Trial By Fury: Institutions and Southern Productivity

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Abstract
Recent empirical studies suggest that institutions are an important part of the foundation
of economic performance through time, and the economic history of the south provides
us with an ideal setting in which to examine this relationship in greater detail. Using data
on lynching to proxy for the quality of institutions, this essay argues that poorly defined,
poorly enforced property rights contributed to southern poverty at the dawn of the
twentieth century. This essay extends recent empirical analyses of the relationship
between institutions and development by offering a unique proxy for institutions that
incorporates aspects of a society's rules, norms, and enforcement characteristics. It also
extends the literature on southern economic history by providing an analytically tractable
institutional explanation for southern stagnation.

1. Introduction

Why was the south so poor from the end of Reconstruction through World War II, and what can the answer tell us about the wealth of nations? Scholars have traced southern failure to low wages, failure to invest in education, lack of an "indigenous technological community," capital markets, labor market isolation, and various manifestations of the legacy of slavery. Using data on lynching to proxy for the quality of southern institutions, the strength of enforcement mechanisms and the extent to which people were willing to contest the structure of property rights, this essay examines the institutional foundations of southern poverty.

> The essence of the southern problem is stated by Ransom & Sutch (2001:xiii): Southern agriculture stagnated while an agricultural revolution transformed the rest of rural America. The South's industrial sector remained small and backward during the age of American industrial growth. And Southern people—white as well as black— were among the poorest, least educated, and most deprived of all Americans at a time when America was becoming the richest, best educated, most advantaged nation in the world.

The fundamental sources of southern stagnation remain unclear. Traditional renderings trace the southern problem to slavery and the Civil War (Woodward, 1951). Data on slavery are statistically informative and the destruction wrought by the war clearly mattered (Engerman, 1971a, Temin 1976), but data on slavery and war *per se* tell us little about how they manifested themselves in low productivity over the long run. Many areas have languished in poverty without slavery, and others have made the transition from

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slavery to freedom without suffering protracted stagnation. In addition, southern

productivity appears to have been higher under slavery than it was during its first decades

of freedom in spite of a move to an apparently more productive institutional arrangement

(Reid, 1973).[1] The war was notable for the destruction it wrought in the south and for the

fact that it brought with it a clear and persistent divergence between the south and the rest

of the country (Margo, 2002)—it wasn't until 1890 that the south re-attained its 1860

level of per-capita output (Engerman, 1971a, 1971b)—however, it is not clear that the

war itself should have led to prolonged stagnation as many post-war recoveries have been

extremely rapid (e.g., Europe and Japan after World War II).[2]

Emancipation should have led to improved productivity by allowing greater

flexibility in labor markets and the south should have recovered from the war quickly

unless something was standing in the way. As Nye (1997) and Acemoglu (2003) argue,

market forces should move societies away from bad institutions and toward good ones as

long as property rights (including the right to use force) are clearly defined and

transaction costs are low. Thus, it is our task to identify the source of transaction costs

that lock in low productivity and prevent the emergence of growth-promoting institutions.

Racist lynching in the economic history of the south is interesting in its own right,

and it has produced a substantial body of literature.[3] Understanding the relationship

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[1] Mitchener and McLean (2003) use data on the percentage of the population in slavery in 1860 to argue that institutions were important determinants of American productivity. Wright (1976) argues that the apparent "efficiency" of slavery discussed by Fogel and Engerman (1974) was an artifact not of any inherent efficiencies in the system but of an unusually strong cotton market.

[2] Barro and Sala-i-Martin (1992) present fundamental analyses of income convergence across regions. They note that southern convergence was unusually slow, but they do not explain why.

[3] Recent sociological studies of lynching include Clarke (1998), Stovel (2001), and Olzak (1990). Grant (1974) offers an historical narrative on the anti-lynching movement, while Shapiro (1988) considers lynching as a smaller subset of white-on-black violence. Dray (2002) presents an historical account of lynching writ large. Historians, sociologists, and psychologists have authored a ponderous literature on lynching. In early studies, Cutler (1905) and White (1929) attempt to explain lynching in terms of poverty,

between institutions that failed to constrain extra-legal violence and southern development can shed light on many issues of modern relevance. Southern history features two prominent characteristics of countries facing modern development dilemmas: the region underwent one of the most massive institutional changes of the last two centuries with the abolition of chattel slavery, and social relations between blacks and whites have always been the region's defining social characteristic. Understanding the factors that produced southern poverty may shed light on the former Soviet Union's transition out of communism and development issues in the Middle East, Africa, Australia, and other areas torn by ethnic strife and uncertain property rights.

Building on recent contributions to the literature examining the institutional foundations of economic development, this essay argues that the uncertainty arising from poorly enforced property rights, racism, and a structure of social capital developed under slavery that was inappropriate to post-Reconstruction conditions were important sources of southern poverty. Qualitative and quantitative evidence on lynching provides evidence that this was the case.

2. Structure and Change in Dixie

Broadly, people need three things to be rich:

1. Something to trade.

2. Trading partners.

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ignorance, racism, and technology. The NAACP (1969), Ginzburg (1988), and the essays in Finkelman (1992) document specific lynchings while Tolnay & Beck (1995) and Dray (2002) are two of the most systematic historical and sociological treatments of the practice. Other recent treatments from various social science perspectives include the essays in Spierenburg (1998) and commentaries on the artwork and memory of lynching (Apel 2004, Markovitz 2004). Among economists, Berkowitz & Clay (2004) use lynching as a proxy for the historical rule of law in a study of judicial institutions.

3. Incentives to trade.

Southerners were only marginally successful in each respect. People should always have "something to trade" in that they presumably own their own labor; however, this was certainly not the case under slavery, and labor markets in the post-Reconstruction era were hampered by uncertainty over who owned the sweat of the southern worker's brow. Conflicts in labor markets have been a fundamental source of poverty throughout world history, and whites' reaction to black position in labor markets produced sharp impediments to the emergence of well-functioning markets. Without secure property rights to one's labor, the extent of markets and incentives to trade are sharply curtailed.[4]

140 years of struggle with the legacy of "the peculiar institution" have produced mixed results. Combined with the Civil War and Reconstruction, slavery left three important legacies: a generally low level of investment in human capital and little emphasis on education, a structure of social capital geared toward bondage rather than freedom, and anti-social institutions that were hostile to the development of mature markets. Almost all of the emancipated slaves were illiterate. The gap persisted well into the twentieth century, and this would have been the case even if the "equal" part of the "separate but equal" doctrine governing southern schools had been true, the gap still would have persisted (Margo, 1990). The region was considerably poorer than the rest of the country, at table 1 suggests. Shortly after the end of Reconstruction, income per capita in the Southeast was only 49.9% of the national average. By 1900, this ratio had worsened: while the southwest appears to have made progress, the southeastern states

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[4] Wright (1982) and Coclanis (2000) trace aspects of post-war southern poverty to pre-war factors. The map in Ransom (2005:42) suggests a "solid south" view of the south's role in international labor markets, with the only large concentrations of foreign-born residents being in coastal cities. Rosenbloom (2001) carries out a comprehensive analysis of late 19th century American labor markets and supports the thesis that southern labor markets were indeed isolated.

enjoyed only 47.8% of average national income. An income gap of this magnitude

persisted well into the twentieth century.

(Table 1 Here)

By almost every conceivable measure, the south lagged behind the rest of the country.

In 1880, the southeast and southwest ranked behind the other regions in per capita

income, urban population, and labor force in manufacturing and services, and these

regions were ranked at the top of the list for the percentage of the labor force in

agriculture—the economy's low-wage sector. This remained relatively unchanged by

1920.

(Table 2 Here)

The structure of social capital—the network of relationships that enable trade—was

inappropriate for post-Reconstruction conditions in that the network of relationships

developed by masters and slaves were more appropriate to the hegemonic bonds of a

master-slave relationship rather than the contractual bonds that would exist between free

and equal men (Wright 1986, Carden, 2005a). Alston & Ferrie (1993, 1999) attribute

paternalism, the practice whereby planters and landlords offered protection, store credit,

and other services in exchange for long-term labor commitments, to contracting

difficulties in an environment of attenuated property rights and to the system of social

control which stunted the growth of well-functioning markets and may have pushed labor

out of the market and into home production. This had its roots in the structure of

institutions remaining as the legacy of slavery, the Civil War, and Reconstruction.[5]

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[5] Chamlee-Wright (2005) amends the analogy between "physical capital" and "social capital,"
incorporating insights from the Austrian school and interpreting it as a heterogeneous structure of complex
relationships rather than as a homogeneous mass.

Institutions are the formal rules, informal norms, and enforcement characteristics that determine the structure of property rights and shape a society's incentives (North, 1990). Rules and norms in the south were not conducive to prosperity: formal rules as embodied in Jim Crow laws was aimed at maintaining the antebellum racial order, and southern markets were burdened with a complex structure of norms prescribing "race etiquette" whereby blacks showed deference to whites in all cases (Alston, 1986) and proscribing social equality between the races (Ransom and Sutch, 1977; Higgs, 1977).[6]

Emancipation brought with it a range of difficulties. Ransom and Sutch (1977:176-77) "believe that the animosity and mutual fear that existed between the races, and in particular the whites' antagonism toward the blacks' economic advancement, were at least as powerful as were economic incentives in motivating individual economic behavior." This worked through several channels. The threat of violence prevented many blacks from acquiring education, practicing trades, and acquiring land. Racism and racist violence also had a "more powerful…more subtle and more insidious" effect on southern development because it also removed incentives for white advancement by weakening signals in the marketplace. Aldrich (1973:300) argued that emancipation brought enormous disruption; what was one day a "species of capital" was the next day "a disorganized and unruly labor force." Institutions associated with racist violence reduced competitive pressure on whites and therefore reduced labor productivity.

