

Did Southerners Favor Slavery?  
*Inferences from an Analysis of Prices in New Orleans, 1805-1860*

Jeffrey D. Grynaviski  
(grynaviski@uchicago.edu)  
Department of Political Science  
University of Chicago

Michael Munger  
(munger@duke.edu)  
Department of Political Science  
Duke University

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## **Did Southerners Favor Slavery?**

Slavery's existence in the U.S. is well-known. The first slaves were introduced before 1620, and chattel slavery did not formally end until the passage of the 13<sup>th</sup> Amendment in 1865. But the legacies of slavery, physical, economic, and psychological, are difficult to gauge. What we do know is the effects of slavery were lasting, casting a shadow into the future. This a shadow that did not fade with the abolition of slavery in 1865, or even in 1965, with the abolition of Jim Crow voting restrictions after passage of the Voting Rights Act. The legacy of racism, embodied in both attitudes and vestigial rules and practices, is obdurate. This persistence of organized racism may simply betoken the universality of ethnic resentment. But we will argue that there is something unique, and intentional, about American racism.

The core of the explanation for why is simply that the ideology erected by Southern elites to explain and preserve slavery had staying power. Ideological artifacts of the South's pro-slavery ideology served as the impetus for Jim Crow laws in the late-nineteenth century (Woodward 1974), and constituted the ideological bulwark the Solid South's one-party political system in the early-twentieth century. Race and political manipulation of issues of race stimulated the transition to bipartism in the region (Black and Black 1987, 2002; Gerring 1998; Key 1949; Sundquist 1983).

Demagoguery on race catalyzed and justified the massive and violent resistance to integration at mid-century (Bartley 1969; Black 1976); and continues to shape political behavior today (e.g. Carmines and Stimson 1980, 1989; Citrin, et al., 1990; Fleisher 1993; Glaser 1996; Kousser 1974; Nye and Bullock 1992; Reeves 1997; Sears, et al., 1980; Sigelman, et al., 1995; Terkildsen 1993). Given the enduring influence of these ideas, it is important to ask whether the laws, customs, and practices of the slave South were solely tools of social control and economic exploitation? Did the creation of slave-owning society change Southerners?

These questions are larger versions of a more specific controversy in the history of the South. It is clear that at some point there was near-universal acceptance of the practice of slavery. But how did Southerners reconcile the radical language of rights in the founding documents with the ownership of

slaves? Did they wrestle with the problem, eventually solving it by dint of intellectual creations of notions of the humanity of slaves and their role in society? Or was the support of the language of liberty always self-serving and exclusive? Did Southerners at the time of the founding mouth false sentiments, to preserve comity in the effort to defeat England (Cohen 1979; Finkelman 1996; Jenkins 1935; Jordan 1968; Freehling 1972; McColley 1973)?

Historians have approached these questions from a variety of perspectives, using primary documents and contemporary accounts. Our approach is different, because it relies on observable implications of attitudes, rather than trying to measure the attitudes themselves (King, Keohane, and Verba 1994). The advantage of our approach is that we do not rely on what people said they thought, or what later they thought they had said (Benson 1967).

We measure the pattern of continuity and change in prices charged for slaves at auction, for the period 1805-1860. What we find is that *something* changed, and changed profoundly, in the period of the middle 1830s. Much of our effort is directed to try to eliminate, or at least account for, other possible causes of this change. The conclusion we offer is that the best explanation for the transformation is that many Southerners changed their minds, and embraced slavery after 1835. Until that time, if our interpretation is correct, there were deep and honest divisions among Southern elites.

By spelling out a reduced form model of slave auction prices, based primarily on economic concerns, including risk and time discounts, we can see the outlines of the effects of strengthening proslavery ideology during the 1830s. This change comes on the heels of a period, following the American Revolution, when slavery was only reluctantly accepted by many in the South. If our claims are borne out, these findings represent a significant use of empirical time series methods to extend existing research on antebellum American political history.

Before we proceed, it is useful to give a word of caution about our method. As the historian Winthrop Jordan (1968) quipped, “If it were possible to poll the inhabitants of Jamestown, Virginia, concerning their reactions to those famous first ‘twenty Negars’ who arrived in 1619 I would be among the first at the foot of the gangplank, questionnaire in hand.” The absence of direct, individual-level

survey evidence is a barrier to the kind of research now generally conducted about racial attitudes (Alvarez and Brehm 1997; Gilens 1996; Glaser 1994; Hurwitz and Peffley 1997; Kinder and Sears 1981; Kellstedt 2000; Kuklinski, et al., 1997; McConahay 1982; Nelson 1999; Schuman, et al., 1997; Sears, et al. 1997; Sniderman, et al., 1984; Sniderman and Piazza 1993; Virtanen and Huddy 1998). But the indirectness of the method used here has the important feature that it looks at the consequences of attitudes, rather than self-reported expressions of attitudes, thereby avoiding the problems associated with misrevealed or disguised preferences (Berinsky 1999; McConahay, Hardee, and Batts 1981; Kinder and Sanders 1996; Krysan 1998; Oliver and Mendelberg 2000; Sniderman, et al., 1991). In short, the drawback of the indirect method is also its best feature.

We proceed in four steps. First, we give a brief description of the background of Southern conceptions of the slave economy and our empirical puzzle. Second, a theoretical model is spelled out, identifying variables that influence the prices of slaves at auction. Third, empirical proxies of these variables are identified, and sources of data are discussed. Finally, we estimate a series of models that give estimates of the coefficients of these variables as explanations of slave prices.

## **I. Introduction**

Prior to the Civil War, pro-slavery views were widely held, even among intellectual elites, and even in the North (Tise 1987). Let there be no mistake: one key defense of slavery centered on the claim that bondage ennobled the African. Politicians, clergy, and social critics applauded slavery for its important contributions to economic development, the spiritual benefits for Christianized slaves, and in utilitarian terms, contributed to the happiness of the whole, even at the expense of the few. John Calhoun declared before Congress in 1837:

But let me not be understood as admitting, even by implication, that the existing relations between the races in the slaveholding states is an evil—far otherwise; I hold it to be a good, as it has thus far been proved itself to be to both, and will continue to prove so if not disturbed by the fell spirit of abolition.

We now believe it has been a great blessing to both of the races—the European and African, which, by a mysterious Providence, have been brought together in the Southern section of this Union. The one has greatly improved, and the other has not deteriorated; while in our

political point of view, it has been the great stay of the Union and our free institutions, and one of the main sources of the unbounded prosperity of the whole (quoted in Jenkins 1935, p. 80).

