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BETTING ON SECESSION:
QUANTIFYING POLITICAL EVENTS SURROUNDING SLAVERY AND THE CIVIL WAR

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Working Paper 19625
http://www.nber.org/papers/w19625

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
November 2013

The authors acknowledge the support of the National Science Foundation award SMA-1004569, and the New Orleans Center for the Gulf South. They benefited from the helpful comments and suggestions of Jenny Bourne, Stanley Engerman, Jean-Laurent Rosenthal, Gavin Wright, and conference participants at the meetings of the Cliometrics Society on January 5, 2013, the NBER Development of the American Economy Program Meeting on March 2, 2013, and the "Time on the Cross at 40" Conference at the University of Chicago on October 5, 2013. Yibang Chen, Zachary Cohen, Kyle Falvey, Denise Fornoff, Jessica Hayes, Benjamin Kim, Daniel Penaranda, Stephen Ragany, Kara Ramsey, Catherine Rath, Mallorie Smith, and Emily Westermeier provided able research assistance. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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NBER Working Paper No. 19625
November 2013
JEL No. G18,N31,N41,P16

ABSTRACT

Abraham Lincoln's election produced Southern secession, Civil War, and abolition. Using a new database of slave sales from New Orleans, we examine the connections between political news and the prices of slaves for 1856-1861. We find that slave prices declined by roughly a third from their 1860 peak, reflecting increased southern pessimism regarding the possibility of war and the war's possible outcome. The South's decision to secede reflected the beliefs that the North would not invade to oppose secession, and that emancipation of slaves without compensation was unlikely, both of which were subsequently dashed by Lincoln's actions.

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"We are not enemies but friends. We must not be enemies."
Abraham Lincoln, Inaugural Address, March 4, 1861

I. Introduction

The struggle between the Southern slave-based labor system and the Northern "free soil" movement produced bitter and violent conflict throughout the 1850s, which culminated in 1861 with Southern secession and four years of Civil War. The Civil War remains a puzzling event to historians, economists and political scientists. The Southern decision to secede is clearly traceable, at least in large part, to a political push by Southern slave owners, especially in the Deep South. There is no doubt that the key issue in the minds of the advocates of secession was the future of slavery. Secessionists saw the risk that President Lincoln and the newly resurgent Republican Party posed to maintaining slavery as a labor system in the existing South, and to being able to expand the reach of slavery into the territories and possibly other areas including Cuba. But if the goal of secession was preserving the slave system, what were slaveholders' expectations regarding the cost of the war and its possible outcome? Did they anticipate that Lincoln and the North would passively permit secession, or decide to fight? Once war began, did they expect a short, painless war with a quick victory for the South (or at least northern recognition of the Confederacy), or the long, bloody conflict that would ultimately result in the destruction of the slave labor system? How did the probability weights attached to these possibilities change in 1860 and 1861?[1] In this paper, we investigate those questions by

[1] Wright (1978) reviews both of these categories of economic arguments relating to secession, and considers the difficult economic calculations that are embedded within them. Wright shows how challenging it is to demonstrate the connection between the decisions to secede and an increase in the expected value of slaves. By leaving the Union, the South created a new Union, from which it was excluded, with a united and powerful supermajority in favor of precisely the policies it feared most. How would an isolated and hostile Confederacy be able to defend itself against the much more populous North, and how would the South be able to successfully

examining the connections between political news related to slavery and the price of slaves during the five-year period leading up to the Civil War and the first months of armed conflict.

Our main contributions include the estimation of a model of slave prices using slave sales data from New Orleans. We construct counterfactual scenarios of slave prices that predict temporal price movement in the absence of political and military events. We show that prior to 1860, few political events seemed to affect slave prices, and even the Dred Scott decision had only a small and temporary effect. After Lincoln's nomination for the Presidency, slave prices fell, and they continued to fall once the war commenced. The overall decline in slave prices was large (more than a third from their 1860 peak) and occurred prior to any battle losses by the South. We also find that this steep initial decline in slave prices was the same for all age and sex cohorts of slaves sold. Thus, the early sharp decline in slave prices should not be interpreted as reflecting the expectation of a likely emancipation of southern slaves without compensation to their owners. Instead, the decrease in slave prices seems to have reflected rising concerns by slaveholders regarding the consequences of Lincoln's election. His apparent resolve to prevent secession, and especially his actions in April 1861, were perceived by slaveholders as a severe adverse shock in the market for slaves.

