has also contradicted enthusiasts on empirical grounds. By addressing the methodological concerns raised by McShane, Williams, and Wagoner

(1992), several studies have found that prisons in fact *do not* generate economic benefits to their host communities (Glasmeier and Farrigan 2007; King, Mauer, Huling 2004), and in some cases can be harmful (Besser and Hanson 2004; Gilmore 2007; Hooks et al 2004). Drawing from larger debates in the economics of community development, these authors have critically analyzed the presumed sources of a prison's "inevitable economic boost" and have retooled a theory describing the pitfalls of prison-based economies (Silas 1984: 27).

First, prior to these studies, promises of employment opportunities had not been vetted by a rigorous investigation of who actually fills the new jobs. King, Mauer, and Huling (2004) put it this way:

Simply identifying that a prison creates employment without tracing the recipients of that employment provides little useful information for citizens of a potential host community...When prisons are promoted to a community as a solution for economic distress, the belief by the community is that not only will the prison bring jobs, but also that the *current residents* will fill the jobs (457: emphasis in the original).

After closer examination, Thies (1998) found that workers from *outside* of the community typically occupy new prison jobs, effectively narrowing opportunities for community residents (see also Gilmore 2007, Beale 1997). Partly, this can be explained by union backed prison operating procedures. King, Mauer, and Huling (2004) note that the most coveted correctional jobs are usually filled by officers already in the system; the protocol for high-level corrections jobs is structured to preference those officers with seniority in the system (see also Dao 1997, Thies 1998). But these are just the high-wage

jobs. Community members also find that the few low wage jobs prisons create, such as janitorial positions, are out of reach because they are typically filled by the prisoners themselves, for below minimum wage. This is one example of how “prisons [do] not lower the unemployment rate of host counties [because] they may actually pit local residents in competition for employment with inmates” (King, Mauer, and Huling 2004: 474; see also Blankenship and Yanarella 2004).

Second, Hooks *et al.* (2004) found that prisons have failed to spur economic growth and in the slowest growing counties new prison construction actually impedes growth. To explain this, these authors distinguish between indirect incentives, such as tax subsidies and infrastructural investments, and direct interventions such as athletic fields, casinos, or military bases, where “newly created jobs are based on the public expenditures” (Hooks *et al.* 2004: 42). Direct interventions are often highly visible and politically popular, but nevertheless the empirical evidence weighs heavily against their favor (Wolman and Spitzley 1996). One possible mechanism to explain the findings of Hooks *et al.* (2004), then, might relate to this distinction and the opportunity costs it implies. That is, when communities invest in prison construction they lose the opportunity to invest in those aspects of the economy that are likely to spur employment growth.

Third, critics assert that a prison’s multiplier effect is likely to be more limited than advocates expect. Williamson, Imbroscio, and Alperovitz (2002) describe the economic multiplier this way: “Simply put, a local economy with rich networks of interaction between local enterprises...will be able to stabilize jobs more easily than localities in which every dollar spent flies straight out of the community...” (166).

Relating to this, prisons have been criticized for generating few linkages with the host community and thus leak important local dollars that are essential to job creation. Three critiques on this point are particularly salient in the literature. 1) Gilmore (2007) notes that corrections officers are unlikely to live in the host community, thereby diffusing their potential economic contributions to the economy. King, Mauer, and Huling (2004) estimate that up to two-thirds of potential tax revenues and other economic benefits leave the host community in this way. 2) Huling (2002) expects that prisons may displace current employment patterns by drawing large box stores and national chains that compete with (and drive out of business) local businesses, but are unlikely to forge local economic linkages themselves. 3) Blankenship and Yanarella (2004), Hooks *et al.* (2004), and King, Mauer, and Huling (2004) all note that construction contracts, especially for large facilities, may not be filled by local construction firms because they lack sufficient resources. This leads to additional economic leakages from the host community that could have expanded its job base (Williamson, Imbroscio, and Alperovitz 2002).

In summary, despite the visibility and political popularity of prison construction, there are several theoretical and empirical reasons to reject the conventional wisdom that prisons are a panacea for poor rural communities.

PRIVATE PRISONS AND ECONOMIC CONTEXTS: A LOOK AT A POTENTIALLY CONFOUNDING DYNAMIC

Undoubtedly, this new research has contributed greatly to our understanding of how prisons impact local economies and job growth. But, just as in any other area of study,

gaps remain. One point of concern for this paper is the failure of previous studies to consider the possible effects of prison privatization. This is an important omission for at least three reasons.

First, in the same way that community leaders woo public prisons with large, publicly funded incentives, they also allocate scarce resources for private facilities, justifying their actions by waving the banner of economic development (Mattera and Khan 2001).

Second, public and private prisons operate under two very different ownership structures and funding mechanisms. While they both obtain some degree of public funding, public prisons do so through state-led budget allocations and are publicly owned, whereas private prisons are privately owned and obtain funding through government contracts, the stock exchange and other private sources. This distinction is important because both supporters and detractors of privatization agree that these modes of operation and the motivations they engender will lead to profoundly different outcomes, despite their disagreement on exactly what those outcomes will be. On the one hand, proponents of prison privatization believe that competition in the context of a free market leads private prisons to be more efficient than their public counterparts – that is, they can provide an equal or better “service” at a lower cost. On the other hand, detractors emphasize the tension between profit chasing and cost containment inherent in capitalistic endeavors. Because private companies are beholden to their shareholders, they say, these companies will always privilege profit over public concerns and quality. Yet, despite these strong feelings, there are few reliable studies comparing public and

private prisons on measures of cost savings and quality and none that assess their economic impact on host communities (Perrone and Pratt 2003, Gaes *et al.* 2004).

Third, whatever the effects of prison privatization may be, some researchers think that privatization has the potential to engender an economic climate of competition, creating a situation where market forces not only influence the operations of private facilities, but also permeate through the entire industry, thus subjecting public facilities to the same market pressures.

An important question to ask, then, is whether or not there is an empirical basis for this ideological divide. Expanding from this question, do community leaders serve their communities by doling out publicly funded incentives to attract private prisons? Are there statewide consequences of privatization that effect employment growth in host communities? Before I move on to the debates surrounding these questions, I first outline a brief history of the expansion of prison privatization.

The Push for Prison Privatization: A Brief History

The literature on prison privatization explains that there are several types of privatization and public-private partnerships the government can utilize. Hallett (2006) distinguishes among them this way:

- 1) Private financing and construction of prisons, particularly to avoid the need for issuing public bonds to finance construction of new facilities.
- 2) Private industry involvement inside prisons, particularly in the provision of services to prisoners and in the utilization of prisoners as laborers.

- 3) Private management, construction, and operation of whole prison facilities by independent contractors (as cited in Hallett 2006: 123).

The third type – private management, construction, and operations – most closely resembles the type of prison under examination in this paper, and is likewise the most controversial form of private involvement in the prison industry. More specifically though, according to the Department of Justice (2000), the data I use includes, “...all confinement facilities *administered* by State or Federal governments or by private corporations...” (U.S. Department of Justice 2000, emphasis mine).