Defenders of this perspective might admit that slaves were sometimes mistreated, but laid the blame for such abuses on the intemperate master, not the system of slavery itself. Robert Walsh (1819) argued in terms of material benefits:

The physical condition of the American negro is, on the whole, not comparatively alone, but *positively good*, and he is exempt from those racking anxieties—the exacerbations of despair, to which the English manufacturer and peasant are subject to in their pursuit of their pittance.... Where the institution of slavery does not exist, there are *other institutions* generating an hundred fold more vice, misery, and debasement, than we have ever witnessed in the same compass in America (emphasis in original; quoted in Tise 1987, pp. 98).

It is possible to believe that this view of slavery, which held abuses to be exceptional and argued that Africans actually benefited from serving whites in civilized society, was simply settled among Southerners, so often is it now attributed to slave-owners. But there is an important element of anachronism in such an attribution before the middle 1830s. By no means was it settled, at least in elite discourse, that slavery was acceptable morally, or viable politically and economically. (Dienstag, 1996).

Despite the continued existence of the slave regime through the Civil War, there is considerable evidence from primary source materials that many Southerners regretted the continuation of slavery. Because of slavery's harmful effects on the character of slave-owners and the Southern economy, not to mention the institution's incompatibility with the liberal ideals of the period, some members of the Southern elites condemned slavery. Thomas Jefferson, for one, lamented the impact of slavery on planter character. In *Notes on Virginia* he wrote: "There must doubtless be an unhappy influence on the manners of our people produced by the existence of slavery among us. The whole commerce between master and slave is a perpetual exercise of the most boisterous passions, the most unremitting despotism on the one part, and degrading submissions on the other (pp. 257)." George Washington condemned the slave economy for the agricultural depression of the revolutionary war period caused by soil exhaustion and overproduction of cash crops: "I never ride to my plantations without seeing something which makes me regret having continued so long in the ruinous mode of farming, which we are in." (The George Washington Papers at the Library of Congress, Letter George Washington to George William Fairfax,

November 10, 1785). James Madison (1787) noted the tension between slavery and revolutionary ideals in *Vices of the Political System of the United States*: “Where slavery exists the republican Theory becomes still more fallacious.”

By the late-1830s, however, expressions of antislavery attitudes had all but vanished. Numerous explanations have been offered. Jenkins (1935), for one, contends that the abandonment of antislavery arguments was the result of almost two decades of work, sparked by sectional controversy over Missouri in 1820. Similarly, Tise (1987) suggests that the now dominant proslavery arguments were simply an elaboration of the ideals of conservative republicanism developed by nullificationists, emphasizing the hierarchical social and political structure necessary for adequate civil society and opposition to subversive influences, such as abolitionism. Elkins (1959) and Robert (1941) suggest that the proslavery consensus was brought about by the end of a thirteen-year long agricultural depression started by the Panic of 1819. Other scholars (e.g. Cooper 1983; Freehling 1990; Fredrickson 1971) argue that the rise of radical abolitionism around 1830 caused the change. For many Northern abolitionists, slavery was inherently sinful, and they placed moral responsibility squarely on the individual slave-holder, rather than the “system” of slavery inherited from previous generations. This claim proved honest but unstrategic, because it destroyed the middle ground occupied by moderate Southerners for whom slavery could be justified, for now, by circumstance and necessity.

Although the above explanations seem plausible, modern political science suggests that they are incomplete because they ignore the role of elites in shaping public opinion. First, there is a growing consensus that public awareness about policy questions is a function of elite discourse about the issue. V.O. Key’s powerful metaphor of public opinion as an “echo chamber” captures the intuition nicely, with citizens able to give reasonable opinions only about issues that are communicated to them by their leaders (see also Carmines and Stimson 1989; Hetherington 2001; Hinich and Munger 1994; Page 1978; Zaller 1992). Second, elites are able to profoundly influence public opinion by framing issues in terms of particular values or beliefs. Of particular import seems to be frames concerning race and core American values like freedom and equality, both of which were extremely salient in the antebellum South (e.g.

Kinder and Sanders 1996; McClosky and Zaller 1984; Sniderman, et al., 1991; Zaller 1992; Zaller and Feldman 1992).

We conjecture, but cannot directly test, that a change in the way that slavery was framed by elites during the mid-1830s fundamentally altered public opinion in the region. Following Andrew Jackson and the Democratic Party's annihilation of the National Republicans in 1828, a new opposition party was slow to form. However, as the end of Jackson's term approached, factions interested in toppling Jackson began to organize under the moniker of Whig, interestingly, with different regions in the U.S. aligning under the same party but with different issue positions. In the South, the key issue was initially opposition to "King Andrew," whose "appointment" of the unpopular Martin van Buren to be the next president and whose "illegal" presidential decree that distributed federal moneys to local banks created concerns about the growing power of the national executive. Although this platform was sufficient to drum up some support, it was not a sufficient building block for the new pro-tariff party in the predominantly agricultural South (Cooper 1983). The Whigs were desperate for an issue that would carry the presidency.

Freehling (1965, 1990) argues that the abolitionist Postal Campaign of 1835 created an environment where slavery could provide an issue that could be exploited by the fledgling Whig Party. Funded by the Tappan brothers' dry-goods business, the American Antislavery Society (ASA) began a campaign to spread its ideas nationwide, beginning with the South. Hoping to tap into the region's long-standing antislavery sentiments, the ASA mailed "incendiary" pro-abolition pamphlets in bulk. Apparently the ASA miscalculated the region's sentiments. Southerners, believing the pamphlets a ruse to stir-up black revolts, descended in mobs onto their post offices, and destroyed the letters.

The Postal Campaign linked Southern concerns over social control with antislavery agitation. In a speech before the Senate the following winter John Calhoun argued: "It was agitation here [in Congress] that they feared, because it would compel the Southern press to discuss the question in the very presence of slaves, who were induced to believe that there was a powerful party at the North ready to assist them (*The Congressional Globe* 1836, pg. 75; see also Freehling 1965)." And later in the session: "While this [antislavery] agitation continued, it was impossible but the ignorant slave population must believe that

one half of the people of this Union were their friends, and that all they had to do was to organize a successful insurrection for those friends to come to their aid (*The Congressional Globe* 1836, pg. 81; see also Freehling 1965).” Any subsequent domestic arguments for gradual emancipation were suppressed by the mob. Freehling (1965) writes: “Carolinians who espoused the old necessary-evil argument were frowned on in 1835 and silenced by 1836. To go further—to hint at colonization, to criticize the Negro seamen law, to urge that slaves be allowed to read their Bibles—was cause for mob justice (pg. 33).”