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compete militarily and economically against the North to expand into the Western territories? Furthermore, the permanent status of the territories of greatest obvious value for the potential expansion of slavery had already been determined (or could have been predicted) by December 1860. Most importantly, Kansas was finally admitted to the Union as a free state in January 1861. The secession debates, however, make one thing absolutely clear: slavery was perceived as being at risk, *whether or not the South seceded*. Both sides recognized that the consequences of secession or remaining within the Union were highly uncertain, given Lincoln's electoral victory. There was no way to play it safe.

II. Slave Prices, Dred Scott, and the Civil War

Why use slave prices to quantify the economic importance of political events? Slave prices measure market perceptions of the discounted present value of future income and other benefits that masters expected to gain from the labor of their slaves. In particular, the threat of war and its expected costs had important implications for the market value of slaves. One potential cost to slaveholders was expropriation – that is, emancipation without slaveholder compensation. An increased fear of emancipation without compensation would have shortened the expected economic lifetime of the slaves and consequently lowered their prices. Even if emancipation without compensation was not a major concern to slaveholders, the threat of war could have lowered slave prices, either because of anticipated higher taxes or anticipated reductions in the productivity of slave labor. Furthermore, the desire to maximize the value of slave wealth clearly was an important underlying cause for the South's decision to secede from the Union.[2] Slave prices, therefore, are a natural measure of changing perceptions of the outcome of the South's bet on secession.

[2] We will not review here the literature establishing that secession was motivated by concern related to slavery, which we regard as beyond reasonable doubt, based on the simple facts surrounding the secession decisions (that is, the debates and conflicts that preceded and coincided with secession). That does *not* mean, however, that secession reflected a *large expected gain* in slave values, nor does it mean that secession was regarded as a low-risk decision. Opponents of secession argued strongly for remaining in the Union as a better way to preserve slave wealth. Proponents and opponents of secession engaged in protracted debates about the probabilities of various political scenarios. They disagreed about the probabilities to attach to prospective events, and those disagreements explain why the debates were so protracted. Participants considered a wide array of forward-looking possibilities about the economic consequences for slavery of secession, and both sides recognized substantial probabilities of loss from secession as well as gain. The debates were extremely sophisticated and balanced. Indeed, reading the speeches now, it is hard to come to the conclusion that there was an obvious economic case either for or against secession. Georgia and Virginia were particularly crucial cases in the sequence of seceding states, and in neither case could one say that secession was obviously in the interest of slave owners. See Freehling and Simpson (1992,

Slaves were valuable financial assets and represented a significant share of southern wealth.[3] Goldin (1973, p. 85), for example, estimates the market value of slaves at $2.7 billion where Ransom and Sutch (1988, p.151) give a slightly higher figure of $3 billion (in 1860 dollars). Because slaves were mobile, the prices of slaves in New Orleans should reflect those of other slaves deployed elsewhere in the South (Yanochik, Thornton, and Ewing, 2003). An analysis of slave prices, therefore, should provide a good indication of price movements throughout the South.

The Civil War was the culmination of many different political events involving slavery. Slave prices are forward looking opinion aggregators that can help sort out the relative importance of these events and their perceived meaning, and therefore, can tell us whether news was a positive or a negative for slaveholders and if so, how much. Absent the use of slave prices, it can be difficult to interpret the economic significance of some of these events.

We illustrate that point by analyzing accounts from contemporary newspapers and journals to gauge the importance of the Dred Scott decision of March 6, 1857. As the discussion shows, oftentimes political events had ambiguous effects on the institution of slavery. The Court ruled that Dred Scott (a Southern slave residing on free soil) had to be returned to his Southern master, but the Supreme Court's decision went much further, arguing that federal actions to limit the spread of slavery, beginning with the Missouri Compromise, were unconstitutional. The implication was that all western territories in America were open to slavery. States could still

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2010).For background on the struggle over slavery, from the perspectives of the North, the South, and the West, see, for example, Stampp (1965), Fehrenbacher (1962), Dusinberre (1965), Gaeddert (1974), Wright (1978, Chapter 5), Fogel (1989), Zarefsky (1990), Freehling and Simpson (1992, 2010), and Basler (2001).