The popularity and expansion of this type of prison privatization resulted from a confluence of events beginning in the 1970’s and 1980’s, a period that ushered in a distinct political and ideological climate (Logan 1990; Shichor 1995). Criminality in this period took on a new meaning with the war on drugs; increasingly, non-violent drug offenders (particularly African Americans) began to fill the nations prisons (Hallett 2006; Shichor 1995). During this era the crime rate climbed at an alarming rate, filling prisons to the point of bursting. Generally though, the public was favorable to “get tough on crime” policies but became increasingly disdainful of increasing incarceration costs (Shichor 1995). As a result, somewhat of a paradox emerged – the same public that favored “get tough” laws and prison expansion were unwilling to pay the necessary costs for new prison construction. Since the main benefit of privatization is consistently presumed to be reduced cost and improved efficiency, the impetus for the expansion of prison privatization arose in part out of this paradox (Gaes *et al.* 2004; Hallett 2006; Logan 1990; Shichor 1995).

Drawing on the anti-government and pro-free market sentiments characteristic of the Reagan era, policy makers touted prison privatization as a viable alternative to governmental prison operation. The economic logic underlying claims to improved efficiency and cost reduction is “derived from modification of the standard market model” with the notion of free competition at its root (Sclar 2000: 6). Simply put, the standard market model depicts “...an ideal free-market system...[in which] numerous providers exist to serve customers’ needs – and customers enforce efficiency by virtue of their option to cease transacting with one provider in favor of another” (Hallett 2006: 134). This model envisions a world in diametric opposition to the “monopoly conditions” of public services, providing a culturally resonant answer to the scourge of government.

Despite this outward appearance of governmental non-involvement, however, this detachment is often a façade that can be capitalized upon for political gain. Indeed, another major “cost reducing” benefit (for proponents) of privatization is that private prison funding, through the use of lease revenue bonds, can circumvent voter approval for prison construction, allowing leaders to use public funding (without appearing to do so) *and* capitalize on the political popularity of being seen as tough on crime (Hallett 2006; Mattera and Kahn 2001; Shichor 1995).

Other authors expand upon this narrative by focusing on the efforts of constituencies that are politically and ideologically aligned with the privatization movement, emphasizing that prison privatization is not simply a utilitarian response to objective economic conditions but is also integrally connected to vested interests (Hallett 2006; Price 2006; Price and Riccucci 2005). In this view, politicians are compelled to

expand prison privatization even in the face of inconclusive evidence. These myriad factors, coupled with the public's perception that, "the situation cannot become worse, let's try something else, we don't have anything to lose" helps to explain the expansion of prison privatization (Shichor 1995: 247). The first private prison opened in 1984. Though growth was slow at first private prison growth rapidly expanded in the early 1990s (Mattera and Kahn 2001) so that by 2001 there were 91,828 inmates housed in private prisons (Harrison and Beck 2002).

What Does the Literature Say About Privatization and Employment Growth?

The case to privatize prisons, as we have seen, rests on claims to efficiency, innovation, and flexibility and stem from free market assumptions – whether privatization has delivered on these promises has sparked some scholarly debate on the topic. Most of this work has focused on "utilitarian" or "micromanagement" issues, though other works have focused on moral, ethical, and "macro-level" contexts relating to race, politics, and inequality (Shichor 1998, Shichor 1995; Logan 1990; Hallet 2006; Price 2006; Price and Riccucci 2005). Though none of these authors take as their central thesis the matter of host community employment growth, it is possible to glean from these works clues relating to my topic. There are two debates in particular that I address: 1) the effects of prison privatization on labor 2) the generation of an economic climate of competition and the extent to which this may trigger a "race to the bottom."

The Effect of Privatization on Labor

A large proportion of prison expenditures are allocated to labor – about 70% (Donahue 1989; Gaes *et al.* 2004). According to Gaes *et al.* (2004), the purchase materials required for construction and operations – the remainder of prison expenditures – do not offer much potential for cost savings. Based on these facts, most observers agree that the major cost savings of private prisons are likely to come from labor expenses. Even privatization proponent Charles Logan (1990) sees the reduction of “overly generous benefits” as an advantage of private ownership. Since it would seem that trimming the fat around labor is taken as a given, how do proponents and detractors envision this effect of free market discipline on the operations of private prisons? What are the effects, if any, that this might have on host community job growth?

Those who oppose privatization emphasize the antagonism between capital and labor that necessarily squeezes maximum productivity from labor while minimizing labor costs as much as possible. Proponents of prison privatization do not view market competition as exacerbating this problem though. In fact, advocates such as Logan (1990) claim that labor conditions in private prisons will actually improve over conditions in public facilities. The rationale for this is grounded again in free market reasoning; because private corporations are so deft at personnel management they “can cut costs *without cutting salaries*...[through] [a]dequate and appropriate staffing, better working conditions, and more efficient procedures” all of which “improve productivity and morale, decrease absenteeism and turnover, and reduce expensive reliance on overtime” (Logan 1990: 81, emphasis mine). The underlying specter, however, is the fact that cost savings are likely to come, perhaps not at the expense of employee salaries,

but rather in the number of total employees hired. This issue here as it relates to employment opportunities in the host community should be obvious: job opportunities for locals, which are limited even for public prisons, are in even shorter supply in private prisons.

But even on the matter of wages, a recent comparative study by Austin and Coventry (2001) has shown that, “the total cost savings of prisons is only about 1%, most of which comes from cutting labor costs.” Admittedly though, lower wages by itself may not pose a problem for the employment growth of host towns. But, as Shichor (1995) asks, “how [can] private companies, paying less money, with more limited fringe benefits...attract a better and *stable* workforce” (Shichor 1995: 195 emphasis mine)? The question is important because it reveals the difficulties prisons, especially private prisons, face in terms of turnover rates. Even if, as Huling (2002) has suggested, private prisons are more likely to hire locally (probably because they don’t allow unions), they tend to suffer from comparatively high turnover rates due to low pay (Shichor 1995; Camp and Gaes 2000; Hallett 2006), which may eventually force them to extend their employee search geographically, beyond a distance where locals would benefit.

Statewide Economic Climate of Competition: Does the Privatization of Some Facilities Trigger A “Race to the Bottom” for Cheap Prison Labor?

Some authors have argued that the introduction of private prisons into a market has the potential to discipline public prisons into becoming more efficient and flexible.

McFarland, McGowan and O’Toole (2001) summarize this perspective: “Proponents believe that private prisons not only cost the taxpayer less, but also require the state-run

agencies to operate more efficiently themselves. When private companies are allowed to enter into the market for prisons, they argue, state run facilities are forced to operate more efficiently or risk losing their funding” (6).