These attitudes were reinforced by the ensuing presidential election of 1836 in which both the Democratic and Whig parties campaigned on a proslavery platform in the region. The panic following the abolitionist Postal Campaign presented an issue that the Whigs attempted to use against Martin van Buren, the Northern presidential candidate. In subsequent debates before Congress on abolitionist petitions and the “gag rule,” Vice President van Buren was forced to take a position on the persistence of slavery in Washington, D.C. In an attempt to appeal to moderates in both the North and South, he argued that congressional action was constitutional but he opposed any action on the issue. This stance provided Whigs with leverage to charge the Democratic candidate as a threat to the South because he had refused to take a hardline stance against Northern abolitionists. This was effective because, as noted above, Southern conservatives were in the process of transforming the symbolic terms of debate by rhetorically linking antislavery sentiments with support for black insurrection. Importantly, the nature of the linkage would have been persuasive even to members of the necessary-evil argument, since these actors had managed to justify delay, largely because of their concerns about the police control of the slave (Miller 1977). The fate of Southern antislavery was sealed when the Democratic strategy to fend off the attack was to try to prove that they were even more proslavery than the Whigs (Cooper 1978, 1983; Freehling 1965, 1990).

From that point forward, the dimensions of political conflict as defined by the regions elites and the policy agendas of the two parties in the region excluded questions about the future of slavery. In fact, given the arguments made by Southern elites about the constitutional prerogatives of the states to determine the legality of slavery within their own borders, together with the purported right to secede if

the national government acted against slavery, the public argument was pretty well settled in the South. While debates continued about how to handle relations with the North, from this point forward the overwhelming sentiment among elites was that slavery was a positive good and would continue to exist indefinitely. This discourse persisted at least until the first shots were fired on Fort Sumter. Based on our current models of elite influence on public opinion, the way the debate was framed together with the absence of conflict on the issue, would have convinced the mass public in the South that slavery was there to stay.

### *The Empirical Puzzle*

Did Southern planters believe their own anti-slavery rhetoric following the American Revolution? This simple question has flummoxed historians for decades and has important implications for our understanding of political and social history during the antebellum period. Many have argued that if anti-slavery sentiments were sincere among the region's elites, then their beliefs should have spurred them to actively pursue pro-abolition policies in the region. Considering that the presumed opponents of slavery included the titans of the age-political leaders like Washington and Jefferson-it is difficult to imagine that serious consideration would not have been given to their proposals. At a minimum, if they genuinely opposed slavery, the Southern elites should have manumitted their own slaves, and many critics of slavery, notably Jefferson, did not. This lack of action has led many scholars (e.g. McColley 1964; Cohen 1969; Jordan 1968) to conclude that the anti-slavery views of the region's political elites were at best, shall we say, theoretical, and certainly not widely shared. At worst, the expressions of anti-slavery attitudes by Southern elites may have just been part of a cynical effort to build political bonds with politicians from the North.

Others have taken a somewhat more favorable view of Southern leaders, and argued that the guilty feelings of Southern planters were soothed by a background belief, and even a hope, that the end of slavery was near. This view was largely grounded in the successes of antislavery in the aftermath of the Revolution in the North. Freehling (1972) notes that the Southern Founders took advantage of every

realistic opportunity to hamstring the advancement of slavery during the first years of the republic, and he thought it reasonable that they believed that the trend would continue into the century. Thomas Jefferson (1944) expresses the hope that the next generation of Virginians will continue the antislavery tradition and set the precedent for peaceful abolition throughout the South. He writes to a friend discouraged by the pace of reform in the region:

These [young Virginians] have sucked in the principles of liberty, as it were, with their mother's milk; and it is to them I look with anxiety to turn the fate of this question. Be not therefore discouraged (Letter Thomas Jefferson to Dr. Richard Price, August 7, 1785 [1944]).

A generation later, Auguste Levasseur who was Marquis de Lafayette's private secretary records: "It seems to me that slavery cannot subsist much longer in Virginia: for the principle is condemned by all enlightened men; and when public opinion condemns a principle, its consequences cannot long continue (1829)."

George Fitzhugh, the prominent pro-slavery theorist, offered further support for this view, suggesting that it was only in the quarter century prior to the Civil War that the South began to articulate an argument in favor of slavery: "Twenty years ago the South had no thought—no opinions of her own. Then she stood behind all Christendom, admitted her social structure, her habits, her economy, and her industrial pursuits to be wrong, deplored them as a necessity, and begged pardon for their existence (1857 pg. 274-275)." James Henry Hammond provided a similar perspective:

And what then was the state of opinion in the South? Washington had emancipated his slaves. Jefferson had bitterly denounced the system, and had done all he could to destroy it... The inevitable effect in the South was, that she believed slavery to be an evil—weakness—disgrace—nay a sin. She shrank from the discussion of it... and in fear and trembling awaited a doom she deemed inevitable. (James Henry Hammond 1858, quoted in Freehling 1965)

Confirming that there was some substance to the antislavery sentiments observed by contemporary observers and today, as late as 1831, the Virginia legislature considered plans for gradual emancipation and colonization (Freehling 1982, 1990; Robert 1942). At least one prominent historian dates the emergence of proslavery thought to Dew's (1832) famous critique of Virginia's colonization plan (Genovese 1969, 1992).

For the remainder of this paper, we propose and implement a method for adjudicating between the two general schools of thought regarding the extent of anti-slavery attitudes in the South. The method also allows us to identify the approximate timing of a change in Southern attitudes, if a change occurred at all, which provides evidence in favor of our conjecture that the transformation of Southern attitudes was dated to the rise of the Whig Party in the period around 1835 and 1836.

## II. Deriving Observable Implications

In this section, we derive the observable implications from a reduced form time series model of slave auction prices. The foundation for our test is a political-economic model of asset pricing in which we assume that the value of slave labor is determined by traditional economic factors and public expectations about the long-run viability of slavery. The key intuition is that slave-owners as rational economic agents should react to changes in their subjective assessments of the probability abolition: if the probability of abolition declined, then the expected value of slaves as assets should increase, and the price of slaves should also rise. We believe that the death of Southern apologetics for slavery—an event that we date to the mid-1830s—created precisely this sort of change in beliefs. Counter-intuitively, Southern beliefs in the possibility of abolition vanished contemporaneously with the rise of radical abolition in the North.

### *A Political-Economic Model of Slave Prices*

The standard model of asset pricing is based on a present value calculation. According to the classic “value of marginal product” theory of the wage of a worker, slave or free, wages are determined as follows:

$$w_t = \frac{\partial f_t}{\partial L} P_t \tag{1}$$

In words, wages at time  $t$  are equal to the “value of the marginal product,” or the result of multiplying the number of units of output produced at the margin by the price at time  $t$  of a unit of that output.

Of course, “wages” aren’t really an issue in a slave system. Instead, the “shadow wage” is a measure of the exploitation of the slave’s labor by the owner. But since the value of the slave is the present value of the wages expropriated (net of upkeep and monitoring costs), we can write an expression for the value of the slave:

$$\text{Net Present Value}_{t=k} = \sum_{t=k}^{t=L} \frac{\left[ \frac{\partial f_t}{\partial L} P_t - U_t \right]}{(1 + \delta)^{t-k}} \quad (2)$$

The  $U_t$  term is defined as upkeep costs in time  $t$ , and the discount term  $\delta$  defines the rate of time preference, where current investment and borrowing is traded off against future consumption. Very similar representations have been posited by previous analysts including Fogel and Engerman (1974) and Passel and Wright (1972).