[3] Ransom and Sutch (1988, p. 139) estimate slave capital represented 44 percent of all wealth in the cotton-growing states in 1859. See also Deyle (2009, p. 840).

decide to exclude slavery within their borders, but even then, they were obliged to respect the property rights of slave-owners over slaves residing within their own borders.

The initial reaction to the Dred Scott decision was jubilant in the South.[4] On March 14, 1857, an article in New Orleans' *Daily Bee* predicted that the decision "...will exert the most powerful and salutary influence throughout the United States." Similarly, on March 15, the *Louisiana Courier* wrote that "[n]o judicial tribunal has ever rendered a more important decision than that of the U.S. Supreme Court in the case of Scott vs. Sanford...It must be exceedingly gratifying to the advocates of democracy, who have so long and so vigorously contended against the odious Missouri restriction, to hear from the highest authority a confirmation of all they have heretofore maintained, as to the unconstitutionality of that act." New Orleans' *Daily Picayune,* optimistically predicted on March 20, 1857 that "the Union men of the country, of all sections, who are for the constitution as it is, will be able, we trust, to put down effectively all forms of incendiary agitation, and restore quiet and harmony to the country."

But as early as March 19, 1857, there was recognition of the fact that a political backlash in the North could offset or even eliminate the gains from the decision. On that date, the *Louisiana Courier* wrote about its concern that "Black Republican lamentations" might "succeed in electing Ethiopian presidents..." In New Orleans' *Daily Bee,* on March 21, 1857, similar fears were voiced: "But he is a shallow observer of events and an unskilful judge of human nature, who imagines that the verdict of the Supreme Court—though consonant with right and justice, and consistent with the soundest interpretation of the federal compact—will, as if by magic,

[4] There were rumors about the decision prior to March. On January 1, 1857, *New York Herald* reported the false rumour that the Court had decided to rule that the Missouri Compromise was unconstitutional. In fact, we know from internal documents that the Court did not decide to broaden the case until mid-February 1857, so any such rumours were wrong. Nonetheless, they may have affected slave prices.

dissipate all preconceived opinions, dispel hostile views, and restore the era of fraternal harmony and peace...The verdict of the Supreme Court breaks like an angry wave against the impregnable rock of Northern fanaticism." The April 1857 issue of *De Bow's Review* expressed a similar sentiment, predicting that the North "is about to change its position" and will "organize upon the basis of this another party, which shall struggle again for the control, and as must be the result if successful, the overthrow of the Republic..."

It is interesting to note the level of sophistication of the discussion of Dred Scott's potential effects on slave prices, including the recognition of the possible harm to slave owners (and benefit to the North) from reduced commodity prices. Consider this passage from *De Bow's Review*, April 1857: "Economically, the extension of slavery will injure the South and benefit the North. It will cheapen the raw material and enhance the price of manufactured articles. It will increase the trade and commerce of the North, multiply her customers, cheapen cotton, sugar, molasses, rice, meats, wheat, and Indian corn, and thus injure the South whilst it benefits the North. The extension of free society will have the exact opposite effect, and rear up rivals and competitors, instead of customers, for the old free States. The South desires slavery extension only as a means of defence against the inroads of abolition." Clearly, as people thought about the consequences of the Dred Scott decision, they saw complex implications for the institution of slavery and the South.

From today's vantage point, the Dred Scott decision was a turning point in American political and legal history. Politically, it marked the beginning of Abraham Lincoln's prominence as a politician; seeking to overturn the Dred Scott decision became the focal point of Lincoln's speeches and his famous debates with Senator Douglas. Although Lincoln was defeated by Douglas in the race for Senate in 1858, Lincoln's successful presidential election campaign in

1860 continued to focus specifically on his advocacy against the Dred Scott decision. With respect to legal history, Dred Scott was the apogee of the Supreme Court's defense of "states' rights," and the Taney Court was the high water mark of Southern influence; Lincoln's election, the Civil War and its aftermath changed the direction of the Court, and ushered in a new era of Supreme Court acquiescence with the will of the national government under Northern control.

The Dred Scott Decision had important economic consequences for both the North and the South. Calomiris and Schweikart (1991) and Wahl (2012) argue that the Dred Scott decision was an important adverse shock to Northern immigration and infrastructure expansion plans. Along with other events that contributed to the conflict between free soil and slave interests, especially in Kansas, it rendered politically impossible for the time being the construction of a transcontinental railroad, which was disastrous for the speculation in western railroad securities that was running very high in the mid-1850s. According to this view, the Dred Scott decision, and the broader conflict over slavery, was instrumental in setting in motion the Panic of 1857.