Part of the foundation for this assertion comes from work by Osborne and Gaebler (1992), who, in a chapter entitled “Competitive Government: Injecting Competition into Service Delivery,” recount the story of trash collection in Phoenix. Due to difficulties raising taxes, explain the authors, the mayor decided to contract out the city’s garbage duty. Ultimately, though, the city-run “Public Works” won the contract with a margin of \$6 million over the nearest private competitor, demonstrating the beneficence of competition and the malleability of government agencies. The authors conclude that, “perhaps more than any other concept in this book...[competition]...holds the key that will unlock the bureaucratic gridlock that hamstringing so many public services” (79-80). An interesting aspect to this perspective is the uncritical acceptance of competition as advantageous and the assumption that, whatever the advantages may be, they will “catch on” when the public sphere is forced to compete. Importantly though, these authors glossed over the fact that these savings were made possible with the use of new technology requiring only one worker per truck instead of three. Though I would guess that the political popularity of saving 6 million tax dollars would outweigh the costs of lost jobs in the eyes of voters, the unintended consequences are clear: despite expectations to the contrary “competition between public and private may have the antithetical impact of lowering overall services *throughout the system*” (Gaes 2005: 86, emphasis mine).

The results of “injecting” competition, however, will ultimately hinge on the validity of claims made by prison privatization proponents and detractors. An economic climate of competition may prove beneficial if privatization itself is the boon that proponents predict (higher salaries and job satisfaction resulting in a lower turnover rate). On the other hand, if high turnover rates and low wages are endemic to private prison operations (as studies have shown) then “injecting” competition into the public sphere seems unlikely to result in the type of employment growth residents hope for and expect. Instead of extending the “benefits” of competition to a statewide level, it may actually engender a statewide “race to the bottom” for a cheap and scaled down workforce, the results of which may point to a lower overall benefit for the prison’s host community.

HYPOTHESES

Based on the recent literature that has examined the effects of prisons on local areas and found them to be an ineffective catalyst of employment growth, I derived the following hypothesis:

Hypothesis 1: Prisons are not a significant determinant of employment growth for rural counties.

I developed another hypothesis to guide data analysis relating to my research question, which asks: what are the effects of prisons on local areas in the context of a state that has undergone some degree of privatization? As noted in the foregoing literature review, proponents and detractors of privatization hardly agree on the effects of privatization, yet there is little research to bolster either of their claims. A critical reading of the existing literature, however, seems to reveal that the evidence weighs against the

expectations of privatization proponents. If, as detractors expect, privatization compromises worker conditions, then prisons that operate in a statewide context of competition may further hinder employment growth in their host county, thereby calling into question the beneficence of publicly funded incentives to attract prisons. For this reason I derived the following hypothesis.

Hypothesis 2: Prisons in states that have undergone some degree of privatization will demonstrate negative employment growth.

DATA AND METHODS

To examine the effects of prison construction on local areas I made use of a dataset that includes detailed county-level employment information and other economic measures, as well as information on prison construction. The use of county level data is increasingly popular in studies of national economic processes. According to Hooks *et al.* (2004) there are several benefits to this unit of analysis, though it does pose some difficulties as well. For the purposes of this paper, which seeks to understand the effects of prisons on local areas, counties are preferred to larger units of analysis such as states or regions because these units often obscure within unit variation. Also, in terms of pragmatic concerns of data collection, counties provide static boundaries (compared to cities or labor markets), which facilitates comparative analysis (Hooks *et al.* 2004). On the other hand, with a county-level focus it is possible to lose sight of macro-level political and economic interventions or processes that in part determine county level conditions; following Hooks *et al.* (2004) I included controls that account for regional economic processes and spatial diffusion (explained in further detail below).

To test my hypotheses I employ a panel design – panels consist of seven-year periods for the dependent and main independent variables. I constructed the periods around this timeframe for two reasons: First, the classification system for the primary dependent variable changed in 1997 from the Standard Industrial Classification (SIC) system to the North American Industrial Classification (NAIC) system. Second, at the time that I began this research, 2004 was the most recent year that employment data were available. For all other variables periods were created according to data availability (i.e., some measures are only collected on a decennial basis). In creating these periods I followed Hooks *et al.* (2004) and employed average change scores for the dependent variable (more details below); this method is preferred to a simple change score, which can mask large within period variations and subsequently bias results. Additionally, following Hooks *et al.* (n.d.) and Halaby (2004), I created change scores for the independent and control variables. Hooks *et al.* (n.d.) summarizes the case in favor of this method:

When employing a panel design to study change, Halaby (2004; see also Finkel 1995) makes a persuasive case for employing the method of first difference, i.e., the dependent and independent measures are simple change scores. This approach models directly the change under investigation and provides some protection in the case of omitted variables (see Finkel 1995, p. 5).

Theoretical considerations helped to guide data collection for this paper, while methodological considerations played an important role in variable construction. The theoretical concerns are outlined below, but here I will outline briefly the methodological

concerns that contributed to variable construction as well as include a brief map to help guide replication.

An important concern that guided variable construction for this database relates to the regression assumption of homoscedasticity. Homoscedasticity means that the residuals of a regression equation vary independently of the values of the independent and control variables; in other words, the residuals should be distributed around the predicted values of the regression coefficients randomly (Allison 1999). To test the degree to which my data fit this assumption, I conducted an exploratory ordinary least squares (OLS) regression analysis that included each of the variables I review below. Then, using a Breusch-Pagan/ Cook-Weisberg test of heteroscedasticity, I examined the probability that the residuals of the OLS regression vary independently of the independent and control variables. The results of this test indicated a high probability of heteroscedasticity, significant at the .001 level. According to Allison (1999), “Heteroscedasticity means that the degree of random noise in the linear equation varies with the values of the x variables” (126). While heteroscedasticity does not bias the regression coefficients, it can bias the standard errors (Allison 1999); because significance tests are calculated based on the relationship between the regression coefficients and the standard errors, deflated standard errors are likely to yield a type I error – a relationship where there is none.

To help compensate for this issue, I followed Hooks *et al.* (n.d.) and employed logarithmic transformations for all change scores in the model (except for the measures of industrial segmentation, details below). Change scores, however, sometimes yield negative or zero values. Because the log of negative and zero values are undefined I

identified the minimum value for each change score and added the absolute value of that number to the total, yielding an observed value of the untransformed variable equal to “zero.” To this I added a constant of “1” (one). The resulting values for each change score are a minimum observed value of “zero” (because the log of one is zero) for the transformed variable². The remaining cases for each variable were then shifted upward in relationship to this minimum value, using its absolute value (plus one) as a constant. The maximum value of each variable, then, is equal to the log of the sum of the constant plus the maximum value of the untransformed variable. I include an example below in the explanation of the dependent variable

DEPENDENT VARIABLE

The dependent variable of interest for this study is *employment growth (natural log)*. Employment information in this dataset comes from the Bureau of Economic Analysis (2008), which provides employment data for various sectors of the economy at all levels of government. To account for *employment growth*, I utilized an average change score for the seven-year period under examination (1997-2004). Additionally, I disaggregated construction employment from total employment, following Hooks *et al.* (n.d.), because construction employment itself is likely to result in future employment gains. According to Bartik (1991, 1994), not only does construction provide temporary employment, but it also helps workers gain the human capital necessary to compete in the job market, even after the construction project has been completed. To account for these effects, I

² I performed these log transformations for all U.S. counties (metropolitan and non-metropolitan). In my analyses, however, I include a dummy variable that drops all metropolitan counties. For this reason the minimum value for non-metropolitan counties sometimes exceeds zero.

included construction employment as a separate measure (explained in further detail below). In order to disaggregate construction employment from total employment for the period under examination (1997-2004) I identified the two-digit code (23) for construction under the North American Industrial Classification (NAIC) system and excluded those values.