Of course, the approach we have taken so far is deterministic, and misses much of the interesting action in the asset pricing problem. There are several types of uncertainty, which take the form of transaction cost discounts, to the value of a slave. The first, easily incorporated into equation 2 above, is uncertainty about commodity prices  $P_t$ . Second, owners were concerned about the possibility of slave revolts in groups, or escapes, either of which were likely to make the slave unavailable for service. Consequently, this form of uncertainty takes the form of a probability distribution defined over a discrete outcome set: either a slave continues in service, or is lost forever due to escape or participation in an insurrection. Finally, there is uncertainty over the prospect of abolition of slavery, due to action by the state legislature or the federal Congress. Again, the form of the outcome is discrete, with a high probability that abolition will not occur, and some small probability that it will occur in any given year. Like escape, however, abolition is forever: if it occurs, the value of the slave is lost.

To capture this logic in terms of a discount for the likelihoods of escape or emancipation, consider the following equation:

$$[1-Es] * [1-Em] = [1-Em-Es+(Em*Es)] \quad (3)$$

where  $Es$  and  $Em$  are Boolean operators, taking the value “true” (1) if the slave escapes or is emancipated,

respectively.

It is difficult to analyze such an equation probabilistically, since each separate occurrence of escape or emancipation, if it comes to pass, would constitute a separate event (“escape in year 7” is different from “escape in year 13”, and so on). So, we will make two simplifying assumptions: (1) we will only consider the case where the slave neither escapes or is emancipated over his entire useful life; and (2) the likelihood function can be described as the product of a sequence of independent probabilities.

With these assumptions, the risk discount factor for escape/emancipation can be written as a likelihood function:

$$\prod_{t=k}^L (\rho_{es,t} \rho_{em,t}) = (\rho_{es,k} \rho_{em,k}) \times (\rho_{es,k+1} \rho_{em,k+1}) \cdots \times (\rho_{es,L} \rho_{em,L}) \quad (4)$$

A simple example reveals just how sensitive this discount factor is to even small changes in the subjective assessment of the “safety” of an investment in slaves. Imagine that a potential slave buyer believes that the chances of a successful escape are zero, and that emancipation is impossible. Then there is no risk discount at all, and equation 2 describes the value of the slave. But then suppose that the prospective buyer learns new information. Now he decides that the probability of escape is actually .001 (1 in a thousand) in any given year, and that likewise the probability of emancipation is .001. What is the discount? From equation 4 we know the answer is  $(\rho_{es} \rho_{em})^{L-k}$ . Imagine that the slave is expected to have a useful life  $(L-k)$  of 10 years; then the discount is  $(.999 \times .999)^{10} = .98$ . What this means is that prospective buyer who believes that the chances of either emancipation or escape are low will pay very nearly the full value of the expected marginal product of the labor of the slave. What if the slave has a 30 year expected useful life? The discount then would be  $(.999 \times .999)^{30} = .94$ . A 5% discount for the total risk of either emancipation or escape would influence the price measurably, but is not substantively significant.

Now we face the main question: how sensitive is the discount to small changes in the probability of either emancipation or escape? The answer may be surprising. If the prospective buyer learns new information, about a revolt in a neighboring county where a dozen slaves escaped, or a rumor about abolitionist activity in the state legislature, he might adjust his assessment of the probability of those

events. Suppose he thinks that the probability of escape (for example) is still .001, but that the probability of emancipation has increased from .001 to .03. Over a 10 year useful life, this means that the discount factor is .73; over a 30 year useful life the discount drops to .39. What this means is that a prospective buyer would pay only 40% of the labor value of slave, even if he is 97% certain that there will be no emancipation in any given year. The case for a .03 chance of escape gives exactly the same figure, of course, since the arithmetic is identical.

Figure 1 presents a graph of the decline in the value of a slave, over a 10 year life and a 30 year life, under the assumption that one probability remains at .999 and the other (either escape or emancipation) is slightly less. The graph illustrates two things: the price buyers are willing to pay is very sensitive to even tiny changes in subjective probabilities of escape or emancipation, and the level of discount for a 30 year effective life is going to be quite high, even for levels of risk that are negligible.

We are now in a position to present the fully elaborated model of slave price.

$$\text{Expected NPV}_{t=k} = \sum_{t=k}^{t=L} [\rho_{es,t} \rho_{em,t}]^{t-k} \frac{\left[ \frac{\partial f_t}{\partial L} P_t - U_t \right]}{(1 + \delta)^{t-k}} \quad (5)$$

Although it is quite simplistic, the model reasonably captures the potential sources of variation in the present value of slave-ownership that one would expect to observe. The easiest, in economic terms, are the “price of output” and “marginal product of labor” variables. If the price of cotton, or the productivity of slaves working on cotton, rises then the price of slaves is expected to rise also. The time rate of discount represents the opportunity cost of the labor tied up in labor assets.

The interesting feature of the model, for present purposes, is the impact on asset prices of the probability that slavery will be abolished. Confronted with this possibility, even a small risk of abolition had to be taken extremely seriously, because it affected the value of the entire future income stream. More specifically, this implies that if an individual were to change their expectations, even slightly, about the persistence of the slave regime, the amount they would pay for their slave would also shift. A rational individual would then buy a slave if the expected present value of slave-labor exceeds the price at which

slaves can be purchased at auction.

With this model in mind, it is possible to specify the impact of changes in public opinion about the durability of slavery on the expected present value of slave labor. According to our historical research, it may have been the case that prior to the middle 1830s that it was widely believed that slavery would eventually come to an end. After the mid-1830s, if our interpretation of the history is correct, there was little doubt in the mind of Southern planters that the slave regime would persist indefinitely. In terms of the model, subjectively given values for  $\rho_{em}$  would have been greater after the decline of Southern antislavery than before. This, in turn, would imply that, *ceteris paribus*, EPV also increased. On the other hand, if abolition seemed unlikely to Southerners over the long-run so that there was no change in beliefs, then  $\rho_{em}$  would have remained essentially constant over time with, *ceteris paribus*, no change in EPV.

### **III. Data and Methodology**

The microeconomic model of slave prices generates a very simple test to determine whether or not there was a change in Southern attitudes about slavery, especially regarding the emancipation of slaves. Specifically, the expected present value model generates two key hypotheses that we can test given the available data. First, if there was a change in expectations among planters about the long-run viability about slavery, then that would lead to a “regime shift” during the middle 1830s in the process that determined slave prices. This regime shift refers to a significant change in the pattern of regression coefficients after the purported transformation in Southern attitudes about abolition. Second, if we find that such a regime shift had occurred, then the model predicts that after the change that slave prices will have increased and that they should have been more sensitive to changes in the value of the goods (i.e. cotton) that they produced. This occurred because slaveowners expected to be able to expropriate the earnings from their slaves’ labor for a longer period of time.