How was the South affected by the Dred Scott decision? The South's banking sector was largely unaffected by the Panic of 1857, owing to its stable branching structure and its lack of direct exposure to speculative railroad securities. For the South, the most obvious potential economic influence of the Dred Scott decision concerned the institution of slavery. Specifically, by legitimizing the right of states to maintain slavery ad infinitum, by expanding slavery into new territories, and by protecting the property rights of slaveholders, the Dred Scott decision could have increased the wealth of southern slaveholders. But, as the above newspaper quotations show, the political and economic implications of Dred Scott were not all obviously positive for slaveholders. Some contemporary observers feared a political backlash (a fear that was later confirmed by Lincoln's election as President). Others worried that the territorial

expansion of slavery might reduce the prices of commodities produced by slaves, and thereby reduce the value of slaves. Slave price reactions to political events provide a unique means of aggregating and weighing conflicting opinions about the meaning of Dred Scott for slavery's future and the value of slaves.

The Dred Scott decision was just one of many widely discussed events during the period 1857 to 1860 that had potentially significant, but often ambiguous, implications for the value of slaves. Table 1 lists the principal political events related to the conflict over slavery from 1857 through mid-1861. Some of the salient events of this era include the end of the bloody political struggle over whether Kansas would be admitted to the Union as a slave or free-soil state, which was resolved in pieces over the period 1855-1860, the Dred Scott Decision by the Supreme Court on March 6, 1857, Lincoln's defeat in 1858, the attack by John Brown on Harpers Ferry in October 1859, the nomination of Lincoln in May 1860, Lincoln's election in November 1860, the secession of the various Southern states that occurred in the aftermath of Lincoln's election (beginning with South Carolina's decision to secede on December 20, 1860), the South's attack on Fort Sumter on April 12, 1861, and President Lincoln's response, which took the form of a massive troop mobilization, a blockade of southern ports, and various military campaigns into the South in mid 1861. We gauge the importance of each of these events through our analysis of their effects on the prices of slaves sold in New Orleans.

III. New Orleans Sales Data

To track responses of slave prices to political events one needs a sufficient amount of sales price data at sufficiently high frequency. Because individual slaves and slave transactions were highly heterogeneous in several important respects, the construction of a comparable price

measure requires a sample with many observations of sales for each time period.[5] The Fogel and Engerman database on slave sales is useful for many purposes (see, for example, Calomiris and Pritchett 2009), but it does not contain a sufficiently large number of observations for each month to make it usable for our purpose.

For our study, we develop a new database for all slaves sold in New Orleans, Louisiana between 1856 and 1861. During this time, New Orleans was the largest city in the South and the site of its largest slave market. Unlike states with a common law tradition, Louisiana treated slaves like real estate, and slave sales had to be recorded and notarized in order to establish title (Louisiana 1806, section 10). Today, the records of many of these slave sales may be found in the New Orleans Notarial Archives and the New Orleans Conveyance Office. Because of the availability of these records and the size of the market, New Orleans is the best source for data on slave sales within the United States.

Prior to the establishment of the Notarial Archives in 1867, a notary's records (as well as those of his predecessors) were stored and maintained in his office. In order to locate a legal document, a researcher needed information on the date of sale, the name of the notary who recorded the sale, and the name and location of the current notary who held the document. Recognizing the difficulties facing researchers, the Louisiana legislature created the office of the Register of Conveyances in 1827, whose duties were to register all acts of transfer of real estate

[5] Cross-sectional regression analysis typically accounts for less than 50 percent of the variation in individual prices. For example, using Fogel and Engerman's sample of New Orleans slave sales, Kotlikoff (1979, p. 501) reports an R^2 of 0.479. Much of the remaining price variation is the result individual characteristics which were not recorded by the notary at the time of sale. In this paper, we analyze the temporal variation in slave prices through the construction of an index composed of the average monthly price residuals. The precision of our index is measured by a small standard error of the mean which in turn requires a large number of observations for each month.

or slaves. The Register was required to record the date and location of the act, a description of the slaves "with all necessary details," the price of the transfer, and whether the transaction was for cash or credit. In addition, transfers passed "under private signature" were to be recorded in toto. The Register maintained an index which allowed researchers to locate the sale date and the notary who recorded the act of sale (Louisiana 1827, pp. 136-141).