Using three counties as examples – Wayne County, MI; Ingham County, MI; and Whitman County, WA – the tables below illustrate how I constructed the dependent variable. For each year during the 1997-2004 period I calculated the change in employment for these three counties, and then calculated the mean. The average change in employment for Wayne County, Ingham County, and Whitman County over this period, according to the table, is -4,234, -389, and 294, respectively. That is, between 1997 and 2004 Wayne County lost, on average, about 4,200 jobs per year (not including changes in construction employment). Ingham County lost fewer jobs, on average, than Wayne County, while Whitman County gained an average of 294 jobs per year during this period (again, not including changes in construction employment).

Table 1: Change in Employment in Wayne County and Ingham County, MI and Whitman County, WA (1997-2004 w/o construction)

Year	1997- 1998	1998- 1999	1999- 2000	2000- 2001	2001- 2002	2002- 2003	2003- 2004	Mean
<u>County</u>								
Wayne	2,584	5,179	19,944	-16,079	-20,380	-10,578	-10,344	-4,239
Ingham	-1291	2640	610	-2536	164	819	-3127	-389
Whitman	-3147	19	983	3317	337	163	383	294

I used three counties in order to also demonstrate how the change scores were then transformed into logarithmic values. In this sub-sample the lowest value among the untransformed employment change scores is Wayne County, with an average of 4,234 job losses for each year during the period. As described above, the log of a negative number (and zero) is undefined, so it is necessary to shift the distribution of all the employment values in the database to avoid negative or zero values. Because in this example Wayne County is the lowest value, I shifted the entire distribution upwards in relation to Wayne County. As the baseline, the value of Wayne County itself was shifted upward by adding the absolute value of -4,239 plus “one.” After this procedure, the resulting transformed change score for Wayne County will be equal to “zero.” All other values in the (sub-sample) database were shifted upwards using 4,240 as a constant. The calculations for these three counties are presented below.

Table 2: Dependent Variable log Transformation

	Change Score	Adjusted Value	+ 1	Natural log
<u>County</u>				
Wayne	-4,239	0	1	0
Ingham	-389	3,850	3,851	8.26
Whitman	294	4,533	4,534	8.42

INDEPENDENT VARIABLES

To test the hypothesis that prisons do not contribute to employment growth, the dataset I used contains a comprehensive count of all adult (federal and state level, public and private) correctional facilities built in the United States prior to 2000 (U.S. Department of Justice 2000)³. The prison siting literature distinguishes between the economic effects of newly constructed prisons and established prisons – this strategy remains useful in part because it helps to distinguish between immediate benefits (or drawbacks) of prison construction and long-term benefits (or drawbacks) of prison construction. This distinction is also useful because it helps to verify the claims of political leaders who, of course, vie for resources to initiate *new* prison construction with the professed goal of expanding local employment opportunities. For this reason, I employed measures to account for *established* and *new* prisons (natural log). Since I am interested in the 1997-

³ I would like to acknowledge Peter Wagner and the Prison Policy Initiative for making these data available and accessible.

2004 period of employment growth, I considered a prison to be new if it was constructed between 1991 and 1997. Established prisons are those built prior to 1991. This information and data construction helped me to replicate the findings of earlier studies, but in order to examine the extent to which prisons in states that have undergone privatization contribute to local economic development I created a dummy variable; this variable equals “0” if a state only has public prisons and “1” if a state has undergone some degree of privatization.

CONTROL VARIABLES

Employment measures: To control for the momentum of employment conditions at the time of prison construction, I included a lagged measure for the change in *total employment except construction (natural log)*. In this way, the effect of prisons on changes in employment growth will not be masked by broader trends in employment that have occurred independently of prison construction.

As mentioned above, Bartik (1991, 1994) argues that construction employment contributes to later employment gains. To account for this possibility I included a lagged measure of the change in *construction employment growth (natural log)*. Following Hooks *et al.* (n.d.), these construction projects “include...but are not limited to, prison construction.” To extract these data I identified the two-digit classification for construction (15,16, and 17) from the Standard Industrial Classification (SIC) system, which “encompasses a number of construction activities, including residential, commercial and industrial projects” (Hooks *et al.* n.d.).

Human Capital (high-school and college completion, natural log): Most analysts agree that human capital is a key resource to achieve economic mobility, “The most consistent and significant conclusion across samples is that the percent of a county’s population obtaining a bachelor degree or higher level of college education has a positive relationship with economic growth” (Young, Levy and Higgins 2004: 19, as cited in Hooks *et al.* n.d.). As a result, I controlled for the effects of human capital by including a lagged measure of the change in percent of the *population 25 years and over with a bachelors degree* and a separate measure for the change in the percent of the *population 25 years old and over with a high school diploma* (U.S. Department of Commerce 1981, 1995).

Structure of Industrial segmentation: Following Hooks *et al.* (2004) and Lobao, Rulli and Brown (1999), I recognize that the nature of industrial segmentation is likely to shape employment opportunities. I used lagged variables in the dataset that disaggregate change in employment by *core manufacturing, core nonmanufacturing, competitive, and state* employment (measured as the percent of labor force). The distinction is important because the size of each sector in a given county paints a picture of the overall economic context that defines employment opportunities and in which prisons are constructed.

Core manufacturing and nonmanufacturing, for example, “refers to sectors associated with high wages and high levels of job security” (Hooks *et al.* 2004: 46). The *competitive sector* (e.g., services), on the other hand, is characterized by low wages and job security, while state level jobs such as public administration, health, and education tend to be secure but do not generally provide comparatively high incomes (Lobao, Rulli and Brown 1999). As is the case with the other lagged employment measures, I

identified each employment sector by its two-digit SIC code. Following Hooks *et al.* (2004) and Lobao, Rulli and Brown (1999) I define each segment of the economy as follows:

Core manufacturing includes durable manufacturing (except furniture) plus two nondurable manufacturing sectors: printing/publishing and chemicals and allied products. *Core non-manufacturing* includes construction, transportation services, communication services, and banking credit and other financial services. Most nondurable manufacturing (e.g., food, textiles) plus furniture manufacture are in the *competitive sector*. The *state sector* refers to employees of federal state and local governments (see Lobao, Rulli and Brown 1999, pp. 594-95 for details) (as cited in Hooks *et al.* 2004).

OTHER CONTROL VARIABLES

Other variable selection has been guided by debates in sociology and economics that focus on the relationship between the state and the economy, with particular attention to the capacity of the state to influence (or the likelihood that the state will consciously intervene in) economic activity. For scholars embracing a neoliberal perspective of economic activity, the impetus for economic development and the expansion of employment opportunities lies in free market activity and minimal impingement on capital mobility. In this view, the best way to achieve employment growth is to provide a “good business climate.” By allocating tax and infrastructural incentives, locales offset the costly initial capital investments businesses face, which increases the likelihood that a business, and its concomitant economic activity, will locate in their area. To control for

business climate, I included a lagged measure for the change in *per capita property taxes (natural log)* (U.S. Department of Commerce 1981, 1995).