In this section, we develop a simple econometric model to test these hypotheses. The technology that we use is a very simple technique known as a switching regression based on a linear model with

dummy variables and interaction terms. All the switching regression does is add a second set of covariates whose values are equivalent to those included in the original functional form if the year is greater than the switch and they equal zero otherwise. By an iterative procedure, it is possible to identify the maximum likelihood estimate for the year a switch was most likely. Under the assumption of constant error variance, this is equivalent to maximizing the  $R^2$  (Pindyck and Rubinfeld 1991). F-tests can then be performed to determine whether the inclusion of the structural break in the model yields a statistically significant improvement in fit. Thus, this technique allows researchers to determine the point in history when a structural shift was most likely to have occurred and, given the estimate for when that shift was hypothesized to have occurred, whether the structural shift had a statistically significant influence on slave prices. We can then examine the regression coefficients for the “most likely” model to see if changes in behavior are consistent with our hypotheses.

The dependent value in the analysis is the average price of a field hand sold on the New Orleans slave market from 1805 until 1860. Data for this variable are taken from Fogel and Engerman’s random sample of approximately 5,000 slave transactions obtained from notarized bills of sale. Of these original 5,000 cases, we dropped those in which multiple slaves were sold on one list preventing us from obtaining information about the value of individual slaves, and because it seems that intact families were less valuable than the sum of their individual parts. Because our covariates are limited to prices for agricultural data, we only included those slaves sold as field hands or for whom no occupation was given and who presumably were bought to work the fields. Further excluded were slaves thought too young or too old to be of much immediate value leading us to drop slaves not between the ages of 15 and thirty-five. Finally, we dropped non-cash transactions and those in which slaves were warrantied and who therefore were acknowledged to have some physical handicap or undesirable character trait (e.g. they often ran away). In general, we feel we leaned toward inclusion over exclusion in order to prevent a single slave with unusually high or low value from overly influencing the sample. Of the cases that remained, we computed the average annual price of a slave sold in the New Orleans market.

The covariates in the model are suggested by the expected present value model of slave labor. We

include measures of cotton prices for the year of the auction as well as the two years prior to measure planters' estimates about the value of the products that the region's slaves produced. The source for the cotton price data is Gray's (1881) *History of Agriculture in the Southern United States to 1860* which is the standard source for information about commodity prices during this period in history. Because of the absence of accurate measures of inflation and the observation that there was not a steady decline in the value of money that we have come to expect in the modern era, nominal prices were used.

Figure 2 reports a line plot of the time-series for slave-prices and cotton for the period under investigation. Notice initially that slave prices which are represented by the heavier line generally seem to track with around a one period lag in cotton prices. Visually, it seems that the relationship between these two variables seems to become stronger in the middle 1830s, which is consistent with our expectations. But, both of these intuitions can be captured more rigorously through regression analysis. It is also interesting to note that after trending upward for around 20 years, slave prices spiked right before the onset of the Civil War. The interesting thing about this is that if it were the case that slaveowners believed that they were on the threshold of federally enforced emancipation, then the bottom should have fallen out of the market rather than see prices spike. Based simply on inferences from slave prices, it seems that the South believed that succession (and possibly Civil War) or the threat thereof was sufficient to end once and for all questions about the persistence of slavery.

In addition to agricultural prices, we also included an annual measure of the number of slave revolts collected from Herbert Aptheker's (1970) authoritative work in which he identifies 250 conspiracies or insurrections. The purpose of this variable is to provide an estimate of public concern about slaves escaping from their owners. To be included in Aptheker's study, an event had to involve a minimum of ten slaves; the aim of those slaves had to appear to be freedom; the event generally did not involve slave traders; and contemporary references had to refer to the event as a plot, insurrection, or equivalent term (pg. 162). How reliable is this data? Aptheker himself acknowledges that reports of slave insubordination were often distorted during the antebellum period. On one hand, because of the widespread fear of slave rebelliousness, reports of unrest were frequently exaggerated. However,

Aptheker contends that his examination of the available evidence, requiring multiple sources to document whether an event occurred, effectively distinguishes acts of insubordination or panics from the rhetoric of the period. On the other hand, Aptheker argues that Southern elites appear to have engaged in a systematic effort to keep news of reported conspiracies and insurrections secret. However, this criticism is not particularly damaging for our study since a secret insurrection would probably not have had much of an effect on slave prices. Figure 3 plots the number of slave revolts during the antebellum period, with evidence of a greater volatility in the incidence in slave insurrections over time. Consistent with our historical intuitions, the periods of greatest unrest occurred during the 1830s—the era of Nat Turner’s rebellion, the Postal Campaign, and their derivative activities—and in the decade leading to the Civil War, with John Brown’s raid the most infamous example.

A final variable included in the model is a term to capture any linear trends in the data. We consider this to be a sort of catch-all variable measuring any upward increase in the value of slaves due to factors such as changes in inflation or technology (changes in  $\partial f_t / \partial L$ ) that we were not able to measure more directly. The final linear model that we estimated was therefore:

$$\text{Slave Price}_t = b_{0\text{main}} + b_{1\text{main}} \text{Trend}_t + b_{2\text{main}} \text{Cotton}_t + b_{3\text{main}} \text{Cotton}_{t-1} + b_{4\text{main}} \text{Cotton}_{t-2} + b_{5\text{main}} \text{Revolts}_t \\ + b_{0\text{reg}} * \delta_t + b_{1\text{reg}} \text{Trend}_t * \delta_t + b_{2\text{reg}} \text{Cotton}_t * \delta_t + b_{3\text{reg}} \text{Cotton}_{t-1} * \delta_t + b_{4\text{reg}} \text{Cotton}_{t-2} * \delta_t + b_{5\text{reg}} \text{Revolts}_t * \delta_t$$

$\delta_t$  is an indicator variable that equals zero if the observation occurred prior to the structural break and one otherwise. The switching regression proceeds by varying the cutoff for the indicator variable over time.

Also, note that a more strictly accurate representation of the ENPV calculation in the statistical model would use the natural logarithms of the variables in the model, but such a transformation does not change the timing of the regime shift or the basic intuitions provided by the coefficients. Since variables in log form are more difficult to interpret, we stick with the simpler linear model. To control for the time series properties, we included two auto-regressive terms.

#### **IV. Empirical Findings**

If there was a change in Southern beliefs about the viability of abolition, then we would expect to find a structural break in the econometric time-series model of slave prices. If our theory about the causes of the change in slave pricing is correct, then the estimate of the timing of the regime change should correspond to the emergence of the Whig Party on the national political stage around 1835. The impetus for this change would be a shift in the responsiveness of slave prices to changes in the value of agricultural prices, reflected in larger coefficients for cotton after the regime change due to a smaller risk discount from a decline in the probability of abolition. Our presentation of the results of the switching regression proceeds in two parts. Initially, we present the results of the iterative search for the year most likely to be associated with a regime shift. We then provide substantive interpretation of the parameters in the model to see if the shift is consistent with our hypotheses.