The importance of institutions hinges on the degree to which rules and norms are enforced. In the south, enforcement was uneven across types of rules and norms. Black criminals in the south were routinely sentenced to harsher penalties than their northern

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[6] For example, Alabama's constitution contained a prohibition against miscegenation that was not repealed until 2000. Wright (1987) notes that while blacks and whites were paid the same for the same work, whites tended to advance into higher-paying occupations while blacks did not.

counterparts (Tolnay and Beck, 1995), but members of white lynch mobs routinely

avoided punishment even when their identities were well known. Blacks, on the other

hand, were denied protection from racist mobs on the grounds that some police officers

did not want to risk their lives protecting blacks (Raper, 1933). The frequency and

character of many lynchings suggests that racist norms were enforced vigorously and

gruesomely, with lynchings serving as grotesque "Warning(s) to all Negroes that are too

intimate with white girls."[7]

On one hand, labor markets were competitive enough that planters did not want to

develop a reputation for cheating because it would curtail their ability to find labor. On

the other hand, ignorance and state-sanctioned depredations on black rights allowed more

cheating than we would expect if property rights were clearly defined and perfectly

enforced (Alston & Ferrie, 1999). Legislatures attempted to reduce competition among

planters by enacting "anti-enticement" statutes that made it a crime to hire another

planter's workers under certain conditions. These laws were ineffective because they

applied only to workers under contract, but planters found more effective ways to reduce

competition by prosecuting tenants for trivial or technical violations of criminal law.

This rendered the southern labor market relatively uncompetitive (Higgs, 1977).[8]

Formal institutions like "anti-enticement" statutes suppressed competition, but a more

effective (and more common) way to prevent labor markets from equilibrating was

lawlessness and chaos, also known as "whitecapping," a practice by which "farmers

formed secret organizations to combat the influence of the merchants in the labor and

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[7] So read the sign attached to the lynched body of Daniel Edwards, lynched in Selma, Alabama in 1893 for
fathering a child with a white woman after a year-long consensual relationship (Markovitz, 2004).
[8] See Higgs (1977:74-77) for a more thorough discussion. Wright (1986) argues that southern labor
markets were more fluid than we once thought.

land rental markets (Higgs, 1977:76)." Merchants apparently found blacks "more

amenable to their needs than white 'Cane Hill Billies'" (Finnegan, 1997:206), and whites

"begrudged the good reputation" that blacks were developing in the commercial sector.

In their eyes, something had to be done about the influence of the merchants in southern

labor markets. To accomplish their ends, whites "issued warnings, burned homes, beat

blacks, and fired shots into houses (Higgs, 1977:76)."

In summary, blacks were viewed as a threat to whites in southern labor markets, and

the structure of southern institutions encouraged whites to compete by violence and

intimidation rather than by offering higher-quality labor. Ideal data would measure every

aspect of southern institutions, but perfect measures are not forthcoming. Data on

lynching provide a suitable proxy for a state's rules and norms as well as the type and

quality of enforcement. Observers contemporary and modern noted that the south was an

extremely violent place: poor whites used lynchings to intimidate blacks (Tolnay & Beck,

1995), and attempts to integrate southern cotton mills provoked violence (Wright, 1986).

Lynching served as both "an excellent index of the backwardness of the lower south"

(White, 1929) and a signal to outside investors that liberal property rights would not be

respected, integration would not be tolerated, and investments may not be secure. The

uncertainties of the post-Reconstruction environment are encapsulated in history of the

lynching era.

3. Sowing *Strange Fruit*

The "lynching era" between the end of Reconstruction in the 1870s and the Great

Depression was also the period of most extreme southern stagnation, and the data on

lynching collected by the Chicago *Tribune* and the NAACP allow us to examine the

relationship between southern "backwardness" as expressed in the region's institutions

and productivity. Lynching was a uniquely American practice that persisted through the

middle of the twentieth century, as Figure 1 indicates.[9] According to jurist C.B. Lore,

"law has its highest function in throwing its shield of protection as a barrier before the

ignorant, the weak, and the helpless" and a "calm, just, and fair hearing" was especially

necessary in cases of grievous crime.[10] Racist lynchings were an affront to this "highest

function."

(**Figure 1 Here**)

While it was uniquely American, lynching was also primarily a southern phenomenon,

becoming even relatively more southern as time went on (figure 2). Table 3 gives us

some indication of the extent of the enterprise in the southern states: over 2,500 people

were lynched in the south between 1882 and 1903, compared to eleven in New England

and the Mid-Atlantic, fewer than four hundred in the Midwest and great plains, and just

under three hundred in the west. Lynching was more disproportionately southern over

the broader period from 1889 through 1918, with almost 3,000 people meeting their

deaths at the hands of "persons unknown" in the south while only 219 people were

lynched in the north and 156 people were lynched in the so-called "wild west." Walter

White's aforementioned assessment of lynching as "an excellent index of the

backwardness of the lower south" appears to be accurate.

(**Figure 2 Here**)

(**Table 3 Here**)

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[9] Lynching was also said to have frustrated American missionary efforts in Africa and Asia (Raper, 1933).
[10] Quoted in Grant (1975:106).

Raper (1933) argued that lynchings occurred because laws against murder and chaos were not enforced, and that this provided a powerful negative signal to potential investors. Stopping a lynch mob presented a quandary for elected officials because the lynchers themselves were often prospective voters and race relations—particularly the virtues of white womanhood—were at the center of southern politics. Protection for blacks all but disappeared under the feet of "thundering lynch mobs (Bell, 1978)." In addition, police were hesitant to risk their lives defending blacks (Raper, 1933). Racist attitudes enforced wholesale disregard for the laws that should have constrained racist violence. Lynching occurred in spite of occasional protests by state and local governments—and sometimes with the endorsement of state and local governments. Cole Blease, a governor of South Carolina, when asked once about lynching remarked that he would sooner resign his office and lead the mob than stop a lynching and later campaigned as "a governor who lauds lynching."

Contemporaries understood that violence blighted southern economies. Strom Thurmond prosecuted South Carolina lynchers in the late 1940s to show that law and order, not mob law, reigned in South Carolina. The Memphis *Commercial-Appeal* editorialized against lynching on the grounds that it was bad for the southern economy (Ginzburg, 1988). Among the myriad reasons put forth to oppose lynching was the financial cost incurred by communities in which lynching occurred. The Southern Commission on the Study of Lynching argued in 1931 that the direct and indirect financial costs of lynching were substantial: the direct costs came in the form of explicitly destroyed property, while the greater indirect costs of "(t)he damage a lynching does to labor conditions, investment of capital, reputation of the community, and the like are

inestimable (Commission, p. 62)." While the debate over lynching was grounded in the

sexual politics of the south, contemporary observers, southern leaders, and activists

learned were quick to point out how southern mobbing affected labor market

conditions.[11]

3.1 Lynching: What, Why, and When?

"Lynching" was community-sponsored murder (Waldrep, 2002), and it perpetuated a

culture of fear that cast a long shadow over the southern economy through the early part

of the twentieth century. Brundage (1997:4) argues in greater detail:

Lynching, like slavery and segregation, was not unique to the South. But its

proportions and significance there were unparalleled outside the region. Drawing

upon traditions of lawlessness rooted in slavery and the turmoil of Reconstruction,

lynch mobs in the South continued to execute alleged wrongdoers long after lynching

had become a rarity elsewhere in the nation. By the late nineteenth century, mob

violence had become a prominent feature of race relations in the South that for many

symbolized black oppression. Lynching also came to define southern distinctiveness

every bit as much as the Mason-Dixon line marked the boundary of the region.

Tolnay and Beck (1995:39) argue that whites, especially rural whites, "were more likely

to resort to lynching wherever they felt threatened by the African-American population,

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[11] White (1929:8-9) recalls a conversation he had with an Alabama court official related to the trial of a
group of men charged with lynching two blacks:

Several court officials freely admitted the guilt of the defendants, but accurately foretold early
acquittals. "Nobody around here is ever going to vote for convicting a white man for killing a nigger,"
one of them told me. "Why go to the expense, then, of holding a trial?" I asked, and received the reply:
"What with all the talk up North about lynching, we've got to make some show—we're expecting a lot
of money to be invested in business down here when they finish the Muscle Shoals dam."

either socially, economically, or politically." One version of the Federal Anti-Lynching

Act (H.R. 4528, 80th Congress, 1st Session, page 5) defined a "lynch mob" as

> any assemblage of two or more persons which shall, without authority of law, (1)
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> commit or attempt to commit an act or acts of violence upon the person or property of
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> any citizen or citizens of the United States or other person or persons, or (2) exercise
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> or attempt to exercise, by physical violence against person or property, any power of
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> correction or punishment over any citizen or citizens of the United States or other
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> person or persons in the custody of any peace office or suspected of, charged with, or
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> convicted of the commission of any criminal offense, with the purpose or
>
> consequence of preventing the apprehension or trial or punishment by law of such
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> citizen or citizens, person or persons, or of imposing a punishment not authorized by
>
> law.