The political economy camp, on the other hand, emphasizes the frequency with which the state intervenes in the economic sphere to help assuage low employment and income disparities as well as to construct and maintain infrastructure. To account for the possibility of state intervention, I controlled for state and local level fiscal capacity by including a lagged measure for the change in *total revenue (natural log)* (U.S. Department of Commerce 1981, 1995). I also included a lagged measure of the change in *commercial airline activity (natural log)* to account for differences in infrastructure across counties (U.S. Federal Aviation Administration, various). Again, following Hooks *et al.* (2004), I also included a lagged measure to account for the change in *commercial banking activity (natural log)* in a county, which is expected to have a positive influence on employment growth (U.S. Department of Commerce 1981, 1995).

Regional economic processes: I included regional dummy variables to control for macro-level economic contexts. By including these dummy variables, I can be more confident that the economic impact the prison variable captures is in fact the effect of a prison, rather than the effect of a regional economic process such as deindustrialization.

Spatial Autocorrelation: Regression assumes independence of cases, but labor markets overlap towns, counties, states, and even countries – in other words, the employment rate of one county is likely to depend to some degree on the economic health of surrounding counties. Following other studies that examine spatial processes, I included a control for spatial interdependence as outlined by Land and Deane (1992). I utilized this spatial effects term in the same way as Hooks *et al.* (n.d.):

Land and Deane have developed a procedure to efficiently compute estimators for spatial autocorrelation...To calculate the spatial effects term, “each place is treated successively as the point of reference, and the sum of quotients of the [dependent measure] of every other place divided by its distance from the reference point is computed” (Land and Deane 1992, p. 227; distances have been computed using the standard trigonometric function and the latitude and longitude coordinates internal to each county).

MODEL SPECIFICATION

To test my hypotheses I created models in STATA using two-stage least squares regression (2SLS). Hypothesis 1 is essentially a replication of previous work that has found prison construction to provide no employment benefits, or in some cases negative impacts, to host communities. To test this hypothesis myself I constructed a regression model containing all of the variables reviewed above for all of the 2247 nonmetropolitan counties in the database. The ordinary least squares (OLS) equation for this model is:

$$Y_1 = \alpha + \beta_1 Y_2 + \beta_2 X_1 \dots \beta_{24} X_{23} + e$$

where:

Y_1 = employment growth (natural log, except construction employment) for the seven-year period under examination (1997-2004);

α = y-intercept;

β = regression coefficient

Y_2 = endogenous “Land-Deane” spatial effects term, which is calculated, as specified above, using the dependent variable;

$X_1 = \text{new prison count (natural log)}$, defined as the number of prisons established in a county between 1991 and 1997;

$X_2 = \text{established prison count (natural log)}$, defined as the number of prisons present in a county as of 1990;

X_3 - X_{23} = control variables, reviewed above;

e = error term

This general model, however, needs to be modified because Y_2 (the Land-Deane term) is an endogenous variable. That is, because the dependent variable is used to calculate the Land-Deane term, disturbances in the error term of this model are correlated with the estimated values of the endogenous variable. To address this problem I employ two-stage least squares regression (2SLS). This approach, by “purging” the elements of Y_2 that are correlated with the error term (Wooldridge 2006; see also Hooks and Bloomquist 1992), yields an unbiased estimate for the Land-Deane term and, thus, renders a more accurate calculation of the dependent variable than would ordinary least squares regression (OLS). As the name of the method might imply, 2SLS is calculated in two stages. In the “first-stage” the elements of the Land-Deane term that are correlated with the error term are separated from the uncorrelated elements (Wooldridge 2006). This is accomplished by regressing the Land-Deane term “on all independent variables in the model plus a set of instrumental variables. [I used] the unemployment rate in 1970 and existing housing units in 1950 as the instrumental variables (U.S. Department of Commerce 1981)” (Hooks et al. n.d.). This equation is expressed as:

$$\hat{\gamma}_2 = \alpha + \beta_2 + \chi_1 \dots \beta_{24} \chi_{23} + \beta_{25} \chi_{24} + \beta_{26} \chi_{25} + e$$

where:

$\hat{\gamma}_2$ = the predicted value of Y_2

X_{24} = unemployment rate in 1970

X_{25} = housing units in 1950

The resulting predicted value is uncorrelated with the error term, yet is still able to control for spatial autocorrelation. In the “second-stage,” an OLS model is estimated that includes the predicted value from the first-stage ($\hat{\gamma}_2$) as a regressor. Finally, the general model used to calculate the results I present below is expressed as:

$$\gamma_1 = \alpha + \beta_1 \hat{\gamma}_2 + \beta_2 \chi_1 \dots \beta_{24} \chi_{23} + e$$

I tested the remaining hypothesis in two different ways. First, I conducted two separate analyses. In one model I included only states that have privatized some of their facilities and in the other I examined states with only public prisons. These models provide useful information but are somewhat limited because the comparison group in each model is restricted to counties in states with the same privatization status. To help address this issue I conducted another analysis that included all 2247 counties. As in the basic model, prisons were identified as either “established” or “new,” but were also organized into secondary categories that disaggregated the independent variables by their privatization status. In other words, the independent variables in this model are: established and new prisons in states with only public prisons; and established and new prisons in states that have privatized some of their facilities. The advantage of this analytic strategy is the ability to compare employment growth in prison towns, by privatization status, with the employment growth of all other U.S. counties.

RESULTS

To help provide some context for these analyses, below I've included a table of summary statistics (means and standard deviations, logged and untransformed values) for each of the variables reviewed above (except the regional variables), along with their sources.

Because the privatization status of each state is a central feature of my analyses, I've included summary statistics for each variable in the "full model" (all 2247 rural counties) and summary statistics for counties in states with only public prisons and for counties in states with private prisons. A quick glance at the dependent variable reveals that there is some difference in employment growth between states with private prisons and states with only public prisons; counties in states with private prisons saw an increase, on average, of 85 jobs per year over the seven-year period, counties in states with only public prisons saw an increase of about 97 jobs for each year during the period. When compared to the employment growth over the 1990-1997 period, however, 1997-2004 seems to be a relatively stagnant time for everyone. On average, rural counties experienced an increase in employment of 189 jobs per year during the 1990-1997 period, but only a 90-job increase per year during the 1997-2004 period, a difference of about 100 jobs per year. Though the means illustrate to some extent the climate of the job market in rural counties over these periods, the standard deviations for these values indicate that there is also a great deal of variation. Ascension, Louisiana (the best performing county) increased its job base by an average of 2,845 per year between 1997 and 2004, while Marion, Illinois (the worst performing county) lost about 726 jobs per year.

The means and standard deviations for the independent variables, likewise, do not give an accurate account of the typical case because most counties do not have or have not recently become the host of a prison. However, these values do give some sense of the overall penal climate in the United States. For example, counties in states with only public prisons had .18 prisons as of 1990 and received .06 prisons between 1991 and 1997. States with private prisons had .20 prisons as of 1990 and received .11 new prisons between 1991 and 1997. Again, while these numbers do not paint a clear picture of the typical case, they do demonstrate that, on average, states with private prisons also have more prisons altogether. Freemont, Colorado, for example, had *eight* prisons as of 1990 and added *four more* prisons between 1991 and 1997.