The results of the switching regression provide very nice evidence in favor of our argument that there was a significant change in the way that planters evaluated slaves as commodities contemporaneous with the emergence of the Whig Party in the mid-1830s. A graphical depiction of the iterative search procedure for the most likely period year for a structural break is provided in Figure 4. Looking for the peak of the curve which corresponds to the maximum likelihood estimate of a switch, the Figure clearly shows that 1835 was the most likely cutoff date for a change in the model of the econometric model of the auction prices of slaves. F-tests strongly reject that the regime shift between 1835 and 1836 did not add any explanatory power to the model. The timing of this cutoff is not particularly sensitive to changes in the number of lags of the commodity prices nor to the inclusion of tobacco prices as an additional control variable. Tobacco was excluded in the final analyses to save degrees of freedom, especially in light of the fact that significance tests were not able to demonstrate that the effect of tobacco prices was different from zero. We also truncated the data at 1855 to see if the spike in slave prices at the latter part of the time series was responsible for the shift or influenced the timing. It did not.

Thus far, it seems that the evidence is in favor of our theory about the timing of a change in public beliefs due to a change in expectations about the durability of the slave regime. Indeed, to the

extent that we take seriously our ability to estimate the precise timing of a switch in slave price evaluation, we find that it occurs exactly when we hypothesized, in the year of the first presidential election contested by the Whig Party in the South.

Based on our formal model of slave valuation, if there was a change in beliefs about the probability of abolition, then the effect of cotton prices on slave prices should be stronger after the regime shift. Table 1 reports the regression coefficients for the econometric model with a regime shift in 1835 that allows us to examine this hypothesis. Considering first the main effects, which refer to the influence of the independent variables prior to 1835, we find that the effect of cotton prices in the year of the slave auction as well as its first two lags is positively related to slave prices. It makes sense that the most substantial and significant of the main effects for cotton is the variable's first lag, since that measure would be the commodity price that was immediately prior to the auction and, therefore, most clearly responsible for the set of conditions that governed the supply and demand of slaves on the open market. Turning now to the regime effects, which allow us to test our hypothesis about the changes in the coefficients over time, we find that after 1835 we can reject that there was not an increase in the responsiveness of slave prices to the price of cotton. The coefficients for both the first and the second lags for the price of cotton were large and statistically significant. Even the contemporaneous cotton price was almost significant, with a p-value  $< .11$  despite the relatively small number of degrees of freedom. The effect was really quite large. Assuming a fixed cotton price of 10 cents per pound over time, prior to the regime shift, cotton's contribution to the price of a slave was  $(1.98 + 13.44 + 2.54) * 10 = \$179.6$ . After the regime shift, cotton's contribution to the price of a slave was  $\$179.6 + (14.22 + 27.45 + 15.66) * 10 = \$752.90$ , more than a four-fold increase. Impressively, this was observed even after controlling for the upward trend in slave prices.

Although the coefficients for the price of cotton are consistent with a change in beliefs about the long-term viability of slavery, it is not immediately obvious that the regime change actually led to an increase in slave prices, holding constant the other variables. This is because the intercept was also allowed to change due to the switch, and Table 1 reveals that the constant for the regime effects was

substantial, significant, and negatively signed. It is important to remember, though, that the effect of the switch enters through all of the terms listed under regime effects, not just the constant. To interpret the effect, consider the case where the trend term was set to 32 corresponding to the year 1836 (the first year in the new regime), while the price of cotton (12.5 cents per pound) and the number of revolts (3.2) were set to their averages over the time series. Substituting these values into the regime effects component of the model, we find:

$$\begin{aligned} \text{Regime Effect} &= b_{0\text{reg}} + b_{1\text{reg}}\text{Trend} + b_{2\text{reg}}\text{Cotton}_t + b_{3\text{reg}}\text{Cotton}_{t-1} + b_{4\text{reg}}\text{Cotton}_{t-2} + b_{5\text{reg}}\text{Revolts} \\ &= -928.18 + 12.36*32 + (14.22 + 27.45 + 15.66)*12.5 + 15.11*3.2 = \$232.32 \end{aligned}$$

This represents more than a 30% jump in the value of a slave over the \$706 average for the time period under investigation. So, even holding constant the other independent variables in the model, the behavior of slave prices is consistent with a decline in planters' subjective probability assessments about abolition.

A surprising finding is the positive and statistically significant relationship between slave revolts and the value of slaves. This is in contrast to our expectations that slave insurrections would increase the planters' subjective assessments of the probability that their slaves would successfully escape the plantation; thereby decreasing the lifetime expected expropriated wages that determined the price of a slave in the marketplace. However, we may be misinterpreting the consequences of these events for planters' beliefs. As Fredrickson (1971) notes: "Insurrection panics were frequent after 1830, and for men who supposedly ruled over a docile population, Southern slaveowners were extraordinarily careful to maintain absolute control over their 'people' and to quarantine them from any kind of outside influence that might inspire dissatisfaction with their condition (pg. 53)." Each failed revolt—and every one was a failure with frightful consequences for the rebels—could have increased planter confidence in the set of institutions in place to maintain police control over the slave. Counter-intuitively, reports of these failed insurrections may, therefore, have strengthened slaveowners' beliefs that they could maintain long-run control over their "property."

### *Alternative Explanations for the Switch*

Our argument is that the “switch” in the mechanism by which Southern planters evaluated the economic value of a slave was caused by changes in their expectations about the durability of the slave regime, both in terms of its ability to control and monitor slaves, and to stave off abolition. However, a reasonable alternative explanation is that there were changes in the other factors of production that could have also increased the value of slave-ownership.

One possibility is that the “switch” could be explained by the economic revolution sparked by the invention and dissemination of the cotton gin. The rationale is that in the period following the American Revolution, the Southern economy was depressed because of low prices for the region’s traditional cash crops. The cotton gin improved the region’s economic fortunes because it made it economically efficient to separate the seeds from the valuable fibers of short-staple cotton during a period when demand for cotton was rapidly expanding because of the start of the industrial revolution, with textile mills generating a large demand for the product. Thus, the technology dramatically increased the marginal product of slave labor in cotton production, thereby increasing the value of slave-ownership.

The drawback of this account, however, is that the cotton gin was introduced and widely disseminated much earlier than the “switch.” In fact, the cotton gin was invented in 1794, and had entered widespread use prior to 1805, the first year of our time series. This was because the technology was stolen, even before the first harvest was planned using the new technology. By 1804, the cotton gin had become so widespread and legal disputes over the patent so costly, that its inventor abandoned attempts to profit from his invention (<http://web.mit.edu/invent/www/inventorsR-Z/whitney.html>).