This type of punishment is hardly a modern innovation, but our current interest is in post-

Reconstruction lynching.[12] These lynchings drew inspiration from several sources.

David Augustus Straker, the first dean of law at Columbia, SC's Allen University,

claimed that lynching was not to punish iniquity but to prove that blacks were unfit for

political suffrage (Finnegan, 1997). Lurid, trumped-up tales of "negro murder" and

"negro rape" reduced sympathy for blacks and may have increased the demand for racist

violence (Glaeser, 2005).

For analytical purposes, data on lynching are attractive because they are correlated a

range of activities that did not show up in the official statistics (KKK terrorism, beatings,

floggings, and other forms of extralegal violence) but that were nonetheless correlated

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[12] Waldrep (2002) discusses characteristics of antebellum lynching in detail.

with lynching. In addition, horrific "spectacle lynchings"—in which the victim met his death at the hands of thousands of "persons unknown," often in a carnival-like atmosphere – offer important evidence about the structure of formal institutions and southern communities' tolerance for sadistic violence (Hale, 1996).[13] The House of Representatives argued that "a state deprives a person of life, liberty, or property without due process of law and denies him the equal protection of the laws when the State's inaction has the effect of a discriminatory withholding of protection."[14] It was this "discriminatory withholding of protection" by a monopolist (the state) with no incentive to provide protection that allowed vengeful lynch mobs to wreak havoc on southern markets. Mob violence was "a sudden revolution," "enthroned anarchy," and "passion dominant" in the face of which "life, property, person, character perish as stubble before the flame" (Curry 1896:1291), and disenfranchisement meant that "the entire machinery of the state became an instrument with which to coerce blacks (Alston and Ferrie 1993:855)."

The causes and consequences of this uncertainty are reflected in the letters of black migrants to the north collected by Scott (1919a, 1919b). Regarding wages and treatment of southern black labor, a minister in Newbern, AL writing on 4/7/1917 write that "(a)s leaders we are powerless for we dare not resent such [treatment] or…show even the slightest disapproval…(t)he white man is saying that you must not go but they are not doing anything by way of assisting the black man to stay." Many blacks migrated explicitly because of violence. A writer from Macon, GA noted that blacks were "shot

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[13] One of the most vivid "spectacle lynchings" was the lynching of Jesse Washington in Waco, Texas in 1916. Washington was burned alive in the town square by a mob of ten to fifteen thousand. The mayor watched the lynching from his office window and expressed concern that the lynchers would hurt the tree from which Washington was hung (Waldrep, 2002).

[14] House Anti-lynching hearings of 1948, p. 1.

down here like rabbits" for small offenses, noting that a sheriff and his deputies

apparently shot several men who were shooting craps (Scott 1919a:438). A letter writer

from Daphne, AL pointed out on April 20, 1917 that "there is 15 or 20 familys wants to

come up there at once but cant come on account of money to come with and we cant

phone you here we will be killed they don't want us to leave here & say if we don't go to

war and fight for our country they are going to kill us…(w)e cant talk to you over the

phone here we are afraid to they don't want to hear one say that he or she wants to leave

here if we do we are apt to be killed." First-hand testimony suggests that the south was

not a particularly safe place for workers or investors.

3.2 Lynching and Institutions[15]

Lynching reflected uncertainty about who, exactly, had particular rights and about the

opportunities that remained to be exploited. In a sense, lynching reflected uncertainty

about the endowment of property rights as well as the prices that were supposed to

emerge. In the south, the area that presented the most opportunities for productivity

growth was *directly* affected by lynching. In addition, lynching was reflective of

widespread uncertainty in labor markets as well as uncertainty about the institutions that

would ultimately emerge. It was fairly clear that transgression of racial mores—sexual

congress between black men and white women, for example—would be cause for a

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[15] It may be objected that lynching was "popular justice" whereby informal arrangements came up to deal with chaos that could not be constrained by the state. Tolnay and Beck (1995) argue that this was not the case, and White (1929:259) quotes James Weldon Johnson, who wrote in *Current History* in 1924 that "a mob's accusation is not by any means equivalent to conviction…in a number of cases in which investigators were sent to the scene of lynchings by the National Association for the Advancement of Colored People, their reports showed that the victim's guilt had not only not been proved, but that he was actually innocent of the crime charged." The author's own experience with the microfilm records of the NAACP's anti-lynching campaign suggests that the Association's investigations were diligent and unbiased.

lynching, but it was not clear exactly on what *other* margins blacks could act without stirring up the "lynching spirit" among whites.

Enforcement gives "teeth" to rules and norms, and lynching yields important information about the strength of enforcement mechanisms. First, lynching was a way to enforcing rules and norms. Second, lynching stood in open defiance of rules and norms about how one is to do unto others, showing that in some respects, the law was largely impotent with respect to lynch mobs. Lynching enforced some rules and norms (those governing relations between the races) and was an affront to others ("thou shalt not kill" and various formal codifications thereof).

Lynching also enforced anti-social informal norms, particularly those about relations between white women and black men. Often, the notion that a white woman might be lying or fail to identify her accuser would be grounds for a lynching. As Glaeser (2005) notes, lynching was often a form of revenge against supposed negro depredation. It was often deemed "necessary" to keep blacks at bay. It was alleged that the white man's responsibility was to defend the virtue and integrity of virtuous white women, and so lynching persisted.

3.3 Judge Lynch Clears the Docket

Te historical record is rich with vivid and gruesome accounts of lynchings, and this sub-section briefly discusses several examples that fill in the gaps between racist violence and low productivity. The lynching of Sam Holt in Newnan, Georgia in 1899 was a particularly chilling example. Under the guise of protecting "Our Southern Women," a crowd of thousands mutilated and murdered Holt despite the protestations of a former governor and a judge. This lynching then led to the lynching of one "Lige" Strickland,

Holt's alleged accomplice, who according to the *Weekly Republican* was killed by the mob—this in spite of the protestations of a former employer, an ex-state senator who was "one of the most distinguished citizens of Coweta county." At the site of the Holt lynching was nailed a sign: "We must protect our Southern Women."[16]

Many lynchings were motivated by perceived sexual misconduct. Daniel Edwards sired the child of a white woman after a year-long consensual relationship. He was arrested for rape and riddled with bullets by a mob in Selma, Alabama in 1893. To his body was attached a note reading "Warning to all Negroes that are too intimate with white girls. This the (sic) work of one hundred best citizens of the South Side." A small-town mayor was explicit in his justification of lynching, arguing that "[t]he only way you can teach these Niggers a lesson and put them in their place is to go out and lynch a few of them, and the others will trouble you no more. That is the only thing to do—kill them, string them up, lynch them!" (Markovitz 2004:1,3).

Many lynchings were spontaneous, but others were premeditated or announced in advance. A newspaper collage assembled by the NAACP around the lynching of Claude Neal also shows that the act was hardly spontaneous, bearing headlines like "CROWD AWAITS LYNCHING" from the Tampa *Tribune*, "Mob Holds Negro; Invitations Issued for Lynch Party" from the Richmond *Times-Dispatch*, "MOB PLANS FIERY DEATH FOR KILLER" from the Miami *Herald*, "Mob Invites White Folks to Lynching" from the Milwaukee *Sentinel*, "MANY AWAIT LYNCHING AT CRIME SCENE" from the Shreveport *Times*, "HUNDREDS HEADED FOR A LYNCHING" from the Savannah

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[16] Both lynchings are discussed in Ginzburg (1988:11,15).

News, and finally "GOOD TIME IS HAD BY ALL AS NEGRO IS PUT TO DEATH"

from the Bismarck *Tribune* (Markovitz 2004:28). [17]

Dan Barber, his wife, and their children lived near Monticello, Georgia, when Barber

was suspected of selling contraband whiskey. The Marshall gave someone a marked

fifty-cent piece with which to buy whiskey; the stool pigeon went about his business, and

the town Marshall went to investigate Barber without warrant. He was bruised when

Barber resisted the investigation, aided by his wife and children. The Marshall left and

returned that evening with a mob, which took Barber, his son, and his two daughters to

the edge of town, and strung them up one-by-one before riddling them with bullets. The

Governor of Georgia officially condoned the lynching.[18]

Blacks were also lynched for relatively trivial offenses, such as "insulting" white

women, bumping into them on the street, or in one case, saying hello. Sewell Smith, a

black barber in Rayville, Louisiana, met a grisly fate at the hands of loitering whites

when he allowed a white boy to carry his satchel in anticipation of a tip.[19] Lynching

came to be an important signal of institutional quality to potential outside investors.

Kantrowitz (1998:227) suggests that for South Carolinians, "fears of unpicked cotton and

unplowed fields" were rooted in the uncertainties associated with insecure institutions

and mob violence. The post-Reconstruction south was a violent and murderous place.

Most "chivalrous" southern duels were simply street fights, and a particularly telling

incident came with the editor of the Columbia *State* was gunned down (ironically) by

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[17] One of the most provocative lynchings was that of Anthony Crawford, who was lynched in Abbeville, SC on October 21, 1916, discussed in Finnegan (1998:244-256). In the words of a local banker, "Crawford was insolent to a white man and …deserved a thrashing." In the words of another local banker, the Crawford lynching was justified and "a white man's right to whip a negro once in a while" should not be "interfered with."