Table 3: Means, Standard Deviations, and Data Sources, by Privatization Status (rural counties, N=2247)¹

Change In: ²	Full Sample		States w/ only public prisons		States w/ private prisons		Data Source
<u>Dependant Variable</u>							
Employment (1997-2004 w/o construction)	89.74 (265.1)	9.28 (.02)	97.99 (270.58)	9.28 (.02)	84.64 (261.57)	9.28 (.02)	<i>The Bureau of Economic Analysis (2008, NAIC)</i>
<u>Independent Variables</u>							
New Prison (1991-1997)	.09 (.34)	.06 (.21)	.06 (.25)	.04 (.17)	.11 (.38)	.07 (.23)	<i>The Census of State and Federal Adult Correctional Facilities</i>
Established Prison (prior to 1991)	.19 (.57)	.12 (.30)	.18 (.56)	.11 (.29)	.20 (.58)	.12 (.31)	
<u>Control Variables</u>							
Employment (1990-1997 w/o construction)	189.39 (300.21)	10.27 (.01)	196.82 (310.88)	10.27 (.01)	184.80 (293.46)	10.27 (.01)	<i>The Bureau of Economic Analysis (2008, SIC)</i>
Construction employment (1990-1997)	22.39 (62.88)	8.34 (.01)	23.12 (60.1)	8.34 (.01)	21.94 (64.53)	8.34 (.02)	<i>The Bureau of Economic Analysis (2008, SIC)</i>
% of labor force w/ BA (1980-1990)	10.35 (4.9)	.15 (.04)	10.04 (4.5)	.15 (.04)	10.54 (5.11)	.15 (.04)	<i>U.S. Department of Commerce</i>
% of labor force w/ HS diploma (1980-1990)	10.5 (3.86)	.15 (.04)	10.85 (4.05)	.15 (.03)	10.29 (3.73)	.14 (.03)	<i>U.S. Department of Commerce</i>
% Core manufacturing (1980-1990) ³	.21 (.03)		.21 (.02)		.21 (.03)		<i>The Bureau of Economic Analysis (2008, SIC)</i>

% Core non-manufacturing (1980-1990) ³	.19 (.02)		.19 (.02)		.18 (.02)		<i>The Bureau of Economic Analysis (2008, SIC)</i>
% Competitive sector (1980-1990) ³	.20 (.04)		.19 (.04)		.20 (.04)		<i>The Bureau of Economic Analysis (2008, SIC)</i>
% State sector (1980-1990) ³	.17 (.02)		.17 (.02)		.17 (.03)		<i>The Bureau of Economic Analysis (2008, SIC)</i>
Commercial aircraft activity (1980-1990) ⁴	-432.57 (14,063)	13.87 (.03)	-200.75 (4,378)	13.55 (.01)	-575.67 (17,551)	13.55 (.03)	<i>U.S. Federal Aviation Administration</i>
Commercial bank deposits (1980-1990) ⁵	26.93 (57.85)	11.15 (.001)	30.61 (70.94)	11.15 (.001)	24.66 (47.91)	11.15 (.000)	<i>U.S. Department of Commerce</i>
Per capita property tax (1977-1987) ⁵	.22 (.24)	.45 (.13)	.18 (.15)	.43 (.09)	.25 (.29)	.46 (.15)	<i>U.S. Department of Commerce</i>
General revenues of local gov't (1977-1987) ⁵	6.73 (11.06)	5.26 (.05)	6.2 (10.75)	5.26 (.05)	7.06 (11.24)	5.26 (.05)	<i>U.S. Department of Commerce</i>
N=	2247		858		1389		

¹ Untransformed values are on the left of each column, natural log values on the right

² All of the values in this table are expressed as average change scores

³ Measures of industrial segmentation are untransformed values

⁴ Untransformed values are expressed as flights per day

⁵ Untransformed values are expressed in 1982 dollars, millions

Using the general equation that I described above, Table 4 presents the findings of three separate regression analyses that examine the determinants of employment growth in rural counties. The findings presented in the “Full Sample” model lend support to hypothesis one, which is consistent with the previous studies reviewed above. In summary, established prisons do not have a significant effect on employment growth while newly constructed prisons appear to have a negative effect, significant at the .05 level.

Because the regression coefficients for logged variables can be interpreted as “an ‘X’ percentage increase (or decrease) in the independent variable results in an increase (or decrease) in the dependent variable equal to the value of the coefficient multiplied by ‘X,’” it is somewhat difficult to interpret the coefficients for the independent variables. That is, because the existence or non-existence of a prison only occurs in increments of 100% (the equivalent of one prison), it seems nonsensical to think of a 1% change in a prison. Given this, I interpret the coefficient for the “new prison” variable (-.0039) as a .4% decline in employment for each new prison acquired over the seven-year period under examination. This coefficient does attain statistical significance, and while the magnitude of the coefficient is rather small, I follow the sentiments of King, Mauer, and Huling (2004) when they argue that, “In the case of prison siting, it is incumbent upon those supporting siting for economic development to demonstrate not simply marginal economic gain, but rather, to establish that the economic benefits have been worth the investment” (461). Indeed, though a .4% decline in jobs over a seven-year period probably will not devastate a community, it is important to bear in mind that community leaders do not simply allow prisons to enter their communities – they allocate large and

publicly funded resources to attract prisons for development purposes, resources that could be used for other projects. In this context, I would judge “the economic benefits to not be worth the investment.”

The findings in table 4, presented under the titles “States with only public prisons and “States with private prisons,” lend support to hypothesis 2, which states that privatization is likely to result in negative effects on employment growth in host communities. Specifically, model 2 shows that prisons, in states with only public prisons, do not have a significant impact on employment growth. However, when we turn our attention to states with private prisons in model 3, prisons appear to have a negative and statistically significant effect at the .05 level. In these states, counties that received a new prison saw, on average, a decline in employment of .5% over the seven-year period under examination, net of all other factors expressed in the model.

Table 4: 2SLS Regression Coefficients for Predictors of Employment Growth in Rural Counties Between 1997 and 2004, by Privatization Status¹

	Full Sample	States w/ only Public Prisons	States w/ Private Prisons
Change In:²			
New Prison (1991-1997)	-.40** (.19)	.22 (.35)	-.54** (.22)
Established Prison (prior to 1991)	-.04 (.17)	.25 (.26)	-.24 (.21)
<u>Control Variables</u>			
Land-Deane	-.09* (.05)	-.01 (.05)	-.16** (.07)
Employment (1991-1997 w/o construction)	72.55*** (10.76)	77.13*** (18.55)	70.11*** (12.69)
Construction employment (1991-1997)	38.44*** (5.67)	52.17*** (7.80)	33.23*** (7.03)
% of labor force w/ BA (1980-1990)	6.28*** (1.76)	7.56*** (2.61)	6.82*** (2.16)
% of labor force w/ HS diploma (1980-1990)	2.70 (1.70)	.94 (2.38)	4.03 (2.47)
% Core manufacturing (1980-1990)	3.80* (2.21)	.83 (4.07)	4.92* (2.78)
% Core non- manufacturing (1980-1990)	5.42** (2.13)	2.15 (3.41)	6.27** (2.77)
% Competitive sector (1980-1990)	4.47*** (1.59)	2.35 (2.92)	5.11** (2.05)
% State sector (1980-1990)	-3.99* (2.42)	-9.85** (4.27)	-2.03 (2.86)
Commercial aircraft activity (1980-1990)	.03 (.86)	-8.57 (.12)	.87 (.81)
Commercial bank deposits (1980-1990)	239.21 (157.16)	343.56 (255.95)	42.10 (189.32)