The Conveyance Records represent an alternative (and under used) source of information on New Orleans slave prices. Although the Notarial Archives preserve the actual acts of sale, and therefore provide a more complete description of the transaction, including more information about the slave, the Conveyance Records do provide a brief summary of the sale, including the names and ages of the slaves being sold. Information on occupations or maladies was often under reported in the Conveyance Records (Pritchett and Hayes, 2013), but the Conveyance Records include more transactions than the Notarial Records, for two reasons. First, although few in number, sales passed under private signature (typically a parish judge) were not recorded by the notaries (but were recorded by the Conveyance Office). Second, some notarial records were destroyed by office fires and others are simply missing due to the passage of time. In contrast, none of the Conveyance Records appear to be missing. Thus, the Conveyance Records provide a better database for tracking slave sales at high frequency, and therefore, are a superior data source for our purposes.

The Conveyance Records are handwritten in either English or French. For the period October 1856-August 1861, we have collected data for all slave transactions in New Orleans from the Conveyance Records (representing the sales of more than 16,000 slaves). A large number of slaves were sold each year, averaging approximately 3600 slaves for the first four

years of the sample period.[6] As indicated by the frequency distribution presented in Figure 1, New Orleans slave sales were highly seasonal – monthly sales were approximately three times greater in the winter than in the summer. In part, this reflects the well-known health hazards related to contagious disease in New Orleans during the summer months. In addition, slave sales decreased sharply following the political turmoil that began in late 1860. Variation in the volume of sales by interregional slave traders contributed to both of these effects. Although our focus is on price variation, the changes in trading volume also are noteworthy as indicators of the politically driven upheaval in the slave market in 1860-1861, and therefore, a brief digression on the changing volume of transactions and the data regarding slave traders' behavior is warranted.

Traders and the supply of imported slaves

Most interregional slave traders were transients, purchasing slaves in the exporting areas during the summer and early fall, and reselling them in New Orleans during the late fall and winter. Slaves from the local area were sold year round whereas most imported slaves were sold during the winter months. The changing demographic structure of the slaves sold in New Orleans provides indirect evidence of the seasonal presence of interregional traders. Most imported slaves sold by traders were higher value, prime-aged males (Fogel and Engerman, 1974; Tadman, 1989; Pritchett and Chamberlain, 1993). The relative number of prime-aged males (aged 18 to 30 years) is positively correlated with total sales ($r=0.58$, $n=59$), which is consistent with the seasonality of slave sales observed in Figure 1 and the presence of interregional traders during the fall and winter months.

[6] The number of sales in the late 1850s is not large by historic standards. Pritchett and Smith (2013) estimate, for example, that more than 6200 slaves were sold in New Orleans during the 1830 calendar year.

Interregional traders not only acted as speculators, but also as inter-regional arbitragers, by facilitating exchange between slaveholders in the exporting areas and buyers in Louisiana.[7] Traders tended to be better informed, and possibly were more sensitive to changing market conditions, than local sellers of slaves. They also appear to have been very concerned about Lincoln's candidacy and its possible effect on the market for slaves. Beginning in September 1860, the Richmond auctioneers of Betts and Gregory advised their clients to sell their slaves now. Although prices were currently high, "[t]he Chances are they will be lower." Should their clients wish to purchase slaves, "we would advise you [to] not buy nothing but good negroes and buy them at prices to sell immediately." This market uncertainty was directly linked to the fall election. According to Betts and Gregory, "The Presidents election is having a considerable effect on the market[.] how it will go no man can tell."

Things got progressively worse for traders with Lincoln's election in November. Dickinson and Hill advised their clients that the "financial crisis still rages and is not likely to abate for some months. We have no hope for any political change which will give peace and confidence in commercial matters." Such pessimism was pervasive across the South. In February 1861, Memphis slave trader G.W. Chrisp wrote that the current political crisis "will have a very bad affict on the negro market [.] what we are coming two the lord onely noes [.] We think our state might <u>to be in Hell</u>" [underlining and spelling are from the original document]. The same month, slave trader A. J. Rux reported falling prices and fewer sales in Mobile. Traders were "Selling some in Orleans but a long ways under cost. . . . I am in hopes

[7] Traders bore the risk of a possible price decline between the date of purchase in the exporting areas and the date of sale in New Orleans. Using data from 1830, Freudenberger and Pritchett (1991, p. 468) estimate that interregional traders held their slaves an average of 106 days between purchase and resale, with a modal value of two months. Traders borrowed funds to finance their purchases and because they were highly leveraged, any unanticipated price decrease could threaten them with financial ruin.

times will get better before long but I don't much think there will be any market this winter to do any good."