[18] Papers of the NAACP, reel 1 (1912). On file at the University of Virginia.

[19] Grant (1975:7).

then- Lt. Governor Tillman of South Carolina in 1902, in the open street, for the crime of telling "unpleasant truths" about him (Hart, 1910).

By the early twentieth century, lynching had become a major national issue. The tide began to turn as the twentieth century progressed. Many newspaper editors, governors, and others crusaded against lynching; for example, Louis I. Jaffe of the Norfolk *Virginian-Pilot* winning a Pulitzer Prize for his editorial "An Unspeakable Act of Savagery" in which he opined against lynching. In summary, lynching does provide a useful index of southern backwardness. The data reported by White (1929) allow us a preliminary look at the relationship between the quality of southern institutions and the productivity of southern labor.

4. Empirical Model & Data

The performance of the southern states at the beginning of the twentieth century provides an ideal setting in which to examine the relationship between institutions and economic performance. The Civil War had been over for 35 years, the first generations of southern blacks born into freedom were well into their prime working years, and most of the dust from Reconstruction had finally settled. The consequences were disastrous. According to Ransom and Sutch (1977:174-175),

> The postemancipation era began with great gains and great hopes, but those gains were never capitalized, and those hopes never materialized. The South of 1900 was poor. Relative to the entire United States, per capita income was less than 50 percent of the national standard in the South Atlantic and East South Central divisions. The South of 1900 was underdeveloped. It remained an agrarian society with a backward technology that still employed hand labor and mule power virtually unassisted by

mechanical implements. The rural South of 1900 was stagnant. Crop outputs, yields

per acre, and agricultural technology remained virtually the same year after year.

Progress was nowhere in evidence.

In order to better understand why "progress was nowhere in evidence," an ideal model of

the relationship between southern institutions and development would contain measures

of the quality of formal rules, informal norms, and enforcement mechanisms.

Unfortunately, perfect measures do not exist, but data on lynching capture aspects of each.

In lieu of an ideal model, we consider a simple econometric specification:

$$\ln(Y/L)_{1900} = \beta_0 + \beta_{lynch}\ln(1+\text{lynching measure}) + \boldsymbol{\beta X} + \mu \qquad (1)$$

The dependent variable is price-adjusted output per worker for 1900 as reported by

Mitchener & McLean (1999, 2003) for the continental United States. To capture the

relationship between labor productivity and southern institutions, several measures of the

frequency of late nineteenth-century lynching are used. The first is a measure of the raw

number of lynchings that occurred between 1882 and 1903. The second is a measure of

the number of black lynchings occurring over the same period. Additional measures

normalize these figures by the 1900 population. Lynching data are taken from White

(1929:254-259) and population data are from Kuznets and Thomas (1957).

$\boldsymbol{X}$ is a matrix of control variables to capture the effects of endowments, access to

trade, climate, and settler origin. Two sets of endowments are considered—the first is the

set of geographic endowments that are truly exogenous, and the second is a set of

"endowments" left after the war and reconstruction: the urban population and the

endowments of capital invested in manufacturing and education. As Wright (1986)

argues, one of the most important aspects of the legacy of slavery was the fact that the

southern population was predominantly rural. To control for this effect, the percentage of the population living in urban areas in 1880 is used. In addition, two other distinguishing characteristics of southern history were the region's relative failure to move into manufacturing and her failure to invest in education. These effects are measured using the ratio of capital invested in manufacturing to the labor force (calculated from Kuznets and Thomas, 1957) and Connolly's (2004) measure of migration-adjusted education spending per capita. Also included among the controls are dummies for English, French, Spanish, or Dutch settler origin.

Estimating the relationship between southern institutions and development is complicated by the fact that institutions, or at least in this case the proxy used to measure the quality of institutions, may be endogenous: were southerners poor because they lynched, or did they lynch because they were poor?[20] The poor and the unproductive may be more prone to violence (particularly racist violence) for several reasons. First, the opportunity cost of lynching is lower for the poor, *ceteris paribus*. The capitalized value of the future income he risks by committing a crime is lower than it would be for someone who was more affluent. Second, poor whites (who were responsible for most of the lynchings) were more likely to face competition from blacks in the labor market and thus were more likely to resort to violent means of suppression, particularly during planting and harvest (Tolnay and Beck, 1995). Since lynching is negatively correlated with productivity in that poor people will be more prone to violence, the estimated coefficient on lynching will be biased downward and OLS will produce an upper-bound estimate of the impact of lynching. We can identify the effect of lynching on southern

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[20] Numerous sociological studies have examined the relationship between lynching and economic indicators. These studies are summarized in Tolnay and Beck (1995).

productivity by adopting an instrumental variables approach that will allow us to correct

for endogeneity bias. Generally speaking, we can estimate the following system by two-

stage least squares:

$$Y/L_{1900} = \beta_0 + \beta_{lynching}(1+\text{lynching victims/population}) + \boldsymbol{\beta}\mathbf{X} + \mu \qquad (2)$$

$$\text{Lynching measure} = \delta_0 + + \boldsymbol{\delta}\mathbf{X} + \boldsymbol{\theta}\mathbf{Z} + \boldsymbol{\nu} \qquad (3)$$

$\mathbf{Z}$ is a matrix of instrumental variables that are correlated with lynching but uncorrelated

with labor productivity. Mitchener and McLean (2003) and Carden (2005b) instrument

for institutions using historical state-level data on average soldier mortality, as suggested

by Acemoglu, Johnson, and Robinson (2001) in their cross-country study of the colonial

origins of institutions and development. Mitchener and McLean (2003) note, however,

that these data record mortality rates for American-born soldiers and may not be

plausibly exogenous. It is likely that historical average soldier mortality is highly

correlated with the current disease environment and may therefore be a weak instrument.

Data on latitude provide a more plausibly exogenous source of variation in

institutions. In particular, we can instrument for lynching using the latitude of a state

capital or major city. Data from a real estate website provide latitude measures (in

degrees) of major North American cities. Latitude is suggested as a plausible instrument

by Hall & Jones (1999); a state's latitude may affect the local disease environment, the

types of crops that can be grown, and therefore the types of productive arrangements that

obtain. The next section reports estimates of equations (1), (2), and (3) that shed light on

the relationship between institutions and southern development.

5. Results[21]

The coefficient of interest is β_{lynch}, which measures the impact of additional lynching

(and, by hypothesis, of the quality of institutions) on price-adjusted labor productivity.

This section reports estimates that capture these effects, suggesting that the institutions

permitting lynching and other forms of chaos reduced southern productivity considerably.

Table 4 reports OLS estimations of simple specifications of equation 1 using four

alternative measures of lynching, 1882-1903—the number of people lynched, the number

of blacks lynched, the number of lynching victims divided by the 1900 population, and

the number of black lynching victims divided by the 1900 population—and Connolly's

measure of education expenditure per capita for 1900 to proxy for investment in human

capital.

(Table 4 Here)

These initial estimates suggest a plausible range of magnitudes on the lynching

coefficients and suggest that the explanatory power of the model is high (as measured by

adjusted R-square values ranging from 0.63 to 0.74). They return coefficients on

lynching measures that are both quantitatively and statistically significant: column (3),

for example, suggests that an improvement in institutions as measured by a 10%

reduction in the number of lynching victims between 1882 and 1903 divided by the 1900

population would produce an improvement in labor productivity of approximately 1.35%.

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[21] For quasi-elasticity interpretations, the estimated elasticity is $[(x/y)(dy/dx)] = \beta*[x/(1+x)]$, where x is the average of the independent variable. For total lynch-victims per 100,000 of the 1900 population, x is 7.78. For total black lynching victims per 100,000 of the 1900 population, x is 2.87. The multiplier used to obtain the elasticity for total lynching divided by population is 0.88; for black lynching divided by population it is 0.74. For total lynching, it is 0.99. For total black lynching, it is 0.98. For example, the coefficient of -0.26 on "black lynching victims divided by population" in Table 4 is multiplied by 0.74 to obtain an elasticity estimate of 0.19, suggesting that a 10% improvement in the quality of institutions would have produced a 1.9% increase in labor productivity.

This may be incomplete. To ensure that we are not misidentifying the relationship between lynching and labor productivity, we can re-estimate equation (1) using the number of lynching victims, 1882-1903 divided by the 1900 population to measure the quality of institutions plus a variety of controls.

Table 5 estimates equation 1 adding several successive sets of controls. Column (1) includes the percentage of the labor force in mining to proxy for each state's endowment of valuable natural resources and the NOAA's measure of "cooling days" to proxy for climate. The coefficient on lynching in this case is -0.17, which corresponds to a productivity increase of 1.5% from each 10% increase in the quality of institutions. This estimate is virtually unchanged when we include dummy variables for proximity to trade—specifically, dummy variables for access to navigable rivers, the Great Lakes, and oceans. Other possible effects picked up by the lynching data include the impact of the "endowments" left over after Reconstruction (particularly endowments of human capital, capital invested in manufacturing, and urban population) as well as settler origin. In addition, we can instrument for the effect of lynching using data on latitude.