A second possible change in the factors of production that complemented slave labor was the spread of slavery into the virgin soil of the Southwest. By increasing the amount of productive acreage available to each field hand, so the argument from microeconomic theory goes, each laborer would have a greater number of inputs, thereby increasing the marginal product of slave labor.

Despite the plausibility of this claim, we do not think the “switch” could be explained by westward expansion. While it is true that westward expansion did occur throughout this period, it is not

the case that land sales in the period after 1835 were dramatically different than before. In accord with this argument, North (1966 Chart 16 pg. 79) show that there was not a regime shift in land sales in the South since, despite an occasional short-run spike (including during the late-1830s), the value of public lands sold from about 1815 until the Civil War varied around a more or less constant level. If there was not a regime change in westward expansion, it does not seem likely that this can explain the “switch” in slave prices, especially given the steady growth in the size of the U.S. slave population during this period. Moreover, Passel and Wright (1972) find that if anything, western migration of slaves may have depressed slave prices.

More generally, based on Conrad and Meyer’s (1958) findings in their pioneering work on slave productivity, it is difficult to make the argument that it was a dramatic change in the marginal product of slave labor during the mid-1830s that explained the changes in slave prices in the auction market. Based on Conrad and Meyer’s estimates of the South’s annual cotton crop in pounds and of the number of field hands engaged in cotton production in the region, it does appear that there was an increase in per capita cotton production. Although we do not want to make too strong of a claim about changes in the productivity of slave labor over time based on these estimates, productivity increases seemed reasonably constant over time. Consequently, we believe the inclusion of the linear trend terms captures a great deal of the influence of changes in the productivity of slave labor, and more importantly, that the “switch” cannot be explained by these forces since there was no dramatic technological innovation in the latter years.

A final alternative concerns the consequences from ignoring the effects of supply shocks on slave prices. However, we believe that this was not a very significant factor during the period under investigation. The international slave trade was abolished by the United States in 1808, right at the start of our series. A brief glance at Figure 2 demonstrates that the abolition of the slave trade in 1808 appears to have had almost no effect on the price of slaves, probably because by the early nineteenth century the number of slaves that could be imported would have been miniscule relative to the size of the United States’ domestic slave population. The British decision to abolish slavery in its colonies in 1833 is also

cited in discussion as a possible influence on slave prices. Although the timing is roughly in line with our switch, it is notable the British government compensated slave-owners for their losses, so one would not expect a flood of slaves into the U.S. market, even if one were to allow for the possibility that an enormous number of British slaves could have been illegally imported into the U.S. One could consider all sorts of other historical scenarios that could have influenced the supply of slaves, but the fact is that over the short and the intermediate terms, the amount of slave labor available at any given time was fixed, especially relative to the several million slaves living in the U.S. during the first half of the nineteenth century.

#### *Discussion*

In sum, the statistical evidence supports an array of predictions derived from our political-economic model of slave pricing as a function of public opinion about slavery and economic considerations. First, there was a significant change in the way that people evaluated slaves as assets in the mid-1830s, the timing of this shift that closely corresponded temporally to the creation of the Whig Party in the South. Second, an important component of this shift was an increase in the coefficients for cotton prices, which suggests that there was either a significant decrease in the discount factor for the risk of abolition or a significant increase in the marginal product of slave labor. We have argued that the empirical evidence suggests that changes in the productivity of slave labor are not by themselves sufficient to explain the regime shift. Third, we found that the regime shift was substantial, increasing the price of a slave more than 25% compared to the fifty year average. Thus, we feel that the empirical evidence provides very strong, if only indirect evidence, about changes in public opinion.

#### **IV. Conclusion**

Public opinion has ramifications beyond the political sphere. Preferences regarding environmental policy are reflected in consumption decisions and other daily activities; racial attitudes influence residential choices and hiring patterns; beliefs about the morality of abortion provide women guidance in coping with difficult pregnancies. In the study of past public opinion, or even in domains

were truthful revelation of opinions is unlikely, these sorts of consequences provide an opportunity to study mass opinions in the absence of directly measured, individual-level data.

In this paper, we traced the impact of an observable implication of public opinion to document the presence and timing in the transformation of Southern attitudes about the long-run viability of the slave regime during the mid-1830s. Based on a simple model of asset valuation, we predicted that a shift in Southern attitudes toward abolition would have led to an increase in slave prices. A switching regression using data from the New Orleans slave market found that there was a change in the way that people evaluated slaves as assets around 1835, which is consistent with the argument that Southerners believed that the emancipation of slaves was possible, perhaps even likely, during the first decades of the nineteenth century.

We conjecture that the cause of this transformation in public opinion was a change in the way that the issue of slavery was framed by the region's elites. Prior to the middle 1830s, slavery was often debated in terms of natural rights and the social and spiritual debasement of master and slave. Because Americans, even slaveowners, more or less endorsed the natural rights philosophy, it was difficult for them not to feel at least a bit squeamish about owning another person, and this was reflected in public opinion. During the middle 1830s, slavery became rhetorically linked to police control over the slave, based on the assumption that abolitionist rhetoric fomented slave unrest. As early as 1836, this rhetorical linkage, which had not previously been widespread, was adopted by both parties within the South, and was an important feature of their political campaigns. Although we find this story to be compelling, especially given its consistency with primary source data, the observable implications based on slave prices, and current theories about public opinion change, we must rely on indirect evidence in support of causal mechanisms.

Future research could productively pursue to routes. First, a greater assortment of evidence could be compiled in support of our conjecture about public opinion change. For example, we are in the final stages of collecting roll call data from state legislatures in the South that will allow us to test whether there were honest divisions among southern leaders about the future of slavery as reflected in the

proposals put forward within the states and their voting behavior. Someone could perform similar sorts of content analysis of local newspapers to identify changing patterns of political rhetoric over time. Second, future work could focus on the consequences of the change in public opinion that we have identified. If our interpretation of the history is correct, then prior to 1836 many Southerners believed that slavery was a problem in need of a solution, leaving ground for compromise in the sectional crisis between North and South prior to 1836. After 1836, compromise was impossible, setting the stage for deep sectional divisions during the second party system, with important implications for political conflict and institutional change during the late antebellum period (e.g. Aldrich 1995; Weingast 1998).