Slave Price Index

Not all records in our database can be used for the construction of our price index. Transactions with missing values for age, gender, date of sale, or sales price are excluded from the sample. Also excluded are the sales of partial ownerships, transactions bundled with real estate or other property, self purchases, donations, and exchanges. Finally, the records of slaves sold in groups without individual price information are removed from the sample. After making these exclusions, the working sample includes the sales records of 10,177 slaves.

Table 2 reports descriptive statistics for usable sales data. The variables reported in Table 2 are those that have been identified by prior research (Fogel and Engerman (1974), Kotlikoff (1979, 1992) and Calomiris and Pritchett (2009)) as slave and transaction characteristics that are relevant for modeling slave transaction prices. Prices for credit sales may have been inflated due to the opportunity cost of the borrowed funds. Consequently, we substitute the present value of the payment stream, discounted at an 8 percent annual rate, for the recorded market price.[8] Following previous practice, we express slave prices as logarithms.

Transaction prices reflect characteristics that are observable in our dataset as well as those that are unobservable to us, but observable to market participants. The latter category of characteristics affects market prices in ways that our model cannot capture, and thus produce "residuals" from the perspective of our model. Because our goal is the construction of monthly averages of residuals there is an inherent tradeoff involved in screening data for outliers. In

[8] For most credit sales, notaries did not record an interest rate. For those sales with recorded interest rates, the most common rate was 8 percent.

general, including more observations improves the accuracy of the measurement of an average price, but extreme outliers can bias the measured average. To omit outliers, we first ran a basic hedonic regression using a functional form from previous studies. Most of the outliers are negative, indicating that we overestimate the prices of a very small number of observations. In most of these cases, idiosyncratic factors can account for the low market values of the outliers.[9] After removing 14 observations with residuals less than -2, we reran the regression and presented the results in Table 2, regression 1. None of the findings reported below is sensitive to the omission of these 14 observations.

We follow Kotlikoff (1979, 1992) and others in modeling the age profile of slave prices using a sixth-degree polynomial. In Figure 2, the price-age profile shows the familiar pattern of a hump-shaped relationship between price and age, which peaks around age 22. Our model includes measures of slave characteristics (sex, age, etc.) as well as measures of transaction characteristics. Transactions that offered guarantees to buyers commanded higher prices, as did transactions that offered credit to buyers. Calomiris and Pritchett (2009) show that other attributes of transactions included here (whether they are part of family or group sales, and the origin of the buyer) mattered for transactions through a variety of potential channels, including selectivity bias.

Figure 3 plots the monthly average of residuals estimated from Regression 1 of Table 2. For comparison, Figure 3 also plots the monthly average price for males aged 18 to 30 years

[9] Two of the slaves were runaways (one of whom was contemporaneously absent at the time of sale). Two slaves were blind (in both eyes), one was crippled, and two were guaranteed in title only. Two slaves sold at very low prices ($5 each) with a condition that they be emancipated. Although we include covariates for slaves who were sold without warranty, or with a condition of emancipation, it appears that these instruments are a bit too blunt to capture the price variation for these lower-valued slaves.

without recorded occupation or defect (Engerman's definition). Although both indices follow similar temporal patterns, we believe that the monthly average of the regression residuals provides a better indication of the movement of slave prices.[10] The regression residuals control for seasonality and price variation between ages 18 and 30. The monthly average of the residuals includes all 10,177 observations in the working sample which, other things equal, increases the precision of our estimates. (There are only 2,814 prime-aged males in the sample.) Finally, relatively few prime-aged males were sold during the summer months, rendering price estimates that rely only on prime-aged males especially problematic during those months. Consequently, we use hedonic price indices constructed from regression residuals for the following analysis.