(Table 5 Here)

It is clear here that the sign, significance, and magnitude of the coefficient on lynching stands up to the inclusion of a variety of plausible controls. These estimates suggest that once we control for human capital investment, capital invested in manufacturing, urban population, settler origin, and access to navigable waterways, the effect of racist violence was such that a 10% reduction in lynching would have produced approximately a 1.4-1.6% increase in labor productivity. The IV specification reported in Table 5, column (5) returns a coefficient on lynching that lies barely outside the 10%

rejection region (p-value of 0.1172) and is almost identical to the coefficient in the corresponding OLS specification in column (4).[22]

An obvious concern is the fundamental difference between lynchings in the south and lynchings in the rest of the country. While many racist lynchings in the Midwest served the same purpose as racist lynchings in the south, it may have been that lynchings in the western states were symptomatic of the emergence of order in societies with weak states. To address this issue, Table 6 reports estimates of the models estimated in Table 5, but with dummy variables used to separate lynching victims in southern states from lynching victims everywhere else. In other words, the variable used to construct Table 5 is separated into two separate variables: one for southern lynching, the other for lynching outside the south.

(Table 6 Here)

The impact of lynching appears to have been concentrated almost wholly in the south, as the coefficient on southern lynching is statistically significant at the 1% level in columns 1-4 while the coefficient on lynchings outside the south is statistically insignificant. Again controlling for successive groups of control variables, the estimates reported in Table 6 suggest that the impact of southern lynching was both significant and large, with columns 3 and 4 returning estimates consistent with an increase in labor productivity of about 1.6-1.7% for every 10% reduction in lynching once investment in human capital and endowment of urban population are included in the model. Column (5) addresses the endogeneity issue by again using latitude as an instrument for southern lynching. This returns a coefficient that again lies barely outside the 10% rejection

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[22] Recall that the coefficients are adjusted for quasi-elasticity interpretation. The IV interpretation is sensitive to model specification; however, the results reported in column (5) of Table 5 suggest that the OLS estimator provides a plausible estimate of the impact of lynching on labor productivity.

region (p-value of 0.14) and is consistent with a productivity increase of approximately

1.1-1.2% with a 10% improvement in the quality of southern institutions.

The most enduring fact about lynching was its overwhelmingly racist character.

While just over a third of mob victims during the 1882-1903 period were white, lynching

became progressively more concentrated in the south and progressively more racist over

time. To examine the relationship between racist lynching and labor productivity, Tables

7 and 8 report estimations of equation (1) again using several different sets of control

variables.

(Table 7 Here)

Table 7 reports estimates of equation (1) controlling for mineral endowments, climate,

and access to navigable waterways (column 1), contemporaneous education spending per

worker (column 2), endowment of urban population (column 3) and settler origin

(column 4). All four estimations return coefficients on racist lynching that are negative

and significant at the 1% level, with the coefficients in columns 3 and 4 suggesting

productivity increases of 1.7-1.8% with 10% improvements in institutions.

(Table 8 Here)

Table 8 reports the same basic estimates using data on latitude to instrument for the

impact of racist lynching. These results are broadly consistent with the results reported in

Table 7—the coefficients are negative and significant at the 1% level, and they are

similar in magnitude—however, some cases the coefficient is actually higher than it was

in the OLS specification, suggesting that the latitude IV may actually compound the bias

problem in these specifications. The effect is ambiguous, however: for columns (1) and

(2) of Table 7, re-estimating the equation using the IV specification reduces the coefficient on lynching. For columns (3) and (4), the coefficient increases.

In summary, these estimations suggest that lynching is a plausible proxy for the quality of southern institutions, and the institutions that obtained in the decades following Reconstruction were an important aspect of southern poverty. The relationship between lynching and labor productivity at the beginning of the nineteenth century appears to be quite robust, with lynching producing large drops in labor productivity across specifications. These results support the suggestion of Ransom and Sutch (1977) and the implication of Alston and Ferrie (1993, 1999) that racism, racist violence, and insecure property rights were important factors contributing to the stagnation of the southern economy.

6. Conclusion & Further Directions

Qualitative and quantitative evidence on lynching suggest that the quality of southern institutions and the strength of southern enforcement mechanisms were key factors determining labor productivity. The results reported in this study suggest that institutions, in particular institutions that manifested themselves in lynching and racist violence, were both an important aspect of the legacy of slavery as well as an important factor determining economic performance. Many aspects of the stagnant south—that the region was a poor, uneducated, and disadvantaged region in what was rapidly becoming the richest society the world has ever seen—appear to have their roots at least in part in institutions that failed to punish competition by expropriation and mayhem.

This essay suggests numerous directions for further work. First, these estimates consider only the relationship between lynching and labor productivity in a narrow sense: specifically, this essay looks only at the relationship between lynching and labor productivity at the beginning of the twentieth century. Southern poverty had many different aspects—failure to move into manufacturing, low productivity, failure to invest in education, etc.—each of which deserves further treatment. The lynching data themselves also provide us with a unique data source that we can use to examine the impact of racist violence and insecure institutions at a much more disaggregated level.

In addition, our understanding of the relationship between social capital, informal norms, and other aspects of institutions is fundamentally incomplete; in addition, southern economic history provides us with an ideal setting in which to examine the evolution of institutions over time. Each of the individual "proximate causes" of wealth deserves to be studied in much greater detail, as well.

The findings in this essay are "preliminary" in the truest sense of the word— preliminary not in that they are unreliable, but preliminary in that they provide the bedrock on which extensive further research can be built. We are only now beginning to understand the important relationships between institutions and development, and this essay suggests promising new directions for further research.

Appendix A: Data

1. **Labor Productivity:** income per worker, adjusted for regional discrepancies in
    prices. From Mitchener & McLean (2003), converted to 2000 dollars using the
    price deflators in Johnston & Williamson (2004).

2. **Settler origin, access to waterways**: dummy variables reported in Mitchener &
    McLean (2003).

3. **Percentage of 1880 labor force in mining:** from Mitchener & McLean (2003).
    Also reported in Perloff (1966:622-23, 626-27).

4. **Cooling Days:** Average cooling days as reported by NOAA. The data are
    described in Mitchener & McLean (2003).

5. **Percentage of population in urban areas**: calculated from Kuznets & Thomas
    (1957).

6. **Capital invested in manufacturing:** calculated from Kuznets & Thomas (1957).

7. **Education expenditure per worker:** from Connolly (2004).[23]

8. **Lynching:** data begin in 1882 with the series collected by the Chicago *Tribune*.
    These data have been re-examined by the NAACP and most recently by Tolnay
    and Beck (1995). The data used in this essay are from White (1929:254-259).

(Table A-1 Here)

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[23] Thanks are due to Michelle P. Connolly for generously sharing her data.

Tables

Table 1. Regional Income Per Capita as Percentage of National Average, 1880-1957							
	1880	1900	1920	1930	1940	1950	1957
New England	140.7	133.3	124.4	129.2	127.2	109.2	113.4
Middle Atlantic	140	137.7	133.2	142.6	132.8	118.1	118.1
Great Lakes	101.8	106.2	107.9	109.6	112.1	111.4	109.2
Southeast	**49.9**	**47.8**	**56.4**	**50.2**	**57.6**	**67.7**	**70.4**
Southwest	**60.5**	**68.4**	**80.7**	**64.3**	**70.2**	**86.3**	**86.4**
Plains	89.8	97	86.7	81.7	81.2	94.4	89.9
Mountain	166	145.2	102.2	86.2	89.2	95.8	92
Far West	211.3	162.9	135.1	130.8	131.9	120.4	118.7

1929 dollars. Source: Perloff et al (1966:27).

Table 2. Rank order of Regions, 1880				
Per-capita Income	**Urban Population**	**Labor force in Agriculture**	**Labor Force in Resource Extraction**	**Labor Force in Manufacturing and Services**
Far West	New England	**Southeast**	Mountain	New England
Mountain	Middle Atlantic	**Southwest**	Far West	Mid Atl
New England	Far West	Plains	Mid. Atl	Far West
Middle Atlantic	Great Lakes	Great Lakes	Great Lakes	Mountain
Great Lakes	Mountain	Far West	**Southwest**	Great Lakes
Plains	Plains	Mid. Atlantic	New England	Plains
Southwest	**Southeast**	Mountain	Plains	**Southwest**
Southeast	**Southwest**	New England	**Southeast**	**Southeast**
Rank order of Regions, 1920				
Per-capita Income	**Urban Population**	**% Labor force in Agriculture**	**% Labor Force in Resource Extraction**	**Labor Force in Manufacturing and Services**
Far West	New England	**Southeast**	Mountain	New England
Middle Atlantic	Middle Atlantic	**Southwest**	Far West	Mid Atl
New England	Far West	Plains	**Southwest**	Great Lakes
Great Lakes	Great Lakes	Mountain	Middle Atlantic	Far West
Mountain	Mountain	Great Lakes	**Southeast**	Plains
Plains	Plains	Far West	Great Lakes	Mountain
Southwest	**Southwest**	Middle Atlantic	Plains	**Southwest**
Southeast	**Southeast**	New England	New England	**Southeast**

Source: Perloff et al (1966: 120, 188)

Table 3. Estimated Lynching Victims, 1882-1918						
	1882-1903			1889-1918		
	Whites	Blacks	Total	Whites	Blacks	Total
New England	1	0	1	1	0	1
Mid-Atlantic	3	7	10	4	4	8
East North Central	75	33	108	33	30	63
West North Central	192	63	255	80	67	147
South Atlantic	**113**	**629**	**742**	**78**	**784**	**862**
East South Central	**199**	**745**	**944**	**134**	**880**	**1014**
West South Central	**327**	**577**	**904**	**213**	**745**	**958**
Mountain	273	6	279	101	9	110
Pacific	85	1	19	43	3	46
United States	1268	2061	3262	687	2522	3209

Sources: 1882-1903 from White (1929). 1889-1918 from NAACP (1969).
South Atlantic: DE, MD, VA, WV, NC, SC, GA, FL
E. South Central: KY, TN, AL, MS
W. South Central: AR, LA, OK, TX
Total for US, 1889-1918 also includes 15 whites lynched in "Alaska and unknown."

