

Decoupling the Invisible Hand and the Iron Fist:  
Incarceration and Labor Market Policy in American States Since 1990

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## Abstract

From Rusche and Kirchheimer, to Freeman, to Wacquant, scholars have long theorized that labor market and criminal justice trends are linked. I extend theories of this type to explore whether and how labor market factors relate to differences in state incarceration rates across the United States from 1990-2012. Using scholarship from multiple disciplines, as well as my own analysis of state-level aggregate data over 23 years, I show that analyses connecting labor market and penal policy realms provide useful insights into both policy areas. I employ year fixed-effects analyses and find that state labor market policies and conditions are related to state incarceration practices in visible and significant ways. In particular, states with more indicators of labor market freedom, such as no minimum wage laws and limited collective bargaining protections, tend to have higher incarceration rates. These differences are only partially mediated by differences in state economic conditions and state government ideologies. I then add measures of race to my analysis and find evidence that relationships among labor market and criminal justice policy spheres are contingent and racialized. For example, differences in labor market policies and conditions that matter for American populations generally speaking, matter little for African American populations specifically. As a whole, I find that state-level evidence in many ways supports theories that American free market policies over the last two decades been coupled with an increased use of "the iron fist" of state criminal justice practices. I also find, however, that this relationship has not been universal. My analysis suggests that functionalist accounts of the interplay of labor markets and criminal justice spheres are overly simplistic and miss an important racial story. I conclude by showing that these findings have consequential implications for actors interested in reducing incarceration in America today.

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## Introduction

*Everyone keeps asking me, "How is this possible?" I have five words for you: "Liberty and justice for all." The ever-expanding incarceration industry has begun to violate some of the deepest and most sacred principles of BOTH major political parties. [...] For example, the right takes very seriously the concept of "liberty." Conservatives and libertarians want to defend the rights of every individual to pursue his or her dreams. They favor limited government. They hate massive, failed, bloated government bureaucracies. [...] On the other hand, progressives like me care passionately about the "justice for all" part. [...] Over the last 30 years, both parties helped lead us down the path to mass incarceration. It will take both political parties to reverse course.*  
-- Van Jones, March 26, 2015<sup>1</sup>

What do Koch Industries and the American Civil Liberties Union (ACLU) have in common?

Not much. These two interest groups are known for representing opposite ends of the American political spectrum. Koch Industries, heavyweight funders of Tea Party activities and a range of conservative campaigns, are symbols of "small government," individualist approaches to governance and citizenship. The ACLU, meanwhile, centers its activities on ideals of "rights and justice" and can be understood as a beacon of liberal and collectivist governing methods. When it comes to labor market policy, for example, Koch Industries and the ACLU are seasoned opponents. Koch Industries actively pursues free-market policies, favoring minimal government constraints on employers, while the ACLU supports policies aimed at protecting employee rights and laborer interests, frequently advocating for increased employer regulation.

Despite their opposing positions on most issues of governance, Koch Industries and the ACLU recently announced their shared commitment to reducing incarceration in the United States, together founding the well-funded *Coalition for Public Safety* in March 2015. Today, Koch Industries and the ACLU claim common ground on the goal of addressing "America's over-incarceration problem." Even so, these two interest groups continue to represent opposite positions

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<sup>1</sup> Van Jones, March 26, 2015, *A Cause That Unites the Right and Left* <http://www.channel3000.com/news/jones-a-cause-that-unites-the-left-and-right/32025016?item=0>

on labor market policy.<sup>2</sup> Do these labor market policy differences matter for those concerned with America's over-incarceration problem? If so, how?

In this paper, I consider one facet of these questions by testing an extension of Rusche and Kirchheimer's classic hypothesis, that criminal justice practices and labor market policies follow similar trajectories (Rusche and Kirchheimer 1933). Specifically, I look at differences across states from 1990-2012 and examine whether and how variation in state incarceration rates reflect differences in state labor market conditions and policies.

I show Rusche and Kirchheimer's core argument to be useful: labor markets matter for criminal justice outcomes, and criminal justice outcomes matter for labor markets. I also demonstrate that commonly theorized relationships among these two policy areas are not observed in all cases, confirming that functionalist accounts of labor market effects on penal policy are incomplete. In fact, by exploring states that do not fit expected patterns and employing racial sub-group analysis, I show that functionalist accounts miss critical insights about how race matters in relationships among criminal justice and labor market policy spheres in the U.S. today.

In what follows, I first discuss prominent theories from multiple disciplines to create a comprehensive starting point for considering how labor market factors and incarceration rates may be expected to relate at the state level from 1990-2012. Next, I employ year fixed-effects models to explore associations among labor market factors and incarceration across states within this time period. I construct a labor market policy index that measures state policies regarding minimum wage, public employee collective bargaining rights, Prevailing Wage, and "Right to Work" laws. I use this index to analyze how state labor market policies relate to state incarceration rates when a variety of factors are controlled for. I then extend this analysis by exploring the role of state racial composition among state labor market and criminal justice policies, identifying important nuances within relationships among labor market conditions and state imprisonment rates.

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<sup>2</sup> See <http://www.coalitionforpublicsafety.org/>; and <http://www.nationalreview.com/article/415029/coalition-public-safety-robert-l-woodson-sr>

There is wide consensus that a broad range of political, social, and economic factors influence state incarceration differences. I will demonstrate that, according to evidence from the last two decades, state policy choices matter too. The policy choices that matter, however, are not necessarily the ones we think.

## **Literature Review**

### ***Beyond Rusche and Kirchheimer***

Rusche and Kirchheimer are well known for making the argument that punishment practices reflect levels of labor supply and demand (Rusche and Kirchheimer 1933). Specifically, they posited that in capitalist societies, punishments would be harsh during times of high labor surplus and more lenient during times of labor shortage. Many researchers have critiqued this claim and other elements of Rusche and Kirchheimer's basic theories, pointing out that their conceptualization of a direct relationship between labor market factors and penal practices is overly simplistic (Garland 2012: 109). Of particular concern, Rusche and Kirchheimer neglect to address complexities introduced by intermediary processes, such as politics, ideologies, institutions, legislative systems, and individual actors, through which economic conditions and interests may influence the penal realm (Garland 2012: 108-110).

Even so, a number of scholars have extended Rusche and Kirchheimer's premise in analytically useful ways confirming that, while not a necessity, labor market and penal policy realms *can and often do* influence each other. For example, researchers have shown that an unemployment-imprisonment relationship is at times observed in the U.S and other advanced capitalist societies (Micholowski and Carlson 1999; King et al. 2012). These researchers make clear that exploring the politically and historically contingent nature of this relationship is a valuable undertaking in itself as it can provide insight into the very intermediary processes Rusche and Kirchheimer ignored (Micholowski and Carlson 1999).

To begin to explore such intermediary processes, in the remainder of this section I organize past scholarship into theoretical categories to map out key avenues by which it is reasonable to expect that labor market and criminal justice spheres have influenced each other across American states over the last two decades. I first show how incarceration can be understood to affect labor market conditions. Next, I describe ways labor market conditions may affect incarceration, both via increases in crime and via increases in social insecurity. I then give attention to theories of linked policy regimes, discussing research based on the premise that labor market and criminal justice policies may be linked via governing rationalities and strategies. Finally, I consider several important factors that are likely to play important roles in structuring relationships among state criminal justice and labor market spheres, emphasizing the critical role of electoral politics and the American federalist political structure.

### ***Prison as a Labor Market Institution***

U.S. labor markets are sometimes suggested to be less constrained by institutional intervention than those of European welfare states (Giersch 1993). Under this view, times of strong economic performance in the U.S, relative to European countries, are sometimes attributed to America's lower levels of unionization and fewer welfare subsidies (Scarpetta 1996). This, according to neoclassical economic theory, allows wages to better adjust to market conditions. In Europe, neoclassical theorists argue, institutions introduce inefficiencies. In particular, large welfare states and strong unions limit demand for labor and reduce incentives to work (Western and Beckett 1999: 1031).

Scholars have shown, however, that accounts of the U.S. labor market that neglect to consider the penal system as a labor market institution are incomplete (Western and Beckett 1999). Over recent decades, periods in which the U.S. economy has outperformed European economies have, in fact, been accompanied by significant state intervention in the U.S. labor market through the

expansion of the American penal system. Both in terms of incarceration rate increases and state spending on corrections, the American criminal justice system expanded dramatically relative to other advanced economies over the last three decades. Since the 1980s, the American penal system can be understood as playing a far greater role in U.S. labor markets than traditional labor market interventions such as unemployment benefits and employment related services. In the early 1990s, for example, \$91 billion were spent on courts, police and prisons in the U.S. while only \$41 billion were spent on all unemployment benefits and employment related services (Western and Beckett, 1999: 1031; Statistical Abstract of the United States 1995, Table 585).

Western and Beckett show that there are two primary and conflicting dynamics through which the incarceration boom in the U.S. has impacted labor market conditions (Western and Beckett 1999). In the short run, incarceration *lowers* unemployment levels by removing working-age Americans from the labor force. In the 1990s, Freeman pointed out that the proportion of working-age men in U.S. prisons approximated that of long-term unemployed men on public assistance in many western European countries (Freeman 1996: 26). In the long-run, incarceration *raises* unemployment rates by reducing employment opportunities of the formerly incarcerated. Research has shown that incarceration causes formerly incarcerated individuals to have poor employment records for years into the future, controlling for many other factors and in comparison to their own pre-prison employment (Freeman 1992). Based on these trends, a compelling case can be made that strong U.S. labor market performance, in the 1980s through the mid-2000s, was influenced by high and increasing incarceration rates.