As summarized in Table 3, slave price residuals increased 10.7 log points (or approximately 11 percent) between October 1856 and March of 1857 (presumably reflecting the influence of Dred Scott). Prices then declined 13 log points by November 1857 (presumably reflecting the economic contraction of that time, related in part to the causes and consequences of the Panic of 1857). During the next two years, slave price residuals increased 33 log points (or approximately 39 percent, a rapid increase noted by many contemporary and current scholars). Although the turning point is uncertain, nominal residual prices appear to peak in summer 1860 (possibly coinciding with Lincoln's nomination) and begin to decline during the fall presidential campaign. Compared with residual prices in May 1860, we find that residual slave prices fell 16 log points, or approximately 17 percent, by November 1860. Interestingly, slave prices appeared to stabilize between November 1860 and April 1861, decreasing by only 1.2 log points. The political turmoil caused by the secession crisis and the formation of the Confederacy was

[10] On the construction of hedonic price indices for slaves, see Levendis (2007).

accompanied by relatively little change in the average monthly residuals. This is not surprising. Given that the decision to secede was made in large part to protect the value of slaves, and given that the vote to secede was very close in some key states, it is likely that secession, per se, was not perceived either as obviously bad or good news about slave prices.[11]

Slave prices declined steadily following the firing on Fort Sumter and Lincoln's decision to mobilize federal troops in April. The decline continued into the summer. Compared with April 1861, we find that the regression residuals declined 22 log points, or approximately 24 percent by August 1861. Slave prices declined despite the Confederate victory at Manassas, the first major battle of the war.

Lincoln's response to the attack on Fort Sumter (by requesting a massive troop mobilization) was a major disappointment to the South. Indeed, Lincoln provided an ambiguous message during his March 4 inauguration speech, which he delivered months after the secession of the first southern states. Lincoln reiterated his pledge not to interfere with slavery in the South, and quoted the Republican election platform: *"Resolved,* That the maintenance inviolate

[11] The fact that all the states in which large numbers of slaves resided ended up voting for secession does not indicate that secession was a predictable outcome.Georgia's vote in favor of secession, which many regard as a pivotal event – was quite close (on January 19, 1861, the Georgia Convention voted to secede by 166 to 130 – see Freehling and Simpson 1992, p. xxi.) Virginia (which contained more slaves than any other state in 1861) was deeply divided over secession. Its decision to secede made it the front line of the Civil War, and put it at risk of losing its western areas, which were pro-free soil. In the event, Virginia lost West Virginia almost immediately as the result of its decision to secede, and became the central battleground of the Civil War. Virginia's vote to secede happened very late and as a consequence of events overtaking its deliberations; secession was supported only after troops from both sides had already been mobilized. Virginians voted for secession after they had troops fighting in the field. Indeed, it is possible to argue that if secession had been voted on by the South *as a whole*, Union rather than secession would have carried the day. In fact, South Carolina and other states of the Deep South moved quickly to secede knowing that their actions would bring pressure on the states of the Upper South to secede. Virginia and other states of the Upper South ended up facing the choice between remaining in a Union without the Deep South, in which they would be a powerless minority, or seceding alongside the Deep South.

of the rights of the States, and especially the right of each State to order and control its own domestic institutions according to its own judgment exclusively, is essential to that balance of power on which the perfection and endurance of our political fabric depend; and we denounce the lawless invasion by armed force of the soil of any State or Territory, no matter what pretext, as among the gravest of crimes." He went on to say that "the property, peace and security of no section are to be in any wise endangered by the now incoming Administration. I add too, that all the protection which, consistently with the Constitution and the laws, can be given, will be cheerfully given to all the States when lawfully demanded, for whatever cause -- as cheerfully to one section as to another."

Although Lincoln pledged to uphold the Constitution and to preserve the Union, he also said that "In doing this there needs to be no bloodshed or violence; and there shall be none, unless it be forced upon the national authority. The power confided to me will be used to hold, occupy, and possess the property and places belonging to the government, and to collect the duties and imposts; but beyond what may be necessary for these objects, there will be no invasion -- no using of force against or among the people anywhere. Where hostility to the United States in any interior locality, shall be so great and so universal, as to prevent competent resident citizens from holding the Federal offices, there will be no attempt to force obnoxious strangers among the people for that object. While the strict legal right may exist in the government to enforce the exercise of these offices, the attempt to do so would be so irritating, and so nearly impracticable with all, that I deem it better to forego, for the time, the uses of such offices."