Table 4. Lynching and Real Labor Productivity

Dependent Variable: Log of price-adjusted labor productivity, 1900

	(1)	(2)	(3)	(4)
Constant	7.17***	7.93***	6.8***	8.16***
	(0.42)	(0.55)	(0.26)	(0.49)
Total Lynching Victims, 1882-1903	-0.07***			
	(0.02)			
Black lynching victims, 1882-1903		-0.1***		
		(0.027)		
Total Lynching Victims, 1882-1903 divided by 1900 population			-0.15***	
			(0.03)	
Black Lynching Victims, 1882-1903 divided by 1900 population				-0.26***
				(0.05)
Education Expenditures per capita, 1900	0.24***	0.15**	0.29***	0.12**
	(0.04)	(0.06)	(0.03)	(0.05)
Cross-sections	46	46	47	47
R-Square	0.65	0.66	0.75	0.75
Adj. R-Square	0.63	0.65	0.74	0.74

OLS estimates. White's heteroskedacity-consistent standard errors.

Standard Errors in Parentheses.

*-Significant at 10% level

**-Significant at 5% level

***-Significant at 1% level

Table 5. Institutions and Real Labor Productivity, 1900					
Dependent Variable: Log of price-adjusted labor productivity					
	(1)	(2)	(3)	(4)	(5)
Method	OLS	OLS	OLS	OLS	IV
Constant	9.31***	9.29***	7.71***	7.63***	7.62***
	(0.08)	(0.12)	(0.54)	(0.54)	(0.8)
Number of Lynching Victims, 1882-1903/1900 pop	-0.17***	-0.18**	-0.16***	-0.17***	-0.17[24]
	(0.06)	(0.07)	(0.04)	(0.05)	(0.11)
Percentage of 1880 labor force in mining	2.45***	2.51**	1.36***	1.27***	1.27***
	(0.85)	(0.93)	(0.37)	(0.38)	(0.46)
Cooling days/100	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)
Access to navigable river		0.11	0.15***	0.16***	0.16***
		(0.09)	(0.05)	(0.05)	(0.05)
Access to Great Lakes		0.04	0.09	0.11	0.11
		(0.11)	(0.07)	(0.08)	(0.09)
Access to Ocean or Gulf of Mexico		-0.08	-0.01	-0.006	-0.006
		(0.1)	(0.07)	(0.06)	(0.06)
Capital invested in Manufacturing, 1880			-0.04	-0.005	-0.003
			(0.07)	(0.06)	(0.10)
Education Spending per worker, 1880			0.18***	0.17***	0.17***
			(0.02)	(0.02)	(0.02)
Percentage of 1880 population in urban areas			0.79***	0.67***	0.66**
			(0.24)	(0.24)	(0.02)
English Settler Origin				-0.09	-0.09
				(0.08)	(0.08)
French Settler Origin				-0.01	-0.01
				(0.06)	(0.06)
Spanish Settler Origin				0.09	0.09
				(0.06)	(0.08)
Dutch Settler Origin				0.06	0.06
				(0.07)	(0.07)
Cross-sections	46	46	44	44	44
R-Square	0.52	0.56	0.88	0.91	0.91
Adj. R-Square	0.49	0.49	0.87	0.87	0.87

White's heteroskedacity-consistent standard errors. Standard Errors in parentheses. Latitude of capital/major city used as IV for lynching in column (5).
Lynching victims measured per 100,000 of 1900 population.
Latitude of capital or major city used as IV for lynching.
*-Significant at 10% level
**-Significant at 5% level
***-Significant at 1% level

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[24] While the coefficient on lynching in this specification is not statistically significant at the 10% level, it lies just outside the rejection region with a p-value of 0.1172. Given the limited degrees of freedom in this model (as well as the high degree of multicollinearity) we can be reasonably confident that the coefficient is not zero.

Table 6. Institutions and Real Labor Productivity, 1900

Dependent Variable: Log of price-adjusted labor productivity

	(1)	(2)	(3)	(4)	(5)
Method	OLS	OLS	OLS	OLS	IV
Constant	9.22***	9.1***	7.67***	7.58***	7.34***
	(0.07)	(0.08)	(0.51)	(0.5)	(0.68)
Number of Lynching Victims, 1882-1903/1900 pop (south)	-0.33***	-0.34***	-0.18***	-0.19***	-0.14[25]
	(0.05)	(0.04)	(0.04)	(0.05)	(0.093)
Number of Lynching Victims, 1882-1903/1900 pop (nonsouth)	-0.04	-0.03	-0.07	-0.07	-0.03
	(0.05)	(0.05)	(0.07)	(0.08)	(0.1)
Percentage of 1880 labor force in mining	0.65	0.98	1.10***	0.996***	0.95**
	(0.55)	(0.62)	(0.33)	(0.32)	(0.42)
Cooling days/100	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)
Access to navigable river		0.16**	0.17***	0.18***	0.18***
		(0.07)	(0.04)	(0.05)	(0.06)
Access to Great Lakes		0.04	0.07	0.07	0.09
		(0.09)	(0.07)	(0.08)	(0.1)
Access to Ocean or Gulf of Mexico		0.06	-0.017	-0.009	-0.02
		(0.07)	(0.06)	(0.05)	(0.08)
Capital invested in Manufacturing, 1880			0.02	0.06	0.09
			(0.08)	(0.07)	(0.09)
Education Spending per worker, 1880			0.13***	0.11**	0.11**
			(0.04)	(0.04)	(0.04)
Percentage of 1880 population in urban areas			0.73***	0.61**	0.61***
			(0.24)	(0.23)	(0.22)
English Settler Origin				-0.07	-0.07
				(0.08)	(0.08)
French Settler Origin				0.004	-0.004
				(0.05)	(0.06)
Spanish Settler Origin				0.1*	0.09
				(0.053)	(0.06)
Dutch Settler Origin				0.09	0.09
				(0.07)	(0.07)
Cross-sections		46	44	44	44
R-Square		0.75	0.9	0.92	0.92
Adj. R-Square		0.71	0.87	0.88	0.88

White's heteroskedacity-consistent standard errors. Standard Errors in parentheses. Latitude of capital/major city used as IV for lynching in column (5). Lynching victims measured per 100,000 of 1900 population.
*-Significant at 10% level
**-Significant at 5% level
***-Significant at 1% level

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[25] Again, the coefficient has a p-value of 0.14, which suggests that it is precisely estimated given the limitations of degrees of freedom and multicollinearity. On significance testing in economics, see Ziliak and McCloskey (2004).

Table 7. Institutions and Real Labor Productivity, 1900, OLS Estimates

Dependent Variable: Log of price-adjusted labor productivity

	(1)	(2)	(3)	(4)
Constant	9.09***	8.008***	7.8***	7.81***
	(0.08)	(0.45)	(0.4)	(0.37)
Number of Black Lynching Victims, 1882-1903/1900 pop	-0.37***	-0.30***	-0.23***	-0.24***
	(0.09)	(0.05)	(0.06)	(0.05)
Percentage of 1880 labor force in mining	1.01*	0.62	1.08***	1.05**
	(0.58)	(0.67)	(0.36)	(0.43)
Cooling days/100	0	0	0*	0
	(0)	(0)	(0)	(0)
Access to Navigable Waterway	0.16**	0.3***	0.25***	0.28***
	(0.08)	(0.08)	(0.07)	(0.08)
Education Spending per worker, 1900		0.11**	0.12***	0.1***
		(0.05)	(0.05)	(0.04)
Percentage of 1880 population in urban areas			0.6**	0.68***
			(0.22)	(0.21)
English Settler Origin				-0.03
				(0.05)
French Settler Origin				0.12**
				(0.05)
Spanish Settler Origin				0.09*
				(0.05)
Dutch Settler Origin				0.13
				(0.06)
Cross-sections	46	46	45	45
R-Square	0.74	0.79	0.87	0.9
Adj. R-Square	0.72	0.77	0.85	0.87

White's heteroskedasticity-consistent standard errors. Standard errors in parentheses.
*-Significant at 10% level
**-Significant at 5% level
***-Significant at 1% level

Table 8. Institutions and Real Labor Productivity, 1900, IV Estimates

Dependent Variable: Log of price-adjusted labor productivity

	(1)	(2)	(3)	(4)
Constant	9.09***	7.05***	7.72***	7.48***
	(0.08)	(0.74)	(0.61)	(0.63)
Number of Black Lynching Victims, 1882-1903/1900 pop	-0.37***	-0.23**	-0.31***	-0.28***
	(0.09)	(0.11)	(0.1)	(0.09)
Percentage of 1880 labor force in mining	1.01*	0.67	1.12***	1.02**
	(0.58)	(0.62)	(0.37)	(0.38)
Cooling days/100	0	0	0*	0
	(0)	(0)	(0)	(0)
Access to Navigable Waterway	0.16**	0.37***	0.27***	0.3**
	(0.08)	(0.09)	(0.07)	(0.09)
Education Spending per worker, 1900		0.21**	0.13**	0.13**
		(0.08)	(0.06)	(0.06)
Percentage of 1880 population in urban areas			0.41**	0.62***
			(0.2)	(0.21)
English Settler Origin				-0.01
				(0.06)
French Settler Origin				0.15***
				(0.06)
Spanish Settler Origin				0.11*
				(0.06)
Dutch Settler Origin				0.1
				(0.07)
Cross-sections	46	46	45	45
R-Square	0.74	0.81	0.86	0.9
Adj. R-Square	0.72	0.78	0.83	0.87

White's heteroskedasticity-consistent standard errors. Standard errors in parentheses.