### ***Poor Job Prospects Increase Crime***

While the research discussed above focuses on the effect of incarceration on labor markets in the U.S, another line of research has explored the reverse direction of impact, emphasizing the impact of labor market conditions on incarceration. First, many scholars have suggested that labor



market conditions influence penal practices through changes in crime rates. Research of this type is based on the premise that as job prospects for poor Americans decrease, incentives to commit crime increase, leading to both increased crime rates and increased incarceration rates.

Freeman's work exemplifies this line of scholarship. Freeman (1996) shows that, for low-skilled, low-wage workers, the returns to legal employment have decreased over recent decades. He points out that from the mid-70s through the 1990s, real earnings fell substantially for the least educated and lowest-wage workers. He suggests that earnings for these individuals dropped approximately 20-30 percent in this time period, indicative of a substantial decrease in the demand for low skilled labor in the U.S. (Mishel and Bernstein 1994; Freeman 1996). Freeman and many other scholars contend that even as real wages have fallen, returns to criminal activity have increased. Ethnographic studies confirm that, in large part due to transformations within the informal drug market, incentives increased markedly in 1980s and 1990s for low income men in urban areas to engage in criminal behavior (Bourgois 1995; Bourgois 1996; Tonry 1995; Anderson 1999). According to this view, the American prison boom over of the last few decades is linked to the labor market primarily through an increase in crime, which is driven by increased unemployment and decreased wages for low-skilled workers.

### ***Government of Social Insecurity Theories***

Researchers from the fields of sociology and political science expand on analyses such as Freeman's, suggesting that labor market conditions influence incarceration through more than crime rates alone. Scholars of contemporary American politics have suggested that criminal justice policies may be used to govern the *social insecurity* that accompanies certain labor market configurations. Scholars in this field suggest that criminal punishment can be understood as “express[ing] authorities’ reaction to perceived menace of marginal populations” (Western 2006: 2295). Thus, to

the extent that labor market factors cause an increase in perceived social insecurity, penal policies are expected to become more punitive, whether or not crime increases.

Understanding penal policies and practices as tools in the government of social insecurity has two key implications for theorizing relationships among labor markets and incarceration rates. First, increases in unemployed and low-wage populations are expected to be viewed as an increased risk to public safety. Rather than basing criminal justice policy on actual crime conditions, authorities may base criminal justice policy on the perceived *risk* of crime associated with perceived economic conditions within certain populations (Simon 2013). Second, to the extent that economically marginalized groups appear to refuse to work in available jobs, or reject dominant conceptions of work and achievement, these populations may represent a threat to economic and social order broadly speaking (Western 2006; Quinney 1974).

Thus, some scholars have explicitly argued that changes over recent decades in the U.S. labor market have depended on the simultaneous expansion of the criminal justice system. Exemplifying explanations of this type, Wacquant (2001; 2009) suggests that the penal system is employed in the government of social insecurity to ensure that lower class Americans “accept” unstable economic and social conditions associated with neoliberal labor market configurations. According to Wacquant, “the invisible hand of the market and the iron fist of the state combine and complement each other to make the lower classes accept desocialised wage labour and the social instability it brings in its wake” (Wacquant 2001). In particular, Wacquant contends that poor African American men represent a certain type of social order threat in the American imagination, leading them to be specifically targeted for incarceration. Writing in 2001, Wacquant pointed out that while black men made up 6% of the U.S. population, they had accounted for over half of new prison admissions every year since 1989 (Wacquant 2001:403-404).

Wacquant (2009) describes contemporary American incarceration practices as part of the “fourth peculiar institution,” following slavery, Jim Crow laws, and the ghetto in the role of defining,

confining and controlling African Americans (98). Wacquant argues that a "carceral continuum" between prison and the "hyperghetto" arose in the wake of the decline of the communal urban ghetto of the Fordist-Keynesian era as a mechanism for keeping unskilled African Americans "in their place." Wacquant suggests that slavery (1619-1865), Jim Crow (South, 1865-1965) and the communal ghetto (North, 1915-1968), each operated in various ways to organize and extract (cheap) labor from African Americans while simultaneously demarcating and excluding them in racialized ways. While Wacquant places the "hyperghetto + prison" in this historical trajectory of institutions that define and confine African Americans, he emphasizes several important differences from the three previous "peculiar institutions." These differences form the basis of his core thesis about this fourth peculiar institution: that the ghetto has become more like a prison, the prison has become more like the ghetto, and the two are linked in a carceral continuum that captures African Americans, particularly young black men, in a "never-ending circulus between the two institutions" (Wacquant 2009: 97).

Wacquant outlines four characteristics that both distinguish today's hyperghetto from the ghetto of the Fordist-Keynesian era and exemplify its "prisonization." First, today's hyperghetto is characterized by class segregation as well as racial segregation - middle and upper-class blacks no longer live in the same vicinity, resulting in the majority of ghetto residents being poor and unemployed. Second, in distinction from all three previous peculiar institutions, the hyperghetto serves no positive economic function, due to the decline in demand for urban factory laborers. According to Wacquant, the hyperghetto now "at best" serves a negative economic function of storage of a surplus population, just like a prison (Wacquant 2009: 105). Third, communal institutions such as the black press and churches have been replaced by state institutions of social control such as welfare/workfare agencies and extensions of the penal system such as police and parole officers (Wacquant 2009: 107). Fourth, the hyperghetto is no longer able to "buffer" residents

from external forces giving way to the depacification of everyday life via both increased crime and increased policing.

Empirical research has further demonstrated an interconnection among labor market and penal forces along racial lines. Western, Kleykamp and Rosenfeld (2006) use data from the National Correction Reporting Program and the Current Populations Survey, disaggregated by race and education level, to analyze labor market effects on prison rates using a variety of fixed effects models. Looking at state-level data from 1983-2001, they found that falling wages and unemployment significantly increased low-skilled black men's incarceration rates. However, only falling wages impact low-skilled white men's incarceration risk. These findings are consistent with other research that suggests that poor labor market conditions for low-skilled black men in poor urban neighborhoods exposes them to greater scrutiny from police and heightens perceptions of their dangerousness (Western et al. 2006: 2304; Steffensmeier et al. 1998). Such concerns of social insecurity are less pronounced when white populations are seen to suffer declining economic conditions (Western et al. 2006).

Soss, Fording and Schram (2011), find further evidence in support of the "racialized labor market" interpretation of the incarceration boom, advanced by Western (2006) and Wacquant (2009). Using disaggregated state-level panel data to explore determinates of prison rate changes from 1976-1995, Soss et al. find that declining wages for low-skilled white workers have only a minor effect on white incarceration rates. Meanwhile, declining wages for low-skilled black workers substantially increased the likelihood of incarceration for African Americans (Soss et al. 2011: 108). Together, this research gives evidence that perceptions of social threat are often racialized in present-day America. In particular, where economic conditions are perceived to be volatile for poor African Americans penal policy is likely to be more punitive, regardless of actual crime rate changes.

## ***Linked Policy Regimes Theories***

As discussed above, some researchers have examined the effects of labor market conditions on incarceration, while others have explored the effects of incarceration on labor markets. I turn now to research that has explored relationships among labor market policies, particularly policy related to labor market regulation, and incarceration. Specifically, an important extension of Rusche and Kirchheimer's hypotheses is the conceptualization of *linked policy regimes*, in which governing rationalities and mechanisms actively bring together criminal justice and labor market policy fields.

Recent research has drawn attention to broad shifts in dominant American governing strategies and rationalities that have linked criminal justice and labor market policy spheres in new and consequential ways (Simon, 2007). Beckett and Sasson (2000) are well-known for making the case that throughout the 1980s and 1990s the U.S. transitioned from a welfare state to a "security state" characterized by decreases in government spending on poverty relief and expanded use of the penal apparatus. Similarly, Beckett and Western (2001) analyze state-level incarceration rates and find that large penal systems are found in states with weak welfare systems. They take this association to be further evidence that labor market policy and criminal justice policy operate hand-in-hand as part of a single punitive policy regime. Importantly, Beckett and Sasson (2000) and Beckett and Western (2001) emphasize the role of political actors and economic elites in deliberately employing strategies to bring about these punitive shifts across policy fields in the post-1990 United States.

Soss, Fording and Schram (2011) expand on these arguments, giving a more nuanced description of the fundamental shifts in American poverty governance that Beckett, Sasson, and Western point to. Looking at both macro and micro level evidence, they show that paternalist and neoliberal trends have converged across policy realms leading to "a mode of poverty governance that is, at once, more muscular in its normative enforcement and more dispersed and diverse in its organization" (Soss et al. 2011: 3). By Soss et al.'s account, both labor market policy and criminal

justice policy can be understood as central areas in which mechanisms and rationalities that advance neoliberal paternalist agendas play out.

Soss et al.'s argument is similar in many ways to Wacquant's. They agree, for example, that racialized changes in American labor market conditions occurred concurrently with changes in the penal realm. However, for theorizing relationships among labor market and penal policy domains, there are several important ways Soss et al.'s account differs from Wacquant's. First, rather than seeing current neoliberal economic shifts as a rollback of the welfare state, Soss et al. contend that neoliberalism has been characterized by more state involvement in economic and social programs, transformed in fundamental ways to serve markets and structured around market principles. Second, Soss et al. reject Wacquant's argument discussed above, that the urban poor serve no positive economic purpose. Instead, they show that welfare programs have been redesigned to mimic market pressures, becoming sites where state power is used to pursue market objectives (Soss et al. 2011: 7). Third, in contrast to Wacquant's functionalist explanation for the rise of the "fourth peculiar institution," Soss et al. focus on the role of political institutions, agents, and rationalities, in the transformation of poverty governance. They make clear that while poverty governance logics and policies across policy areas are observed to function in certain ways, they do not do so by necessity. They point to the importance of exploring how and why poverty governance functions, whether in social welfare, labor market, or criminal justice spheres, without falling into the trap of assuming that it must always function in this way.