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**Figure 1: Discounts for Slave Values**

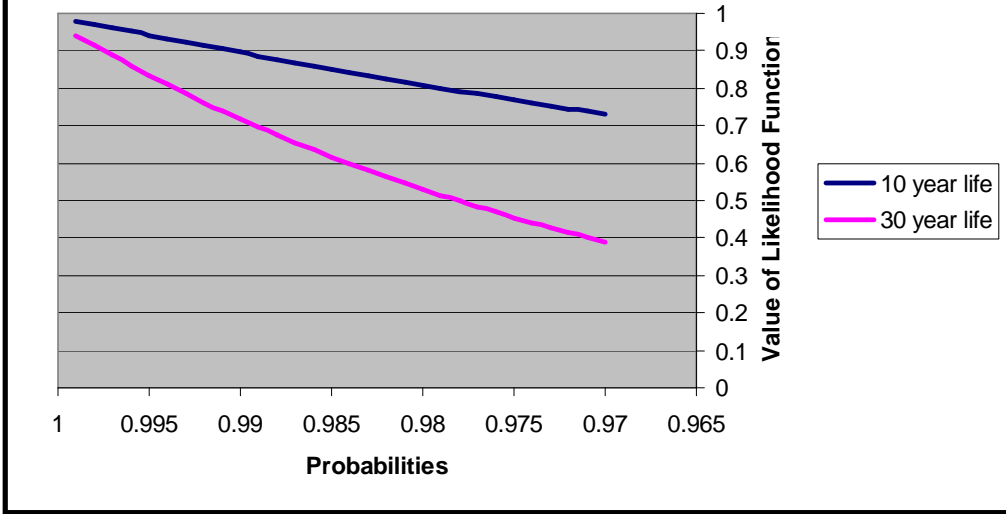


Figure 2.

**Prices of Cotton and Slaves, 1802-1860**

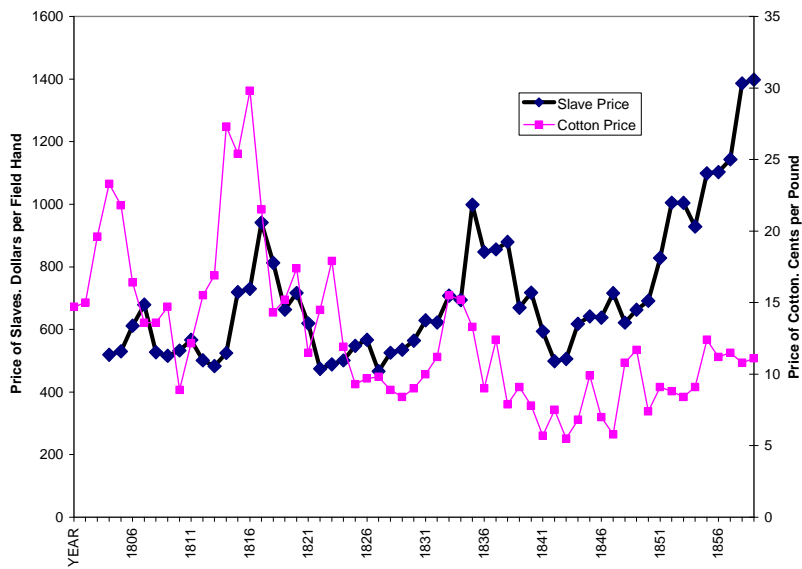


Figure 3.

**Number of Slave Revolts, 1800-1860**

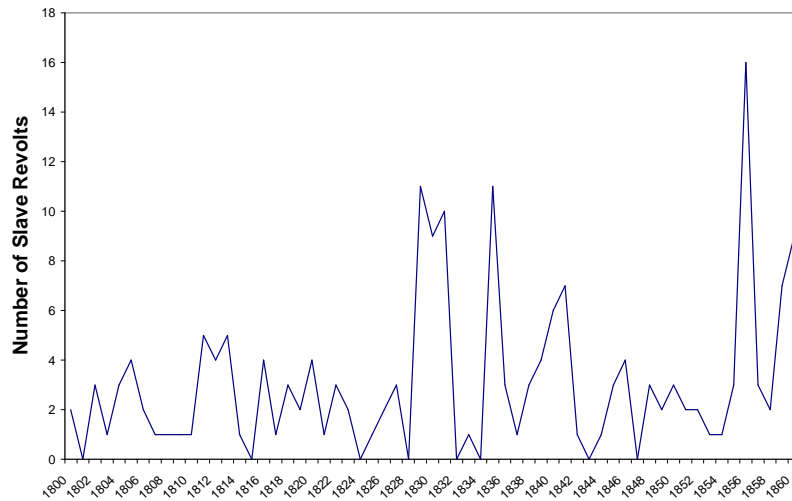


Figure 4. Likelihood of a Regime Shift in the Auction Price of Slaves, 1815-1850

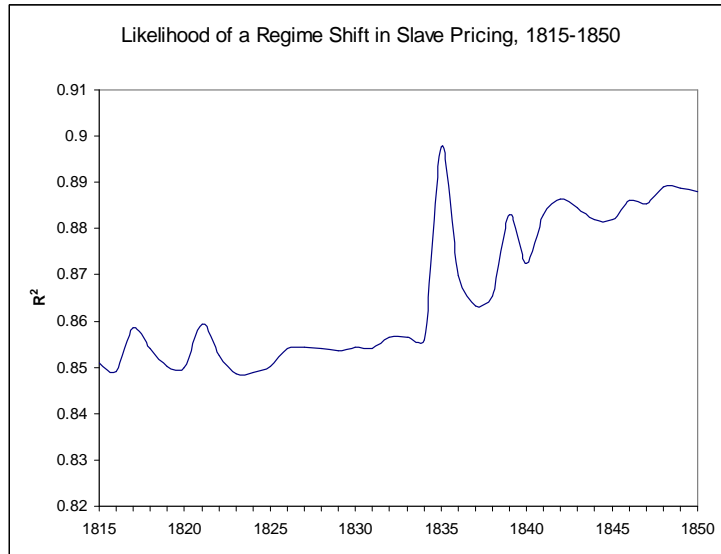


Table 1: Regression Analysis of Slave Prices, 1805-1860

Variable	Coefficient (s.e.)
<b>Main Effects</b>	
Constant	239.25 (112.88)**
Trend	5.53 (2.93)*
Price Cotton <sub>t</sub>	1.98 (4.12)
Price Cotton <sub>t-1</sub>	13.44 (4.00)**
Price Cotton <sub>t-2</sub>	2.54 (4.10)
Revolts	0.88 (4.73)
<b>Regime Effects</b>	
Constant	-928.18 (204.89)**
Trend	12.36 (4.33)**
Price Cotton <sub>t</sub>	14.22 (8.61)
Price Cotton <sub>t-1</sub>	27.45 (7.69)**
Price Cotton <sub>t-2</sub>	15.66 (7.84)*
Revolts	15.11 (6.98)**
<b>Autoregressive Terms</b>	
Lag 1	-0.45 (0.15)**
Lag 2	0.22 (0.15)
<b>Diagnostics</b>	
N = 55    Durbin-Watson = 2.02    R <sup>2</sup> = 0.90	
* denotes statistical significance p < .10 (two-tailed)	
** denotes statistical significance p < .05 (two-tailed)	