*-Significant at 10% level

**-Significant at 5% level

***-Significant at 1% level

Latitude of capital or major city used as instrument for lynching.

Table A-1. Cities Used for Latitude Calculations
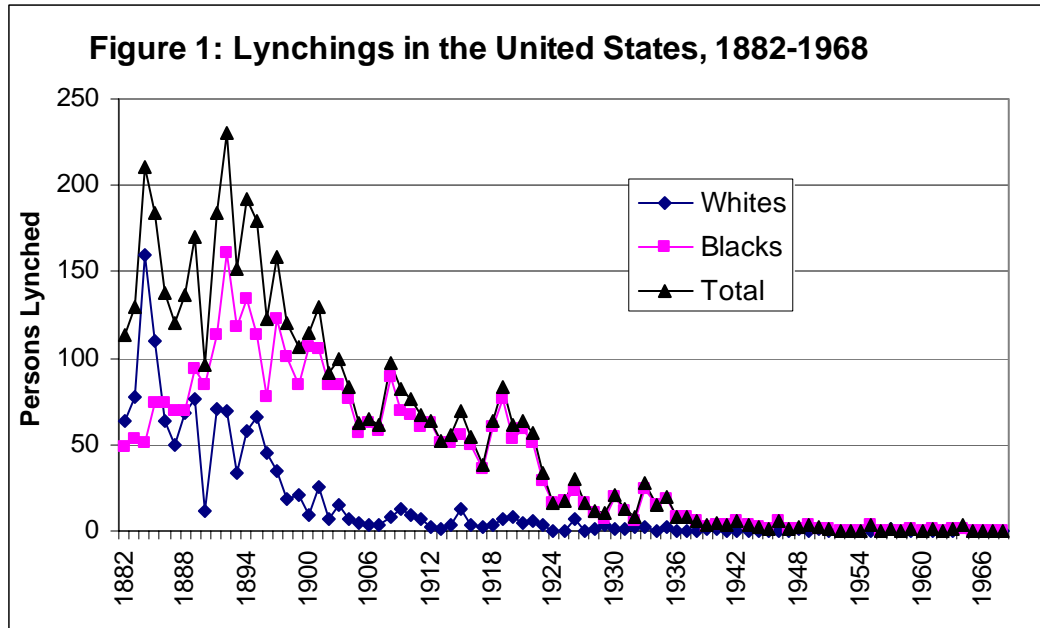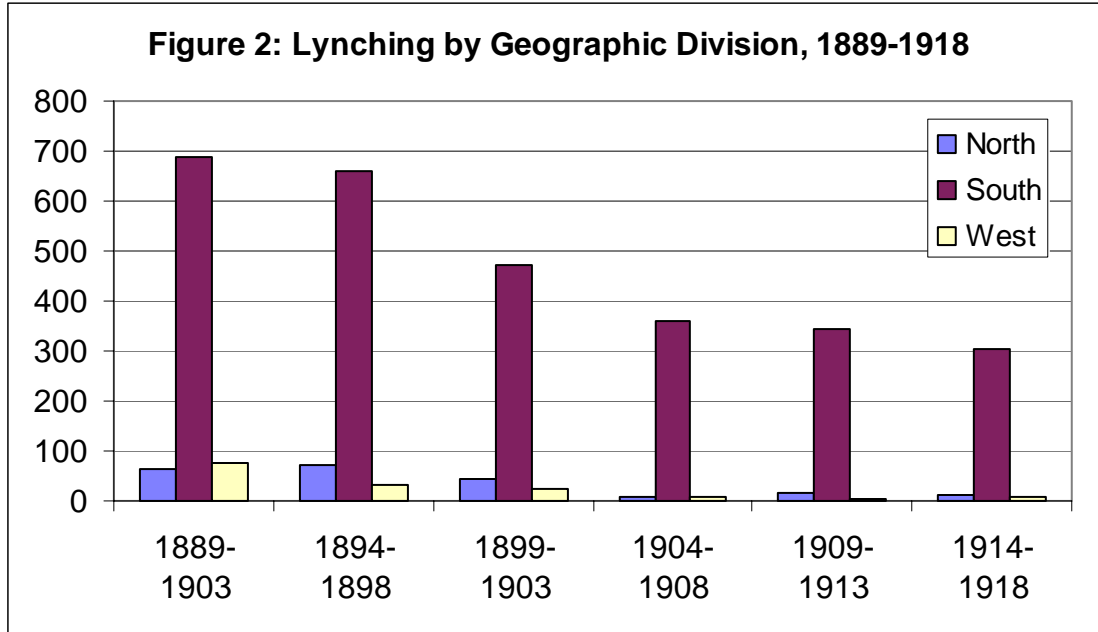
(taken from www.realestate3d.com)

Alabama: Montgomery	Nebraska: Lincoln
Arkansas: Little Rock	Nevada: Las Vegas
Arizona: Phoenix	New Hampshire: Concord
California: Sacramento	New Jersey: Trenton
Colorado: Denver	New Mexico: Albuquerque
Connecticut: Hartford	New York: Albany
Delaware: Dover	North Carolina: Raleigh
Florida: Tallahassee	North Dakota: Bismarck
Georgia: Atlanta	Ohio: Columbus
Idaho: Boise	Oklahoma: Oklahoma City
Illinois: Springfield	Oregon: Salem
Indiana: Indianapolis	Pennsylvania: Harrisburg
Iowa: Des Moines	Rhode Island: Providence
Kansas: Topeka	South Carolina: Columbia
Kentucky: Louisville	South Dakota: Pierre
Louisiana: Baton Rouge	Tennessee: Nashville
Maine: Bangor	Texas: Austin
Maryland: Baltimore	Utah: Salt Lake City
Massachusetts: Boston	Vermont: Montpelier
Michigan: Lansing	Virginia: Richmond
Minnesota: Minneapolis	Washington: Olympia
Mississippi: Jackson	West Virginia: Charleston
Missouri: Jefferson City	Wisconsin: Madison
Montana: Helena	Wyoming: Cheyenne

Figures

Figure 1: Lynchings in the United States, 1882-1968

Source: University of Missouri-Kansas City "Lynching in America" database:
http://www.law.umkc.edu/faculty/projects/ftrials/shipp/lynchingyear.html

Figure 2: Lynching by Geographic Division, 1889-1918

Source: NAACP (1969).

References

Acemoglu, Daron. 2003. Why not a Political Coase Theorem? Social Conflict, Commitment, and Politics. *Journal of Comparative Economics* 31(4):620-652.

Aldrich, Mark. 1973. "Flexible Exchange Rates, Northern Expansion, and the Market for Southern Cotton: 1866-1879. *Journal of Economic History* 33(2): 399-416.

Alston, Lee J. 1986. Race Etiquette in the South: The Role of Tenancy. *Research in Economic History* 10:199-211.

Alston, Lee and Joseph Ferrie. 1993. "Paternalism in Agricultural Labor Contracts in the US South: Implications for the Growth of the Welfare State." *American Economic Review* 83(4): 854-876.

Alston, Lee J. and Joseph P. Ferrie. 1999. *Southern Paternalism and the American Welfare State: Economics, Politics, and Institutions in the South 1865-1975*. Cambridge: Cambridge University Press.

Alston, Lee J., Gary D. Libecap, and Bernardo Mueller. 1997. Violence and the Development of Property Rights to Land in the Brazilian Amazon, in John V.C. Nye and John Drobak, eds. *The Frontiers of the New Institutional Economics*. San Diego: Academic Press, pp. 145-196.

Apel, Dora. 2004. *Imagery of Lynching: Black Men, White Women, and the Mob*. New Brunswick: Rutgers University Press.

Barro, Robert J. and Xavier Sala-i-Martin. 1992. Convergence. *Journal of Political Economy* 100(2): 223-251.

Bateman, Fred and Thomas Weiss. 1977. *A Deplorable Scarcity: The Failure of Industrialization in the Slave Economy*. Chapel Hill: University of North Carolina Press.

Bell, Derrick A. 1978. The Racial Imperative in American Law, in Robert Haws, ed. *The Age of Segregation: Race Relations in the South, 1890-1945*. Jackson: University Press of Mississippi, pp. 3-28.

Brundage, W. Fitzhugh. 1997a. Introduction, in W. Fitzhugh Brundage, ed. Under Sentence of Death: Lynching in the South. Chapel Hill: University of North Carolina Press, pp. 1-20.

Brundage, W. Fitzhugh. 1997b. The Roar on the Other Side of Silence: Black Resistance and White Violence in the American South, 1880-1940, in W. Fitzhugh

Brundage, ed. *Under Sentence of Death: Lynching in the South*. Chapel Hill: University of North Carolina Press, 271-291.