### ***Electoral Politics and Federalism***

Electoral politics have also played a key role in both generating and mediating labor market and criminal justice policies. Two phenomena are particularly important for considering the relationship between labor markets and penal policy in the United States. First, criminal justice policy is known to play a uniquely communicative and symbolic role which can be leveraged by

political actors (Durkheim 1902; Durkheim 1933; Smith 2008). Among other effects, this makes it politically expedient for authorities to focus on crime control, rather than other policy concerns, particularly at times when government legitimacy is threatened. Second, the federalist political system plays a critical role both in structuring and altering the links among criminal justice and labor market policy in the United States.

Taking up this first phenomenon, scholars have pointed to the rise of “tough-on-crime” rhetoric and policy in the 1980s and 90s as a prime example of how the symbolic power of penal policy can work in relation to changes in the labor market sphere. Scholars have shown that tough-on-crime policies were engaged by politicians in large part in response to government legitimacy crises of the 70s and 80s, where an economic squeeze on the American middle class contributed to wide-spread public skepticism of government abilities across policy fields (Scheingold 1995). Research suggests that rather than addressing large-scale structural economic shifts that were responsible for much of this increased mistrust of government, politicians found it easier to gain political capital by focusing attention on crime and crime control (Page 2004). Thus, it is argued, politicians deliberately engaged the uniquely symbolic power of crime and punishment policy to actively redirect public attention away from economic issues, towards crime control concerns. Beckett (1994) showed, for example, that public opinion followed rather than led tough-on-crime political mobilizations in this era.

Providing a compelling example of this interplay of labor market conditions, politics and the symbolic power of penal policy, Page explores the 1994 debate around revoking Pell Grants to prisoners. In this case, a minor education subsidy for prisoners that served rehabilitative and order maintenance purposes became a public “outrage” and was ultimately repealed. Page shows how this niche criminal justice policy was used by politicians and other authorities to gain favor with constituents, even when the policy proposal itself had little to do with stated policy goals (Page 2004).

Accounts such as Page's indicate that the 1990s were characterized by an increase in punitiveness in criminal justice spheres in which the strategic actions of political actors were of central importance. Page outlines a convergence of socio-historical developments that formed the context of criminal justice policy debates in the 1990s. He points out that the early 1990s saw increasing popular rejection of the rehabilitative ideal of punishment. This, together with increased mistrust of government, including the government's ability to fight crime, led to a reduced "buffer of experts" between populist ideas and criminal justice policymaking. These trends were accompanied by an increased competition among political elites to promote symbolically charged policies to show they were "doing something" about crime and punishment (Page 2004: 370-371). Engaging the symbolic power of penal policies, Page points out, was particularly effective for gaining political capital in a wider social context of a general assault on the undeserving poor. In particular, this time period was marked by a shift of the archetypical poor person from "just like us" (rural and white) to "dangerous and undeserving" (black and urban) (Beckett and Sasson 2000; Page 2004:371).

Structural aspects of the American political system also play important roles in shaping and mediating relationships among criminal justice and labor market spheres. Miller (2010) shows that understanding the distinctive character of the American federalist system is also critical to understanding criminal justice outcomes in American states, particularly in regards to racial disparities in crime and punishment politics (806). Miller points to two influential consequences of the American federalist political system in the criminal justice realm. First, federalism limits the authority and incentives of the federal government to address the wide range of social problems that give rise to crime. Second, federalism diffuses political power across multiple venues, which makes it difficult for poor and low-resource groups to access decision-making (Miller 2010, 806). Miller claims, therefore, that the nature of the American federal system obscures the ways in which disparities in crime and punishment are linked to broader socioeconomic patterns (Miller 2010: 807).



Miller finds that central lawmaking structures of the American political system discourage sustained attention to connections between crime and larger social issues. Members of congress are rarely held accountable for their positions on local crime problems, but have multiple incentives to respond to single-issue interest groups and criminal justice agencies. Local policy makers, meanwhile, are constrained in their ability to significantly address economic conditions. Thus, even when local policy makers perceive crime to be an outcome of economic situations, the American political system often leads local and national actors to converge on responses to crime that increase punishment rather than dealing with these foundational economic concerns (Miller 2010: 834).

The scholarship discussed above makes a strong case that labor market and penal practices have interacted in meaningful and complex ways in the U.S. over the last two decades. In the following section, I explore these relationships further in a series of state-level empirical analyses. In the first set of analyses, I construct models that estimate the relationship among state incarceration rates and state labor markets, analyzing the effectiveness of labor market policies, unemployment, crime, government and ideological differences in explaining state incarceration rate variation. In the second set of analyses, I include race in a variety of ways to explore whether and how the general relationships I observed in my initial analyses are maintained when a racial dimension is added.

## **Analysis**

### ***Data and Variables***

Drawing from a variety of sources, I have constructed a panel data set of state year aggregate data, for all U.S. states, from 1990-2012. All variables used in my analysis, and the sources for these data, are listed in Appendix Table A1. My main dependent variable for the following analyses is the *incarceration rate of sentenced prisoners* in a state compiled by the National Prisoner Statistics Program. I use the rates calculated and published by the Bureau of Justice Statistics measuring the

imprisonment rate of sentenced prisoners under the jurisdiction of state or federal correctional authorities per 100,000 U.S. residents.

As my primary measure of *state labor market policy*, I constructed an index based on four state policies: Right to Work Laws, Prevailing Wage Laws, Minimum Wage Laws and Public Employee Collective Bargaining Laws. These index components are described in more detail in Table 1. Both exploratory factor analysis and cluster analysis suggested these policies loaded onto a single factor. I therefore determined that a simple additive index would be appropriate for the purposes of this study. This index ranges from 0 to 4. Lower values on the index indicate state policy regimes with fewer labor market constraints. A state with a Labor Market Policy Index score of 0, for example, would have a Right to Work statute, no prevailing wage laws, a minimum wage below the federal baseline, and laws explicitly or implicitly prohibiting public sector collective bargaining. A state with an index score of 4, on the other hand, would have no Right to Work statute and would have prevailing wage laws and a state minimum wage above the federal baseline, as well as policies favorable toward public sector collective bargaining.

**Table 1. State Labor Market Policy Index Description**

<b>Index Component</b>	<b>Explanation</b>	<b>Labor Market Policy Index Score</b>
<b>Right to Work Law</b>	Right to Work statutes prohibit agreements between labor unions and employers that would require employees, covered by a union, to pay union dues. Twenty-five states currently have Right to Work provisions.	0 = state has Right to Work law; 1 = state does not have Right to Work law
<b>Prevailing Wage Law</b>	State prevailing wage laws require state governments to pay the “prevailing wage” for various classes of construction roles on publically financed projects. Thirty-two states have some form of prevailing wage law.	0 = state has prevailing wage law; 1 = state does not have prevailing wage law
<b>Minimum Wage</b>	States may set state-wide hourly minimum wage laws. When states have no minimum wage or have set a minimum wage lower than the federal minimum wage, the federal minimum wage prevails. In January 2015, 29 states had minimum wages set above the federal minimum of \$7.25. Fifteen states had minimum wages set at the federal level and 6 states have a minimum wage below the federal level.	0=state has no minimum wage or minimum wage is below federal minimum; 0.5=state minimum wage is the same as the federal minimum wage; 1=state minimum wage is above federal minimum
<b>Public Employee Collective Bargaining</b>	Public employee collective bargaining provisions refer to state policies that define the legal rights and limitations on public-sector collective bargaining processes. In 2012, 10 states had laws that were “unfavorable” toward public employee collective bargaining, 14 states had “intermediate”	0= <i>Unfavorable</i> : no provision or collective bargaining prohibited; 0.5= <i>Intermediate</i> : collective bargaining authorized but not required; 1= <i>Favorable</i> : duty to

	laws, and 26 states had “favorable” laws.	bargain explicit or implicit
<b>Index Range: 0-4</b>		
<b>0=state has less constrained labor market; 4=state has more constrained labor market</b>		

\*Sources for each component are listed in Appendix Table A1

As my main measure of labor market conditions, I use *state unemployment rates*. After testing a variety of alternative economic measures, such as poverty (Appendix A2) and economic inequality measures, I found that for the purposes of this study unemployment rate adequately captures the general relative health of state economies. However, this aggregate state unemployment rate measure would not be appropriate for more nuanced analyses.<sup>3</sup>

Across all models, I control for crime rates and state government ideology. I use the *violent crime rate* from the FBI’s Uniform Crime Reports as a measure of relative state crime rates. For this study, I use a state’s violent crime rate in the current period. I also tested models with crime rates lagged multiple years and found the results to be similar (Appendix A3). I use Berry et al.’s measure of *Government Ideology* measuring the mean position of state elected officials on a liberal-conservative continuum, weighted by their power over policy decisions (Berry, Ringquist, Fording and Hanson 1998). Lower values indicate more conservative state government ideology and higher values indicate more liberal government ideology. In some analyses, I also include Berry et al.’s measure of *Citizen Ideology* which measures the mean position of a state’s “active electorate” on this same liberal-conservative continuum. I use the revised 1960-2013 citizen ideology series, again with lower values indicating more conservative citizen ideology and higher values indicating more liberal citizen ideology (1998). Both the Citizen Ideology and Government Ideology measures are computed and compiled by Berry, Ringquist, Fording and Hanson and are described in detail in Berry et al. (1998).