Per capita property tax (1977-1987)	-.74 (.48)	.87 (1.02)	-93.72** (.45)
General revenues of local gov't (1977-1987)	5.76*** (1.73)	3.58 (2.49)	6.69*** (2.30)

Fixed Effects:²

Census Divisions

North East

New England (1)	.94 (.93)	2.00** (.94)	1.08 (1.99)
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Middle Atlantic (2)	1.13 (.72)	-----	.31 (1.04)
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Mid-West³

West North Central (4)	.64*** (.14)	.94*** (.21)	.17 (.29)
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South

South Atlantic (5)	.16 (.27)	.78*** (.29)	-1.03 (.67)
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East South Central (6)	.59*** (.21)	-----	.57*** (.22)
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West South Central (7)	.33 (.26)	.44 (.28)	-.39 (.60)
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West

Mountain (8)	-.28 (.64)	1.12 (.74)	-1.46 (1.09)
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Pacific (9)	-.73 (.95)	.61 (.90)	-1.82 (1.52)
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Constant	-2836.45 (1705.987)	-4034.78 (2757.38)	-584.87 (2053.22)
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R ²	.4250	.5092	.3772
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N=	2247	858	1359
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*p<0.10, two-tailed test; **p<0.05, two-tailed test; ***p<0.01, two-tailed test

¹ All coefficients and standard errors are multiplied by 100 to improve readability

² All variables, except the census divisions, are expressed as average change scores

³ The Eastern Upper Mid-West region was omitted as the comparison category

Table 5 presents the comparison of employment growth in prison towns (in both states with and without private prisons) with employment growth in all other U.S. counties. The results of the regression analysis indicate that prisons in states with only public facilities do not contribute in any significant way to employment growth, whether the prisons are new or established. In states with private prisons, however, new prisons impede economic growth, significant at the .05 level. The coefficient (-.0055) indicates that prisons in states with private prisons, when compared to employment growth in all other U.S. counties, impeded employment growth by .5% over the seven-year period under observation, net of all other factors employed in the model. Established prisons in states with private facilities do not appear to have a significant impact. The findings presented in Table 2 seem to lend further support to hypothesis 2.

**Table 5: 2SLS Regression Coefficients for Predictors of Employment Growth in
2247 Rural Counties Between 1997 and 2004¹**

Change In:²

States w/ only public prisons

	.25
New Prison (1991-1997)	(.37)
Established Prison (prior to 1991)	.43
	(.27)

States with private prisons

	-.55**
New Prison (1991-1997)	(.22)
Established Prison (prior to 1991)	-.29
	(.21)

Control Variables

Land-Deane	-.08**
	(.05)
Employment (1990-1997 w/o construction)	71.60***
	(10.73)
Construction employment (1990-1997)	37.72***
	(5.72)
% of labor force w/ BA (1980-1990)	7.08***
	(1.73)
% of labor force w/ HS diploma (1980-1990)	2.26
	(1.73)
% Core manufacturing (1980-1990)	3.91*
	(2.18)
	%%
% Core non-manufacturing (1980-1990)	5.32**
	(2.11)
% Competitive sector (1980-1990)	4.50***
	(1.56)
% State sector (1980-1990)	-3.94
	(2.40)

Commercial aircraft activity (1980-1990)	.003 (.87)
Commercial bank deposits (1980-1990)	231.99 (156.24)
Per capita property tax (1977-1987)	-.68 (.48)
General revenues of local gov't (1977-1987)	5.85*** (1.72)

Fixed Effects:²

Census Divisions

North East	
New England (1)	1.04 (.93)
Middle Atlantic (2)	1.39** (.14)
Mid-West ³	
West North Central (4)	.69*** (.14)
South	
South Atlantic (5)	.19 (.27)
East South Central (6)	.64*** (.21)
West South Central (7)	.46* (.26)
West	
Mountain (8)	-.10 (.64)
Pacific (9)	-.39 (.94)
Constant	-2740.98 (1604.34)
R ²	.4319

*p<0.10, two-tailed test; **p<0.05, two-tailed test; ***p<0.01, two-tailed test

¹ All coefficients and standard errors are multiplied by 100 to improve readability

² All variables, except the census divisions, are expressed as average change scores

³ The Eastern Upper Mid-West region was omitted as the comparison category

A consistent feature of all of these models is the unremarkable contribution of established prisons to employment growth. This finding provides further support for the notion that prisons are ineffective at forging the type of linkages that are necessary to expand a community's employment base. Not only does new prison construction seem to be an initial burden on its host community, but this finding also seems to demonstrate that there is no long-term payoff for "winning" a prison.

Another salient feature of these models is the performance of the control variables. The strongest predictors of employment growth are: previous employment growth, growth in construction employment, and human capital (particularly the measurement of college attainment). As these predictors have a long precedent in the academic literature their performance is not surprising. What is perhaps more surprising is to note that high school attainment does not, in any of the models, predict employment growth; I would conjecture that this is the case, in part, because college attainment has displaced high school completion as an employer's preferred credential.

The controls that characterize a county's economic structure also attain statistical significance in most of the models, and their magnitudes are relatively large, though not as consequential as previous employment growth. The rest of the controls are inconsistent and generally non-significant, with the exception of the measure of government fiscal capacity – in most models this measure attains high statistical significance and has a magnitude comparable to those that characterize the local economic structure.

DISCUSSION

This research contributes to the literature in the following two ways: 1) It lends further credibility to the claim that prisons do not contribute to the employment growth of host communities and 2) It demonstrates that the decision of a state to privatize some of its facilities does not improve this prospect; in fact, it further impedes employment growth.

In my literature review, I suggested two related mechanisms that might help explain these findings. On the one hand, opponents of privatization contend that, due to inherent contradictions in capital/ labor relations, privatization will inevitably squeeze as much value as possible from its labor, thus scaling back its work force, worsening working conditions, and contributing to excessive job turnover. On the other hand, some researchers have suggested that the private operation of some facilities is likely to generate an industry wide climate of competition, permeating even those facilities that operate with public funding. Combining these two dynamics, I hypothesized that the privatization of some facilities would extend, through market competition, the worst aspects of privatization throughout the market and result in comparatively worse employment growth in a prison's host community. Although my findings are relatively robust, it is important to recognize that this explanation is not directly tested in my analyses. Thus, one limitation of this study is that I am unable to identify the specific mechanisms that explain this relationship, though these explanations seem to be the most plausible to emerge from the literature.