Carden, Art. 2005a. Inputs and Institutions as Conservative Elements. Working Paper, Washington University in Saint Louis.

Carden, Art. 2005b. The Productivity of US States since 1880: Extension. Working Paper, Washington University in Saint Louis.

Chamlee-Wright, Emily. 2005. The Structure of Social Capital: an Austrian Perspective on its Nature and Development. Working Paper: Beloit College.

Coclanis, Peter. 2000. Tracking the Economic Divergence of North and South. *Southern Cultures* (Winter):82-103.

Connolly, Michelle. 2004. Human Capital and Growth in the Postbellum South: A Separate but Unequal Story. *Journal of Economic History* 64(2):363-399.

Curry, J.L.M. 1896. Address to the general Assembly of Georgia, 10/31/1893. In *Report of the Commissioner of Education for the year 1894-1895*. Washington DC: Government Printing Office, pp. 1291-1297.

Dray, Philip. 2002. *At the Hands of Persons Unknown: the Lynching of Black America*. New York: Random House.

Engerman, Stanley L. 1971a. The Economic Impact of the Civil War, in Robert W. Fogel and Stanley Engerman, editors, *The Reinterpretation of American Economic History* (New York: Harper & Row), pp. 369-379.

Engerman, Stanley L. 1971b. Some Economic Factors in Southern Backwardness in the Nineteenth Century, in John F. Kain and John R. Meyer, eds. *Essays in Regional Economics* (Cambridge: Harvard University Press).

Finnegan, Terence. 1997. Lynching and Political Power in Mississippi and South Carolina, in W. Fitzhugh Brundage, ed. *Under Sentence of Death: Lynching in the South*. Chapel Hill: University of North Carolina Press, pp. 189-218.

Finnegan, Terence. 1998. "The Equal of Some White Men and the Superior of Others": Masculinity and the 1916 Lynching of Anthony Crawford in Abbeville County, South Carolina, in Pieter Spierenburg, ed. *Men & Violence: Gender, Honor, and Rituals in Modern Europe and America*. Columbus: Ohio State University Press, pp. 240-254.

Fogel, Robert W. and Stanley Engerman. 1974. *Time on the Cross: The Economics of American Negro Slavery*. New York: W.W. Norton.

Genovese, Eugene. 1974. *Roll Jordan Roll: The World the Slaves Made* (New York: Pantheon Books).

Ginzburg, Ralph. 1988. *100 Years of Lynchings*. Baltimore: Black Classic Press.

Grant, Donald L. 1975. *The Anti-Lynching Movement: 1883-1932*. San Francisco: R and E Research Associates.

Hale, Grace Elizabeth. 1996. Deadly Amusements: Spectacle Lynchings and Southern Whiteness, 1890-1940. in Bruce Clayton and John Salmond, eds. *Varieties of Southern History: New Essays on a Region and its People*. Westport, CT: Greenwood Press, pp. 63-78.

Hall, Robert E. and Charles I. Jones. 1999. Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics* 114(1): 83-116.

Hart, Albert Bushnell. 1910. *The Southern South*. New York: D. Appleton & Co.

Higgs, Robert. 1971. *The Transformation of the American Economy, 1865-1914*. New York: John Wiley and Sons.

Higgs, Robert. 1977. *Competition and Coercion: Blacks in the American Economy, 1865-1914*. Chicago: University of Chicago Press.

Johnston, Louis and Samuel H. Williamson. 2004. The Annual Real and Nominal GDP for the United States, 1789 - Present. Economic History Services (March 2004). URL : http://www.eh.net/hmit/gdp/.

Kantrowitz, Stephen. 1998. White Supremacist Justice and the Rule of Law: Lynching, Honor, and the State in Ben Tillman's South Carolina, in Pieter Spierenburg, ed. *Men & Violence: Gender, Honor, and Rituals in Modern Europe and America*. Columbus: Ohio State University Press, pp. 213-239.

Kuznets, Simon and Dorothy Swaine Thomas. 1957. *Population Redistribution and Economic Growth: United States, 1870-1950*. Philadelphia: American Philosophical Society.

Margo, Robert A. 1990. *Race and Schooling in the South, 1880-1950: An Economic History*. Chicago: University of Chicago Press.

Margo, Robert A. 2002. "The North-South Wage Gap, Before and After the Civil War." NBER Working Paper 8778.

Markovitz, Jonathan. 2004. *Legacies of Lynching: Racial Violence and Memory*. Minneapolis: University of Minnesota Press.

Mitchener, Kris and Ian McLean. 2003. The Productivity of US States Since 1880. *Journal of Economic Growth* 8: 73-114.

National Association for the Advancement of Colored People (NAACP). 1969. *Thirty Years of Lynching in the United States, 1889-1918*. New York: Arno Press and the New York Times.

North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.

North, Douglass C. 1996. Economic Performance Through Time, in Lee J. Alston, Thrainn Eggertsson, and Douglass C. North, eds. *Empirical Studies in Institutional Change*. Cambridge: Cambridge University Press.

North, Douglass C. 2005. *Understanding the Process of Economic Change*. Princeton: Princeton University Press.

Nye, John V.C. 1997. Thinking about the State: Property Rights, Trade, and Changing Contractual Arrangements in a World with Coercion, in John V.C. Nye and John Drobak, eds. *The Frontiers of the New Institutional Economics*. San Diego: Academic Press, pp. 121-142.

Perloff, Harvey S., Edgar S. Dunn Jr., Eric F. Lampard, Richard F. Muth. 1966. *Regions, Resources, and Economic Growth*. Baltimore: Johns Hopkins University Press.

Phillips, Charles D. 1987. Exploring relations among forms of social control: the lynching and execution of blacks in North Carolina, 1889-1918. *Law and Society Review* 21:361-74.

Ransom, Roger L. 2005. *The Confederate States of America: What Might Have Been*. New York: W.W. Norton & Co.

Ransom, Roger L. and Richard Sutch. 1977. *One Kind of Freedom: The Economic Consequences of Emancipation*. London: Cambridge University Press.

Ransom, Roger L. and Richard Sutch. 2001. *One Kind of Freedom: The Economic Consequences of Emancipation*, 2nd Edition. London: Cambridge University Press.

Raper, Arthur F. 1933. *The Tragedy of Lynching*. Chapel Hill: University of North Carolina Press. Reprinted 2003 Mineola, NY: Dover Press.

Reid, Joseph D. 1973. "Sharecropping as an Understandable Market Response: the Post-Bellum South." *Journal of Economic History* 33(1): 106-130.

Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi. 2004. Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development. *Journal of Economic Growth* 9:131-165.

Rosenbloom, Joshua L. 2001. *Looking for Work, Searching for Workers: American Labor Markets During Industrialization.* Cambridge: Cambridge University Press.

Scott, Emmett J. 1919a. Letters of Negro Migrants of 1916-1918. *Journal of Negro History* 4(3):290-340.

Scott, Emmett J. 1919b. More Letters of Negro Migrants of 1916-1918. *Journal of Negro History* 4(4):412-465.

Southern Commission on the Study of Lynching. 1931. Lynchings and What they Mean: General Findings of the Southern Commission on the Study of Lynching. Atlanta: The Commission.

Subcommittee No. 4 of the Committee on the Judiciary, House of Representatives. 1948. Hearings, Antilynching. Washington: US Government Printing Office.

Temin, Peter. 1976. The Post-Bellum Recovery of the South and the Cost of the Civil War. *Journal of Economic History* 36(4):898-907.

Thornton, Mark. 1994. Slavery, Profitability, and the Market Process. *Review of Austrian Economics* 7(2):21-47.

Tolnay, Stewart E. and E.M. Beck. 1995. *A Festival of Violence: An Analysis of Southern Lynchings, 1882-1930*. Urbana and Chicago: University of Illinois Press.

Waldrep, Christopher. 2002. *The Many Faces of Judge Lynch: Extralegal Violence and Punishment in America*. New York: Palgrave-McMillan.

White, Walter. 1929. *Rope and Faggot: A Biography of Judge Lynch*. New York: Alfred A. Knopf.

Wiener, Jonathan M. 1978. *Social Origins of the New South: Alabama, 1860-1885*. Baton Rouge and London: Louisiana State University Press.

Wright, Gavin. 1976. Prosperity, Progress, and American Slavery. In Paul A. David et al., *Reckoning with Slavery: A Critical Study in the Quantitative History of American Negro Slavery*. New York: Oxford University Press, pp. 302-336.

Wright, Gavin. 1978. *The Political Economy of the Cotton South: Households, Markets, and Wealth in the Nineteenth Century* (New York: WW Norton & Co).

Wright, Gavin. 1982. The Strange Career of the New Southern Economic History. *Reviews in American History* 10(4): 164-180).

Wright, Gavin. 1986. *Old South, New South* (New York: Basic Books).

Wright, Gavin. 1987a. The Economic Revolution in the American South. *Journal of Economic Perspectives* 1(1):161-178.

Wright, Gavin. 1987b. Postbellum Southern Labor Markets. In Peter Kilby, (ed), *Quantity and Quiddity: Essays in US Economic History*. Middletown, CT: Wesleyan University Press, pp. 98-134.

Ziliak, S.T. and D.N. McCloskey. 2004. Size Matters: The Standard Error of Regression in the *American Economic Review*. *Econ Journal Watch* 1(2): 331-358.