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<sup>3</sup> As a sensitivity check I also tested models that instead use poverty rates, inequality measures, and interactions of poverty rates and unemployment rates. As suggested above, it is important to note that state unemployment rates are endogenous with state incarcerations rates. For example, incarceration can decrease unemployment measures in the short run by removing individuals from the labor market. Furthermore, unemployment rates do not capture those entirely dissociated with the labor market, nor do aggregate unemployment rate measures pick up differences in unemployment across racial, gender or class groups.

## *Methods*

In the following analyses, I primarily use year fixed effects panel regression models. With observations across all 50 states over 23 years (N=1150), the panel nature of my data set, together with year fixed effects techniques, offers important analytical advantages. First, it allows me to control for obvious concurrent factors, such as crime rates and state government partisanship. Second, I am able to zero in on how state labor market differences relate to state incarceration differences by controlling for national trends. Using year fixed effects removes the national trend, each year, from the dependent and independent variables in the model. Any remaining association can therefore be attributed to differences across states rather than differences across time. Thus, year fixed effects limit the possibility of spurious correlations due to a time trend. Of particular importance, because incarceration rates have been rising rapidly across most states over the last 23 years, without year fixed effects, any independent variable that also trended in one direction over time would appear to drive incarceration rates. Using year fixed effects removes this concern. Finally, I also apply clustered robust standard errors by state to all my fixed effect models to correct for heteroskedasticity that I expect to be clustered by state.

Numerous studies have attempted to explain the causes of the American incarceration boom over the last few decades. This is not one of those studies. This study is not designed to make causal inferences. Instead, the methods I've chosen are intended to help illuminate correlational relationships across policy areas at the state level. The multi-directional, contingent, and mutually reinforcing relationships that are expected among labor markets and criminal justice practices make correlational methods both appropriate and valuable for a study of this type. By focusing on correlational techniques, my intention is to use admittedly imperfect state aggregate measures to illuminate patterns that can help us better understand relationships among labor market and criminal justice spheres in the United States broadly speaking.

## ***Results and Discussion: Labor Market Policies and State Incarceration Rates***

To explore the relationships among labor market policies, labor market conditions, and state incarceration rates, I ran a variety of year fixed effects models, regressing state incarceration rates on the labor market policy index and several key controls. Results from this analysis are reported in Table 2.

**Table 2. Effects of State Differences on State Incarceration Rates, Year Fixed Effects Models, 1990-2012, 50 States**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Labor Market Policy Index</b>	-45.45*** (12.08)	-40.23*** (10.11)	-36.49*** (10.75)	-39.09*** (10.52)	-27.83** (11.56)
<b>Violent Crime Rate</b>		0.32*** (0.06)	0.33*** (0.06)	0.29*** (0.06)	0.29*** (0.05)
<b>Government Ideology</b>			-0.42 (0.36)	-0.44 (0.35)	0.01 (0.37)
<b>Unemployment Rate</b>				16.79** (7.56)	16.30** (7.44)
<b>Citizen Ideology</b>					-2.19* (1.11)
<b>R<sup>2</sup></b>	0.31	0.53	0.53	0.55	0.57
<b>N</b>	1150	1150	1150	1150	1150
<b>VCE</b>	cluster	cluster	cluster	cluster	cluster

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

R<sup>2</sup> with year fixed effects only (no other covariates) = 0.13

Incarceration and violent crime rates are out of 100,000 U.S. residents.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010

SE's in parentheses

As shown, there is a statistically significant relationship between a state's labor market policy index score and its incarceration rate. Recall, higher labor market policy index scores indicate state labor markets are more constrained, the opposite being true of low indices. The present results suggest that states with more market-constraining labor market policy have lower incarceration rates. Conversely, states with less market-constraining labor market policy have higher incarceration rates. This relationship is significant and of substantial magnitude even when controlling for crime rates, state government ideology, and unemployment rates. When citizen ideology is included in the model, it has visible mediating effect while the labor market policy variable continues to be significant at the p<0.05 level. Here, we see evidence that the labor market policy index and the citizen ideology index

are similar to each other and are similarly related to state incarceration rates (See Table 3). Even so, they pick up slightly different aspects of state variation in incarceration rates.

**Table 3. Correlation Coefficients of Key Variables: State-level Measures, 50 States, 1990-2012**

	Incarce ration Rate	Labor Market Policy Index	Violent Crime Rate	Govt. Ideology	Unempl oyment Rate	Citizen Ideol ogy	Black Popula tion %	Latino Populat ion %	Black Incarce ration Rate
Labor Market Policy Index	-0.40								
Violent Crime Rate	0.38	-0.11							
Government Ideology	-0.19	0.43	0.07						
Unemployment Rate	0.15	0.11	0.19	0.14					
Citizen Ideology	-0.35	0.65	-0.10	0.60	0.05				
Black Population %	0.60	-0.42	0.51	0.05	0.16	-0.15			
Latino Population %	0.21	0.09	0.29	0.01	0.20	0.06	-0.14		
Black Incarceration Rate	0.32	0.09	-0.08	-0.14	-0.12	-0.08	-0.22	0.17	
Black Unemployment Rate	0.19	0.08	0.10	0.04	0.47	-0.04	0.24	-0.01	0.08

Together, these models support many of the theoretical arguments described previously.

First, the models indicate that the role of labor market conditions (measured here by unemployment rates), has not operated through crime rates alone. Even when crime rates are controlled for in the models, states with higher unemployment rates tend to incarcerate larger proportions of their populations. This supports *government of social insecurity theories* which suggest that incarceration is used more readily when states experience economic hardship, whether or not crime rates increase.

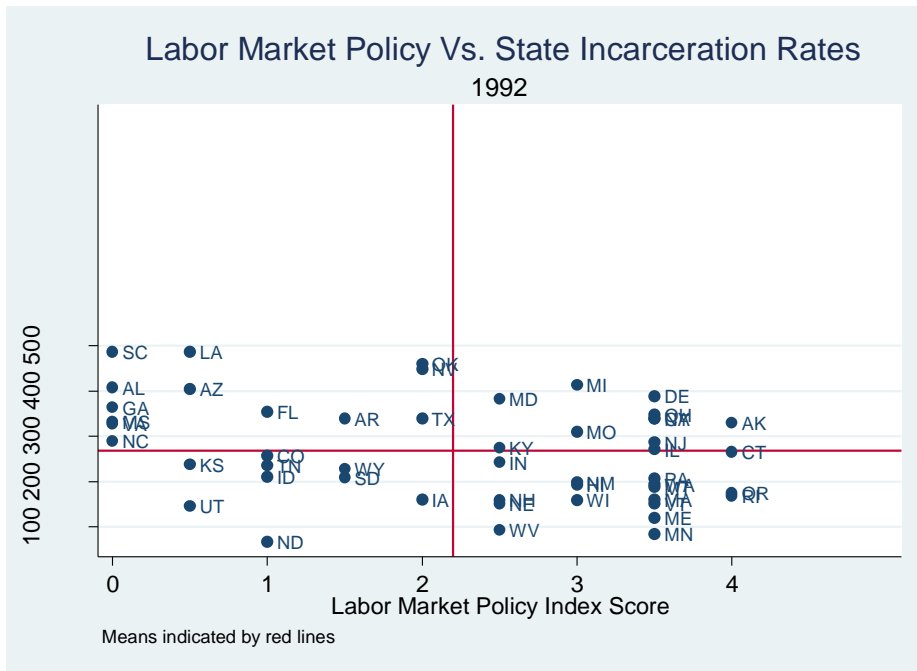
The models also show that state labor market policies play an important role, beyond differences in labor market conditions, in explaining differences in state incarceration rates. That is, state labor market policies are still strongly associated with state incarceration rates even after controlling for differences in state incarceration rates due to crime, government ideology, and unemployment levels. This supports *linked policy regimes theories*, in showing that labor market policy and criminal justice policy have followed similar patterns in recent years, patterns that cannot be explained by government ideological differences or state economic conditions alone.

In addition to the models presented in Table 2, I tested a range of alternate models to check the robustness of my results across specifications. I tested models constrained to different time-periods to explore whether these relationships varied markedly by time-period. I also added a variety of additional control variables, including urban composition, GDP per capita, sentencing policy variables and alternate measures of crime rates (Appendix A3 and A4). I found similar results to those presented here.