Another explanation that seems equally as plausible, and also is untested in my analyses, relates to the role of economic incentives in the process of prison siting. It is possible, as Hooks *et al.* (2004) have suggested, that prisons impede employment growth

due to the opportunity cost of a misguided investment. According to Williamson, Imbroscio, and Alperovitz (2002), “encouraging a favorable business climate is a fundamental goal of most local politicians, Republican and Democrats alike. This in turn means that business typically enjoys a privileged position in the distribution of local fiscal resources” (54). What is the cost to the community when business interests are a priority? One of the greatest ironies of the prison expansion of the 1980s and 1990s is that the resources that were used to fund this effort were often diverted from programs, such as education, that have been demonstrated to expand employment opportunities and simultaneously reduce crime rates (Hallett 2002; Shichor 1995). Indeed, the expansion of the prison industry has resulted, in part, from “community disorganization” – an impoverishment, not just of economic capital, but also of the human and social capital necessary to participate in the mainstream job market (Hallett 2002). So, according to Hallett (2002), “as public resources are diverted toward *prisons* and away from public programs in education and childcare, for example, socially disadvantaged communities struggle all the more” (375, emphasis in the original). It is important to note, however, that this opportunity cost, as Hallett (2002) describes it, is a cost to *all* communities (and especially socially disadvantaged communities) when resources are diverted from public programs to prisons. Future research should examine the degree to which this dynamic is in effect in the specific communities that host prisons as compared to those communities that do not become prison hosts. An important element of this research should, of course, compare the propensity of privatized states and public states to foster a “good business climate” and assess the extent to which their similarities or differences impact the host

community. A point of comparison might begin with the “lease-revenue” bonds that are so important to private prison funding.

Though the opportunity cost of “industrial recruitment” may provide a compelling explanation for why a prison impedes employment growth, it also points to a potential sampling bias in my study. That is, I compared the employment growth of states that only have public prisons with states that have some private prisons, assuming the only major difference between these two types of states to be their decision to privatize. But it might be the case that there is a systematic difference between these states that would lead them down such a path to begin with that my models do not capture. Though I included several measures to control for economic contexts, Goetz and Swaminathan (2006), in a study on the effects of Wal-Mart on poverty levels, say that it is important to test for “simultaneity (reverse causation),” to ensure that the researcher is measuring the independent effect of that variable (216). It perhaps would provide a more robust analysis to use an “estimation strategy,” in which I would first model the predictors of a prison’s location then control for this information in the regression model (as outlined in Goetz and Swaminathan 2006). Such a test would more likely control for sampling bias and should be an important consideration for future research.

Another criticism of this work relates to measurement error. Since I used a panel design, I rely on seven-year periods for the dependent and main independent variables. I also included an established prison variable to account for all prisons preceding 1991. To measure the differential effects of prisons in states with private prisons compared to those without I included a private prison dummy variable that either keeps or drops (depending on its value, “0” or “1”) states with private prisons. The dummy variable, however, is a

static measure of all states with private prisons as of 1997. That is, in 1997 the dummy variable accurately accounts for all states that have private prisons, but for the preceding years in the panel the dummy variable overestimates the number of states with private prisons, since states were acquiring private prisons throughout the period. Though this measurement error is problematic, I am inclined to think that this error is likely to underestimate the strength of the findings since the dummy includes states that do not have private prisons for some of the years during the period, which may dilute the impacts of those states that do have private prisons. An additional measurement error can be found in the prison count: *all* adult prisons were included in the prison measurement, including state and federal prisons. The inclusion of federal prisons may confound the results of these analyses because federal prisons are unlikely to be sensitive to the dynamics of competition I've outlined above. Though it seems possible that measuring the prison count accurately (by excluding federal prisons) may actually strengthen the findings of this research, it is an important omission and should be a consideration of future research.

CONCLUSION

Consistent with the findings of recent studies, I find that prisons do not contribute to the employment growth of their host counties. Furthermore, I find that prisons in states with private prisons significantly impede the employment growth of the host community. This research has helped to further our understanding of the effects of prison siting on host communities by focusing on the economics of privatization. Although those that study prison privatization often focus on how to measure and compare the “quality” of

imprisonment with public facilities, this study has contributed to the debate about prison privatization by examining the “external” effects of this management strategy.

Additionally, by relying on a large sample, the findings of this research are more easily generalized than the results of comparative case studies – the most widely used research method in public/ private prison comparisons.

However, despite the extensive work of others and the findings of this paper, proponents of prison development have and will likely continue to author promotional pieces designed to garner public support for prison recruitment. As researchers it is our duty to compile the most scientifically rigorous and detailed evidence possible in order to draw the most accurate picture of social and economic phenomena; hopefully, the results of such efforts can help arm those who fight for the interests of marginalized people.

With this in mind, I believe that this study provides compelling evidence, on a macro-level, of the harmful impacts of prisons on their communities. As an advocacy piece, though, the quantitative analyses in this paper may not provide compelling evidence to the average community member who is weighing the perceived costs and benefits of accepting a prison – frankly, regression models do not “speak” to people on a visceral level. Further complicating matters, as discussed above, community leaders publicly advocate such plans. Political rhetoric, of course, does communicate on a visceral level. By combining rigorous science with personable evidence, I advocate for further research that will render not only accurate results but also results that can connect with the experiences of those who may be affected by prison siting.

From an academic standpoint, a research agenda that would expand the current research should examine the mechanisms that shape economic development outcomes.

Above, in the discussion section, I outlined the potential opportunity costs of industrial recruitment as one possible mechanism. An in depth comparative qualitative analysis could help to identify the nuances of industrial recruitment and examine its decisiveness in contributing to the negative employment effects of prisons in states with private prisons. Ideally, such a study would investigate the extent and intensity of a community's "business climate" as well as variation in this attribute among states with different philosophies of governance relating to economic development and criminal justice policies. Additionally, the analysis should compare a community that "won" a prison with a community that "lost" the competition; an analysis of a community that devoted public spending to social programs (instead of a prison) would provide an important comparison group to help determine the beneficence of a particular development strategy. Ultimately, the focus of further research should be on employment as well as the effects of prisons on factors that contribute to employability, such as human and social capital. From an activist standpoint, this type of qualitative research can reveal detailed evidence, but can also be packaged to communicate the experiences of real people, experiences that are impossible to see and communicate when using abstract analyses like this one. In summary, while this research has helped to expand our understanding of prison siting and privatization, there is still much work to be done, both academically and in terms of the public consequences of our findings.

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**Appendix A: List of States with Private Prisons and States with Only
Public Prisons**

States with Private Prisons

Alabama
Arizona
California
Colorado
Florida
Illinois
Iowa
Kansas
Kentucky
Louisiana
Massachusetts
Minnesota
Mississippi
Montana
Nevada
New York
North Carolina
Ohio
Oklahoma
Pennsylvania
South Dakota
Rhode Island
Tennessee
Texas
Utah
Wyoming

**States with Only Public
Prisons**

Arkansas
Connecticut
Delaware
Georgia
Idaho
Indiana
Maine
Maryland
Michigan
Missouri
Nebraska
New Hampshire
New Mexico
North Dakota
Oregon
South Carolina
Vermont
Virginia
Washington
West Virginia
Wisconsin