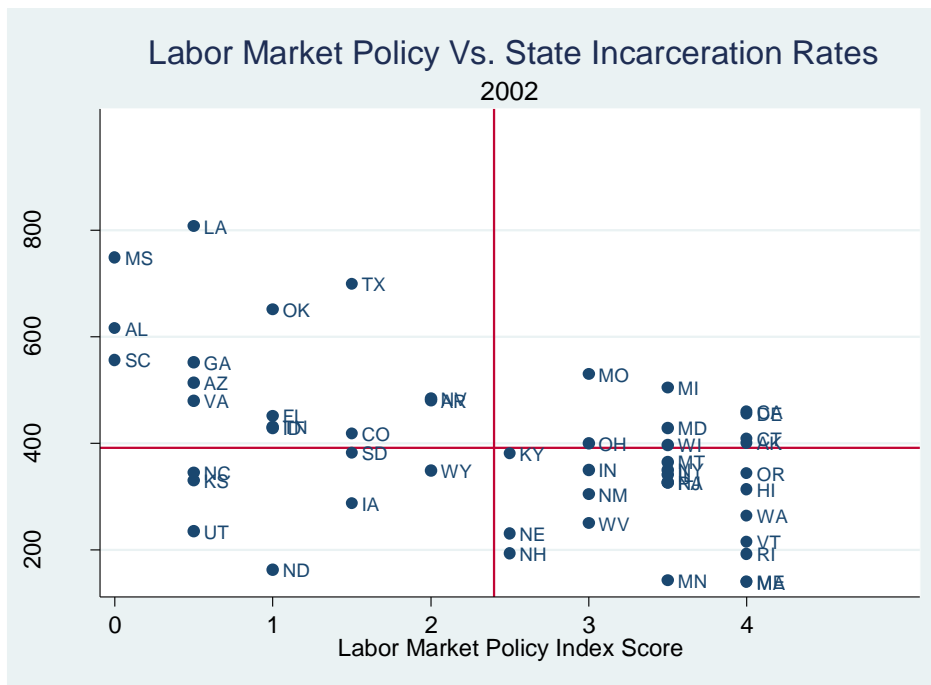
### **A closer look at key associations**

To better understand how state labor market policies have related to state incarceration rates over the last two decades, I created a series of two-dimensional scatter plots in decade intervals. These are presented in Figures 1-3.

**Figure 1**

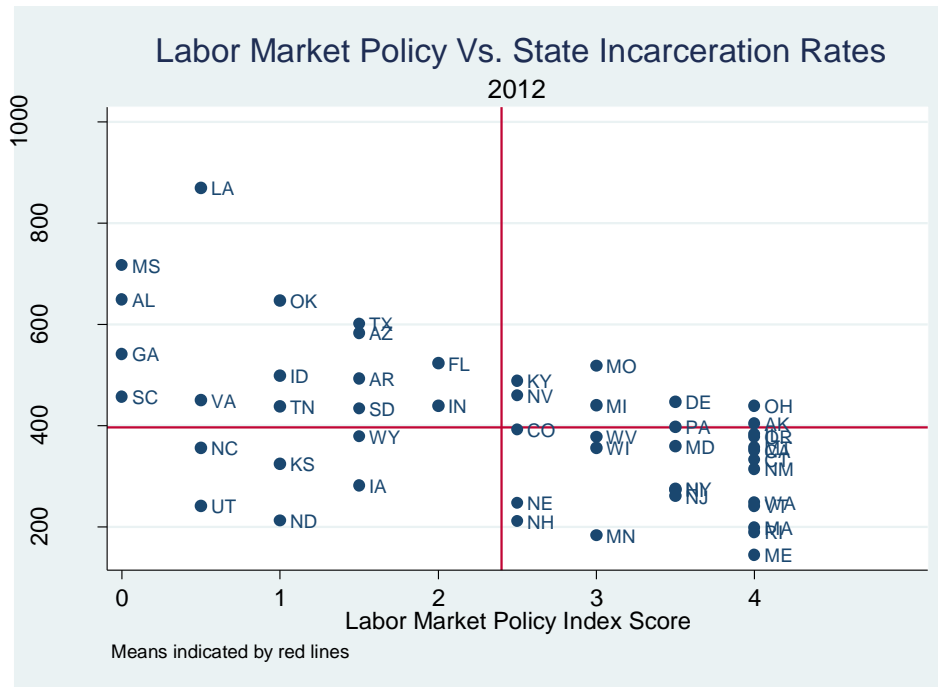


**Figure 2**





**Figure 3**



Several additional observations are made clear by these graphs. First, it appears that a linear relationship between state labor market policy index scores and incarceration rates has become more pronounced over the last two decades. This difference has been driven largely by substantial incarceration rate increases in states with low labor market policy scores (less constrained labor markets). Second, there are several notable outlier states. In particular, four states – Utah, North Dakota, Iowa and Kansas – have low labor market policy scores and have state incarceration rates that are well below the national average. I will discuss these outliers in more detail in the following section.

A third and particularly important observation is that the distribution of state incarceration rates appears to vary meaningfully with different labor market policy scores. States with low labor market policy scores have higher variation in incarceration rates, while states with lower labor market policy scores have less variation. As I will discuss in the concluding section of this paper, this variation provides interesting insight into the relationship among labor market and penal policy areas

in the U.S. today. We see that certain labor market policy regimes are observed to allow both low and very high incarceration rates, while other labor market policy configurations appear to constrain incarceration rates.

## ***Results and Discussion: Race-based Analysis***

### **A. Adding racial compositions measures**

To begin exploring how race matters in the relationship among state labor market conditions and relative punitiveness, I added additional racial composition measures to my original models in Table 2. Table 4 presents my estimates when variables are added to the models for the percent of a state's population that is African American and percent of a state's population that is Latino.

**Table 4. Effects of State Differences on State Incarceration Rates, With Racial Composition Variables Included, Year Fixed Effects Models, 1990-2012**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Labor Market Policy Index</b>	-23.26** (9.77)	-26.43*** (9.64)	-16.34* (9.50)	-18.63* (9.66)	-0.81 (10.79)
<b>Black Population %</b>	8.49*** (1.45)	6.23*** (1.75)	7.05*** (1.66)	6.65*** (1.67)	7.46*** (1.50)
<b>Latino Population %</b>	3.98** (1.67)	2.31 (2.04)	2.38 (1.88)	2.1 (1.88)	2.46 (1.89)
<b>Violent Crime Rate</b>		0.15** (0.07)	0.14** (0.06)	0.14** (0.06)	0.11** (0.05)
<b>Government Ideology</b>			-0.92*** (0.30)	-0.90*** (0.30)	-0.34 (0.32)
<b>Unemployment Rate</b>				8.36 (6.02)	6.57 (6.17)
<b>Citizen Ideology</b>					-3.00*** (1.07)
<b>R<sup>2</sup></b>	0.58	0.6	0.62	0.63	0.66
<b>N</b>	1150	1150	1150	1150	1150
<b>VCE</b>	cluster	cluster	cluster	cluster	cluster

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

Incarceration and violent crime rates are out of 100,000 U.S. residents.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010

SE's in parentheses

As shown in Table 4, states where African Americans make up a larger percentage of the state's total population tend to have higher incarceration rates, even after controlling for crime rates, unemployment rates, and government and citizen ideology. When other controls are added, such as urban composition and sentencing policy variables, this association continues to be robust (Appendix A5). It is also clear that the percent of a state's population that is African American is correlated with state labor market policy. When measures of state racial composition are added to the models, the magnitude and significance of the state labor market policy variable decreases noticeably. States where Black Americans make up a higher percent of their population tend to have lower labor market policy scores ( $r_{\text{labor market index, \%AfAm}} = -0.41$ ). As the models show, these states also tend to have higher incarceration rates, even when crime and other key variables are held constant. These findings indicate that racial composition differences across states play a role beyond differences in state labor market policies and conditions. The correlation among these variables also provides suggestive support of theories that the extent to which African Americans are seen to be affected by weak job prospects *or* as targets of labor market policies affects how these factors relate to the relative punitiveness of a state's penal practices.

## **B. What do the outlier states tell us?**

Next I take a closer look at the outlier states identified in Figure 3. We saw that in 2012, Utah, North Dakota, Kansas and Iowa stood out as having substantially lower than average incarceration rates while also having low labor market policy scores. In attempts to further understand these states, I compared measures of several variables measuring the relative population size and incarceration rates of African Americans in these states. These measures are reported in Table 5.

**Table 5. Comparison of Outlier States – 2012 Measures**

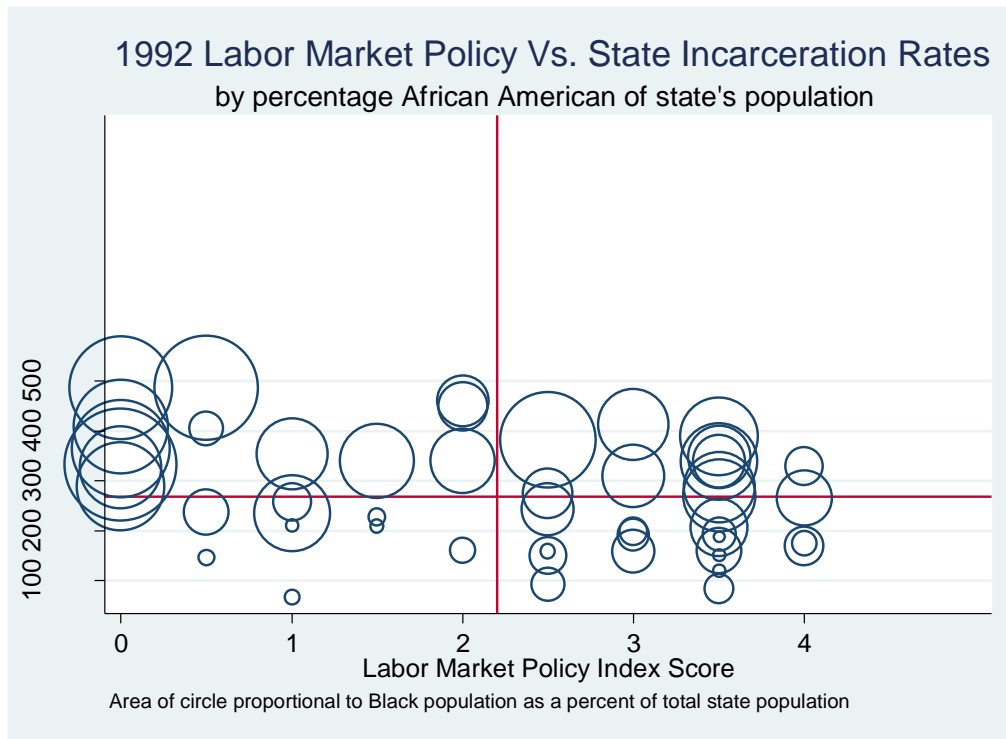
	<b>Labor Market Policy Index Score</b>	<b>State Incarceration Rate</b>	<b>Citizen Ideology</b>	<b>Percent Black of Total State Population</b>	<b>Percent Incarcerated of Total State Black Population</b>	<b>Ratio: State Black Incarceration Rate to Total Incarceration Rate</b>
<b>2012 National Average*</b>	<b>2.04</b>	<b>397</b>	<b>48.45</b>	<b>10.2%</b>	<b>1.70%</b>	<b>4.26</b>
<b>Utah</b>	0.5	242	16.96	1.0%	1.73%	7.04
<b>North Dakota</b>	1	213	48.45	1.4%	1.04%	4.94
<b>Kansas</b>	1	325	35.85	5.8%	1.90%	5.70
<b>Iowa</b>	1.5	282	40.50	3.0%	2.70%	8.88

\*Averages of state averages.

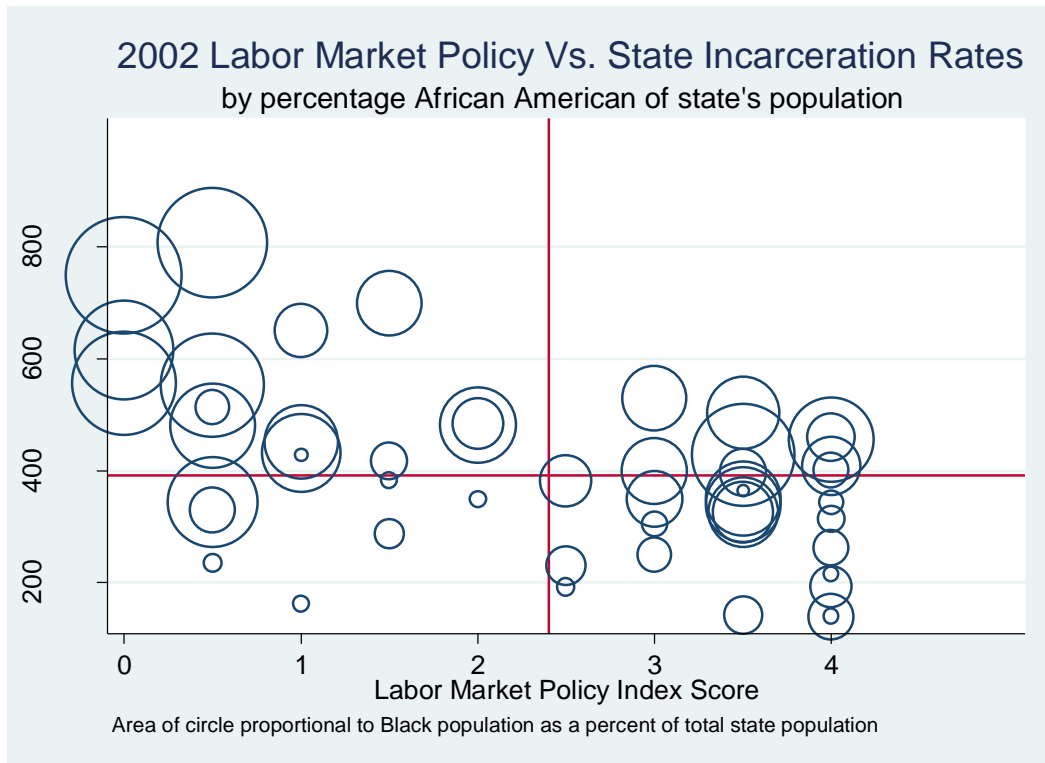
The measures presented in Table 5 suggest that states that have high labor market freedom and *low* incarceration rates also have low African American populations. Meanwhile, the rate at which black populations in these states are incarcerated is similar to the average across all states. Not surprisingly, the ratio of the black incarceration rates to the total state population incarceration rate is substantially higher than average in these states. For example, an African American in Iowa is more than eight times as likely as the "average person" in Iowa to be incarcerated. While this ratio is twice that national average, it must be noted that the average person in Iowa is about 30% less likely to be incarcerated than the average person in other states.

To further explore the relationship among state African American populations, state labor market policies, and state incarceration rates, I developed a series of scatter plots that include a racial composition dimension. These scatter plots mimic those presented in Figures 1-3, but this time states are represented by circles where the size of the circle is proportional to the percentage of African Americans in each state's population.

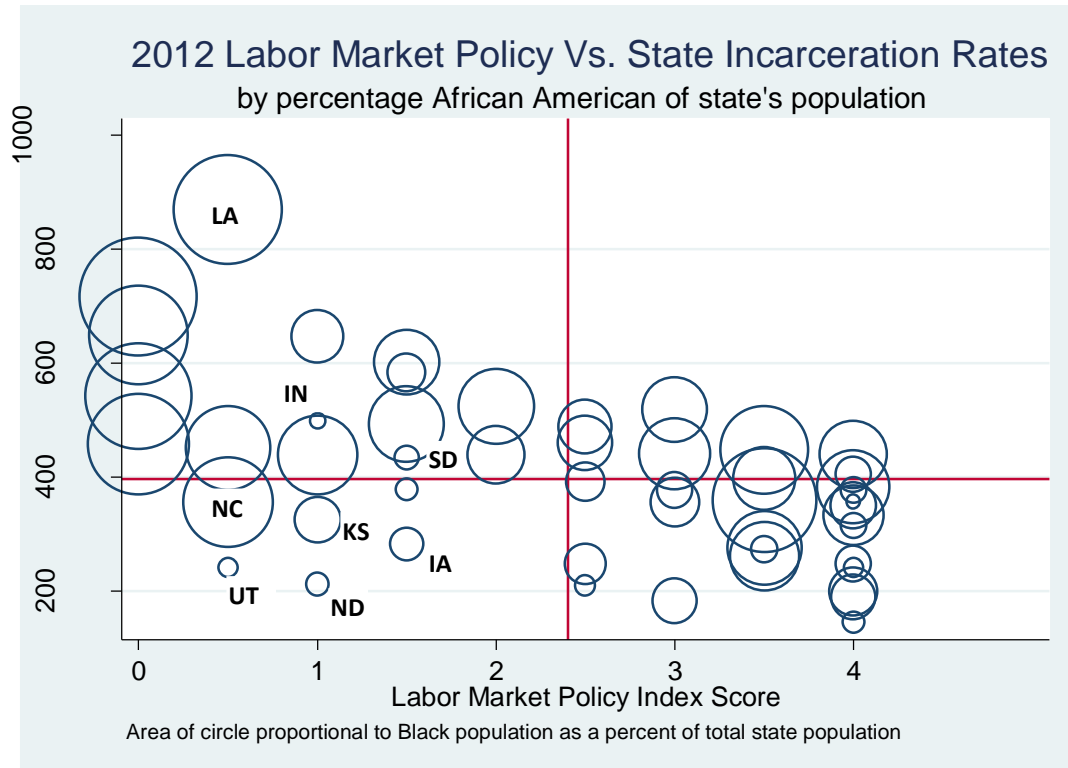
**Figure 4.**



**Figure 5.**



**Figure 6.**



See Figure 3 for all state labels.

Here, we see that many of the states with the lowest labor market policy scores indeed have larger black populations relative to their state's total population. North Carolina stands out as unique in having a larger black population percentage *and* both low incarceration rates and a low labor market policy score. Indiana and South Dakota, meanwhile, are notable for having low black population percentages and higher than average incarceration rates. They also both have lower labor market policy scores. Among states with higher labor market policy scores, there is no clear pattern among state African American population sizes and incarceration rates. Even so, it is worth noting that all the states with larger than average incarceration rates and larger than average labor market scores (there are only 6 of these) also appear to have average to larger than average black populations as a percent of total state population.

### **C. Modeling state Black incarceration rates**

In one more attempt to learn more about the relationship among state labor market policies, incarceration rates, and race, I use similar models to above but this time use state black incarceration rates (the percentage of a state's black population that is incarcerated) as the dependent variable. As shown in Table 6, I find that labor market policy measures and unemployment rates, including black unemployment rates, are far less successful at explaining variation in black state incarceration rates than they were at explaining variation in total state incarceration rates.

**Table 6. Effects of State Differences on State Incarceration Rates of Black Populations, Year Fixed Effects Models, 1990-2012, 50 States**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Labor</b>	35.38	-20.22	17.93	30.37	3.83	52.63
<b>Market Policy Index</b>	(49.45)	(56.12)	(55.34)	(57.52)	(58.52)	(70.57)
<b>Violent Crime Rate</b>		0.51 (0.33)	0.49 (0.31)	0.57* (0.31)	0.48 (0.31)	0.42 (0.29)
<b>Black Population %</b>		-22.56*** (7.25)	-19.47** (7.51)	-18.03** (7.77)	-22.19*** (8.17)	-20.147** (8.45)
<b>Government Ideology</b>			-3.60* (1.91)	-3.68* (1.86)	-3.26* (1.88)	-1.81 (1.69)
<b>Unemployment Rate</b>				-50.72 (45.33)		
<b>Black Unemployment Rate</b>					20.05 (20.47)	15.50 (19.62)
<b>Citizen Ideology</b>						-8.03 (7.24)
<b>R<sup>2</sup></b>	0.1	0.17	0.18	0.19	0.19	0.21
<b>N</b>	1095	1095	1095	1095	1095	1095
<b>VCE</b>	cluster	cluster	cluster	cluster	cluster	cluster

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

Incarceration and violent crime rates are out of 100,000 U.S. residents.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010

SE's in parentheses

Even using Black unemployment rates, the R<sup>2</sup> of these models reaches only 0.21 where comparable models estimating incarceration rates for the total state population (Tables 2 and 4) had R<sup>2</sup>s ranging from 0.31 to 0.66. I also tried using Black employment-to-population ratio and a range of other controls, including sentencing policy variables, and achieved no higher than an R<sup>2</sup> of 0.17 for models of this dependent variable (Appendix A6). Furthermore, variables that were robustly significant in previous models, such as labor market policy, crime rates, unemployment rates and government ideology do not appear significant in relationship to state Black incarceration rates. The size of a state's African American population, as a fraction of the state's total population stands out as a primary determinate of Black incarceration rates, suggesting that racialized policy mechanisms are in effect, and that this effect is of far greater influence than that of labor market conditions. These



results further support the theme that has emerged throughout this section; relationships among state labor market policies and conditions have operated differently for African Americans than for state populations as a whole. In particular, the extent to which Black Americans are perceived to be affected by labor market or criminal justice policies seems to be of key importance in explaining the nature of these policies – and their outcomes – in both fields.

## **Conclusions and Future Research**

This study confirms that those concerned with the reduction of U.S. incarceration rates need to take seriously differences in state labor market policies and conditions. Efforts to change incarceration practices will confront substantially different labor market environments across American states. To the extent that the past two decades are a guide, these labor market differences matter noticeably in the penal sphere. Policy approaches that ignore this relationship may be limited in their success.

In showing that state labor market policy and incarceration rates are significantly related, even after controlling for key variables, my study finds particularly convincing evidence of linked policy regime theories. I find that states with more labor market freedom have, in fact, generally engaged wider use of incarceration, and this pattern has increased over the last two decades. In general, my analysis suggests that policy governing the “invisible hand” of labor markets has been, as Wacquant posits, visibly related to policy governing the “iron fist” of criminal justice systems in the context of American states today.

This is important information for actors now seeking to reduce state incarceration rates. Successful efforts to address America's "over-incarceration problem" will likely require concurrent labor market interventions. The literature reviewed for this study suggests that labor market interventions may be needed that focus on increasing the stability of job opportunities for the poor, limiting public perceptions of social insecurity, and addressing governing rationalities. Future

research is necessary, however, to clarify the intermediary mechanisms at play in these relationships in order to tailor policy solutions accordingly.

My findings also show that theorists that propose a fixed relationship among labor market policies and incarceration outcomes – such as Rusche and Kirchheimer or Wacquant – miss multiple critical points. A key finding of my analysis is that differences in labor market policy regimes appear to affect the *range of variation* observed in state incarceration rates. Specifically, states with more constrained labor markets have a more limited range of observed incarceration rate differences. States with less constrained labor markets, in contrast, are observed to have a large range of incarceration rate variation. For advocates of the reduced use of incarceration, these findings suggest that while intervening in labor market policy is an important avenue for reducing incarceration, lower incarceration rates *are possible* across state labor market policy contexts. Such findings are hard to square with functionalist accounts that suggest a direct relationship among labor market regimes and penal practices.

Preliminary exploration of the role of race in the relationship among labor market policy and state incarceration rate differences confirms that labor market and penal policy relationships operate in contingent and varied ways as proposed by many scholars discussed in the opening sections of this paper (Soss et al. 2011; Western 2006). First, in showing that racial composition measures often overpower and neutralize relationships otherwise observed among labor market and criminal justice domains, my findings suggest that the racialized application of penal policies and practices is of similar importance to that of labor market effects. State racial composition, labor market policies, economic conditions, and penal outcomes are interconnected in the contemporary American context and we should be cautious of considering any one of these factors in isolation. These findings are consistent with theories that decision making points throughout both criminal justice and labor market policy spheres are influenced by racial attitudes and perceptions (Soss et al. 2011).

In a second illuminating counter-example to functionalist accounts linking labor market and criminal justice policies, some states with smaller African American populations give evidence of being more able to decouple governing logics across labor market and criminal justice spheres. That is, the states that were able to maintain more collectivist criminal justice policy, even while having more individualist labor market policies, were states where African Americans make up a small percentage of the overall state population. This finding is consistent with theories of punishment emphasizing that levels of punitiveness depend on the extent to which those being punished are seen as “like us” by the general population (Beckett and Sasson 2000; Page 2004; Durkheim 1902). This evidence supports theories that policy practices affected by perceptions of social solidarity, and of threat, are often organized along racial lines. It may be that in states where the targets of criminal justice policies are more likely to be white or more likely to be perceived as white, the public is more willing to engage less punitive practices.

Even so, in these states where criminal justice and labor market trends appear to exhibit distinct governing rationales – where labor market constraints are limited *and* incarceration rates are lower – the below-average incarceration rates enjoyed by the general state populations are not experienced by the state’s African American populations. Thus, I find further evidence that the racialized application of criminal justice policies is more important for Black Americans’ experience of penal policy than other theoretically important determinates. Differences in labor market policies and conditions that matter for American populations *generally speaking*, appear to matter little for African American populations specifically.

In exposing significant associations among aggregate measures of state labor market and penal policy conditions, this study has illuminated a number of launching points for future research. This macro-level exploration of the interplay of state labor market policy and incarceration outcomes points to opportunities for micro-level analyses that tease out the intermediary processes at work in the relationships observed. What more can we learn, for example, about links among state racial

compositions, limited labor market constraints, and high incarceration rates? What role do politics, institutions, elite actors or other intermediaries play in these relationships? Furthermore, why are African American incarceration rates so much less well explained by labor market factors? Are racialized perceptions and attitudes key determinates here? And, are these determinates historically contingent? If so, what explains this contingency? Future research should pursue questions such as these. This study is also limited by the use of aggregate state-level measures. Future research of this type would be enhanced by employing disaggregated measures and analyses, particularly along race and class dimensions – dimensions which this study has confirmed are of critical importance within the policy and practice relationships uncovered here.

This paper began by asking if policy differences in the labor market sphere will matter in efforts to reduce U.S. incarceration rates. Throughout this study, an answer has emerged. Over the past two decades, at the state-level, labor market policy differences have indeed played a meaningful role in state incarceration outcomes. The nature of this relationship, however, is anything but fixed. For better or for worse, this study makes clear that in the United States of the future, how labor markets will matter for penal practices – and how penal practices will matter for labor markets – will depend on the actions of the stakeholders involved.

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## Appendices

### A1. Key Variables Sources

Variable	Source
Incarceration Rate	Bureau of Justice Statistics. Imprisonment rate of sentenced prisoners under the jurisdiction of state or federal correctional authorities per 100,000 U.S. residents, December 31, 1978-2013. Generated using the Corrections Statistical Analysis Tool at <a href="http://www.bjs.gov">www.bjs.gov</a> .
Violent Crime Rate	Federal Bureau of Investigation, U.S. Department of Justice. Uniform Crime Reporting Statistics. UCR Data Online at <a href="http://www.ucrdatatool.gov/">http://www.ucrdatatool.gov/</a> . Accessed 3/31/15.
Government Ideology	William D. Berry, Evan J. Ringquist, Richard C. Fording, Russell L. Hanson. <a href="https://rcfording.wordpress.com/state-ideology-data/">https://rcfording.wordpress.com/state-ideology-data/</a> Updated Measures of Citizen and Government Ideology (Last Updated 03/19/2015). Using ADA/COPE Scores.
Citizen Ideology	William D. Berry, Evan J. Ringquist, Richard C. Fording, Russell L. Hanson. <a href="https://rcfording.wordpress.com/state-ideology-data/">https://rcfording.wordpress.com/state-ideology-data/</a> Updated Measures of Citizen and Government Ideology (Last Updated 03/19/2015).
Unemployment Rate	Employment Status of the Civilian Noninstitutional Population, 1976-2007. Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS) program.
Black Population %	Compiled using United States Census data
Latino Population %	Compiled using United States Census data
Black Incarceration Rate	Compiled by author using Bureau of Justice Statistics National Prisoner Statistics Data and U.S. Census State Population Estimates
Black Unemployment Rate	Compiled using Bureau of Labor Statistics and U.S. Census State Population Estimates
<b>Labor Market Index</b>	
Right to Work Law	National Conference of State Legislatures; <a href="http://www.ncsl.org/research/labor-and-employment/right-to-work-laws-and-bills.aspx#chart">http://www.ncsl.org/research/labor-and-employment/right-to-work-laws-and-bills.aspx#chart</a>
Prevailing Wage Law	United States Department of Labor; <a href="http://www.dol.gov/whd/state/dollar2013.htm">http://www.dol.gov/whd/state/dollar2013.htm</a>
Minimum Wage	U.S. Department of Labor; <a href="http://www.dol.gov/whd/state/stateMinWageHis.htm">http://www.dol.gov/whd/state/stateMinWageHis.htm</a>
Public Employee Collective Bargaining	Valletta and Freeman (1988) updated by to 1996 by Kim Reuben, updated manually by author to 2012; <a href="http://www.nber.org/publaw/">http://www.nber.org/publaw/</a>



**A2. Effects of State Differences on State Incarceration Rates, Year Fixed Effects Models, 1990-2012, 50 States: *Unemployment and Poverty Rates Alternative Models***

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>
Unemployment	26.00***	7.43	10.64	16.79**			
Rate	(9.49)	(9.14)	(8.40)	(7.56)			
Violent		0.34***	0.34***	0.29***		0.30***	0.29***
Crime Rate		(0.07)	(0.06)	(0.06)		(0.05)	(0.05)
Government			-1.38***	-0.44		-1.15***	-0.47
Ideology			(0.35)	(0.35)		(0.34)	(0.33)
Labor Market				-39.09***			-29.52***
Policy Index				(10.52)			(10.22)
Poverty					18.87***	12.01**	8.41**
Rate					(5.11)	(4.64)	(4.17)
R <sup>2</sup>	0.18	0.39	0.45	0.55	0.32	0.51	0.56
N	1150	1150	1150	1150	1150	1150	1150
VCE	cluster	cluster	cluster	cluster	cluster	cluster	cluster

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010; SE's in parentheses

**A3. Effects of State Differences on State Incarceration Rates, Year Fixed Effects Models, 1990-2012, 50 States: *Primary models with Lagged Crime Rates***

	<b>Model1</b>	<b>Model2</b>	<b>Model3</b>	<b>Model4</b>	<b>Model5</b>
Labor	-39.41***	-35.91***	-38.88***	-27.99**	2.19
Market Policy Index	(10.35)	(11.20)	(11.11)	(12.22)	(10.94)
Violent	0.27***	0.28***	0.25***	0.25***	0.03
Crime Rate	(0.07)	(0.07)	(0.08)	(0.08)	(0.07)
Crime Rate	-0.01	-0.01	-0.01	-0.01	0
Lagged 1 Year	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Crime Rate	0.03*	0.03*	0.02	0.03*	0.02*
Lagged 2 Years	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
Government		-0.4	-0.41	0.03	-0.38
Ideology		(0.39)	(0.38)	(0.40)	(0.34)
Unemployment			16.81**	16.56**	6.29
Rate			(8.05)	(7.91)	(6.55)
Citizen				-2.18**	-3.03***
Ideology				(1.08)	(1.04)
Black Population %					8.03***
					(1.53)
Latino Population %					2.39
					(1.96)
R <sup>2</sup>	0.52	0.52	0.54	0.56	0.67
N	1000	1000	1000	1000	1000
VCE	cluster	cluster	cluster	cluster	cluster

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010; SE's in parentheses

**A4: Effects of State Differences on State Incarceration Rates, Year Fixed Effects Models, 1996-2012, 50 States: Controlling for other variables, including sentencing policy variables**

	<b>Model1</b>	<b>Model2</b>	<b>Model3</b>	<b>Model4</b>	<b>Model5</b>
Labor	-22.2	-36.54***	-39.06***	-20.98	
Market Policy Index	(14.51)	(12.96)	(12.16)	(13.86)	
Violent	0.22**	0.26***	0.25**	0.21**	0.37***
Crime Rate	(0.09)	(0.09)	(0.09)	(0.09)	(0.06)
Government	0.08	-0.44	-0.4	0.16	-1.12***
Ideology	(0.37)	(0.38)	(0.36)	(0.34)	(0.35)
Unemployment	3.14	6.08	7.17	4.4	
Rate	(9.79)	(9.90)	(9.28)	(9.18)	
Citizen	-2.77**			-3.12**	
Ideology	(1.31)			(1.30)	
Poverty	15.45**	14.50**	15.06**	15.56**	
Rate	(6.17)	(6.38)	(6.28)	(6.05)	
GDP per	0	0	0	0	
Capita	(0.00)	(0.00)	(0.00)	(0.00)	
Percent Pop	1.11	0.5	0.81	1.52*	
Living in Metro Areas	(0.81)	(0.68)	(0.86)	(0.90)	
Determinate			-7.59	-7.09	-13.1
Sentencing			(33.91)	(33.42)	(36.14)
Sentencing			-4.03	-11.73	-16.83
Guidelines Measure			(13.73)	(12.23)	(13.77)
Three			-20.85	-11.96	11.43
Strikes Law			(27.60)	(25.77)	(27.49)
Truth in			4.33	15.35	32.2
Sentencing Law			(33.30)	(29.31)	(32.59)
Legalized			19.69	21.88	-29.44
Medical Marijuana			(24.75)	(24.68)	(28.31)
Decriminalization			-38.11	-41.12	-15.91
of Marijuana			(29.10)	(31.45)	(34.65)
R <sup>2</sup>	0.56	0.53	0.55	0.58	0.47
N	800	800	800	800	1150
VCE	cluster	cluster	cluster	cluster	cluster

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

Incarceration and violent crime rates are out of 100,000 U.S. residents.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010

SE's in parentheses

**A5: Effects of State Differences on State Incarceration Rates, Year Fixed Effects Models, 1996-2012, 50 States: Controlling for other variables, including Black Population %**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
Labor	2.68	-16.92	-21.04**	4.25	
Market Policy Index	(13.33)	(11.08)	(9.51)	(11.67)	
Violent	0.11	0.17*	0.12	0.06	0.19***
Crime Rate	(0.08)	(0.09)	(0.10)	(0.08)	(0.06)
Government	-0.33	-0.91**	-1.01***	-0.38	-1.37***
Ideology	(0.34)	(0.35)	(0.30)	(0.28)	(0.32)
Black Population %	6.24***	5.62***	6.92***	7.82***	7.88***
	(1.64)	(1.70)	(1.71)	(1.57)	(1.45)
Unemployment	-2.57	1.51	-0.78	-5.32	
Rate	(8.53)	(8.66)	(7.81)	(7.64)	
Citizen	-3.36**			-3.96***	
Ideology	(1.28)			(1.21)	
Poverty	13.48**	12.55**	13.49**	13.92***	
Rate	(5.31)	(5.77)	(5.30)	(4.73)	
GDP per	0	0	0	0	
Capita	(0.00)	(0.00)	(0.00)	(0.00)	
Percent Pop	0.79	0.09	0.57	1.45*	
Living in Metro Areas	(0.73)	(0.65)	(0.77)	(0.77)	
Determinate			-6.08	-5.25	-1.1
Sentencing			(25.70)	(24.31)	(26.92)
Sentencing			-2.89	-12.52	-11.75
Guidelines Measure			(12.94)	(11.02)	(11.67)
Three			-24.62	-13.82	-3.65
Strikes Law			(25.29)	(21.30)	(24.07)
Truth in			-10.3	1.81	0.37
Sentencing Law			(33.25)	(27.22)	(28.86)
Legalized			66.37***	75.16***	37.69
Medical Marijuana			(24.75)	(23.20)	(24.43)
Decriminalization			-51.60*	-57.16*	-38.41
of Marijuana			(26.68)	(29.60)	(25.94)
R <sup>2</sup>	0.64	0.6	0.63	0.69	0.62
N	800	800	800	800	1150
VCE	cluster	cluster	cluster	cluster	cluster

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

Incarceration and violent crime rates are out of 100,000 U.S. residents.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010

SE's in parentheses

**A6: Effects of State Differences on State Incarceration Rate of State Black Populations, Year Fixed Effects Models, 1996-2012, 50 States: *Controlling for other variables including sentencing policy variables***

	<b>Model1</b>	<b>Model2</b>	<b>Model3</b>	<b>Model4</b>
Labor	3.83	52.63	-34.37	-31.03
Market Policy Index	(58.52)	(70.57)	(60.83)	(57.17)
Violent	0.48	0.42	0.44	0.14
Crime Rate	(0.31)	(0.29)	(0.41)	(0.47)
Government	-3.26*	-1.81	-1.82	-2.1
Ideology	(1.88)	(1.69)	(2.00)	(1.75)
Black	2005.32	1550.06	2291.32	3666.65*
Unemployment Rate	(2047.16)	(1962.54)	(2252.38)	(2085.94)
Black Population %	-22.19***	-20.15**	-22.35***	-19.39*
	(8.17)	(8.45)	(8.28)	(9.71)
Citizen		-8.03		
Ideology		(7.24)		
Poverty			-7.77	1.36
Rate			(27.04)	(23.36)
GDP per			0.01	0.02*
Capita			(0.01)	(0.01)
Percent			-3.75	-4.44
Pop Living in Metro Areas			(4.48)	(4.92)
Determinate				-56.56
Sentencing				(136.06)
Sentencing				-1.35
Guidelines Measure				(70.86)
Three				110.6
Strikes Law				(166.67)
Truth in				84.2
Sentencing Law				(197.63)
Legalized				257.91
Medical Marijuana				(173.74)
Decriminalization				-337.97**
of Marijuana				(152.70)
<b>R<sup>2</sup></b>	<b>0.19</b>	<b>0.21</b>	<b>0.14</b>	<b>0.22</b>
<b>N</b>	<b>1095</b>	<b>1095</b>	<b>750</b>	<b>750</b>
<b>VCE</b>	<b>cluster</b>	<b>cluster</b>	<b>cluster</b>	<b>cluster</b>

Year fixed effects and clustered robust standard errors, clustered by state, applied to all models.

\* p<0.10, \*\*p<0.05, \*\*\*p<0.010

SE's in parentheses