Attributing the initial decline in slave prices to the perceived threat of Lincoln's nomination and election, and the subsequent declines to the increased perceived threat of an

invasion, is problematic. After all, prices might have declined because of changing market fundamentals rather than the political events leading up to the war. To control for those influences, one must construct a counterfactual model that accounts for changes in fundamental variables that affected slave prices over time.

IV. Constructing a Slave Price Counterfactual

Measuring the effect of political events requires the construction of a credible counterfactual measure of slave prices – that is, what slave prices would have been absent the political events – by properly taking into account other, non-political influences and their effects on slave prices. The most important observable factor influencing the expected cash flows from slave labor is the price of cotton. The link between cotton and slave prices has been a central theme of the empirical literature on slavery from its inception. As Phillips (1918) noted, cotton cultivation was among the most profitable uses of slaves: "The cotton belt and the sugar bowl accordingly made a market to attract labor by offering prices higher than rice or tobacco earnings would warrant. The younger staples thus, on different schedule of buoyancy, were the main factor determining slave prices in every corner of the South. Cotton by reason of its immense area and volume of production, reduced even sugar to a secondary role" (p. 176). As Phillips recognized, "The slaves themselves were 'securities' – investments made with a view to future income. … The price of a slave was affected by the price of cotton for the same reason that copper shares are influenced by the current price of copper metal." (p. 179).

Gray (1933) – who referenced Phillips' work – also commented on the connections between slave and cotton prices: "Slave prices were strongly influenced by the rise and fall in

cotton prices. In the earlier years of the nineteenth century there was a belief that slaves should rise $100 for each increase of 1 cent in price of cotton above cost of production." (p. 664).

Nevertheless, the connection between cotton prices and slave prices is not straightforward. As Phillips and Gray both recognized, the relationship between the long-term price trends of slave prices and cotton prices seems to have changed in the 1850s. Phillips noted that: "After five years of western bankruptcy a new climb was begun, roughly parallel to the cotton curve until 1857, when cotton went down but slaves continued upward. In this concluding decade there was again a notable spread between the two pairs of markets." (p. 178) Gray noted that the diverging trends of cotton and slave prices produced big changes in their ratios over time: "In this last speculative movement [of the late 1850s], as Phillips has shown, the prices of slaves advanced much higher in relation to the prices of cotton than in earlier periods of peak prices. Thus, in terms of cents of cotton to hundreds of dollars in average slave prices in New Orleans, the ratio was nearly 4 to 1 in 1805, a little over 1 to 1 in 1819, 1 to 1 in 1837, but only about 0.6 to 1 in 1860." (p. 667)

Phillips saw the divergence between cotton and slave prices as an indication of unsustainable speculation. As Fogel and Engerman (1974) put it: "To [Phillips] the ratio of cotton to slave prices was as crucial in evaluating the wisdom of an investment in slaves as the price-to-earnings ratio was for evaluating the wisdom of an investment in corporate stocks…. The data assembled by Phillips showed that the ratio of slave to cotton prices rose by over six fold between 1805 and 1860. A change of this magnitude clearly indicated to Phillips that, by the last decade of the antebellum era, slaves were overvalued – that is, priced too high to permit an investor to earn a normal rate of profit….The rise, Phillips concluded was primarily the consequence of speculation. The supply of slave had been 'cornered' as a consequence of the

closing of the slave trade. Hence 'it was unavoidable that the price should be bid up to the point of overvaluation.'" (pp. 61ff).

Expectations of future conflict and the disruption of the slave trade may have also affected the connection between slave and cotton prices. According to Walter Johnson (2013, p. 374f), by the "late 1850s, the price of slaves seemed to cut loose from all other prices in a cycle of speculation that observers termed 'the Negro fever.' … The combination of relatively high cotton prices and fears about the future of the institution (particularly in the Upper South) combined to convince Deep-South planters that they needed to get their hands on as many slaves as they could in order to insulate themselves from whatever political misfortunes might befall the institution as a whole."

Contrary to Phillips and Johnson, Fogel and Engerman (1974, pp. 91-93) argued that the rising ratio of slave prices to cotton prices reflected a legitimate market perception of increased productivity in cotton cultivation rather than a speculative price bubble. "Among the developments which made cotton farming increasingly more efficient were the improvements in the varieties of cotton seeds, the introduction of the cotton gin, the reduction in transportation and other marketing costs, and the relocation of cotton production in the more fertile land of the New South." Like Fogel and Engerman, Gray concluded that the effect on revenues of the production expansion had more than offset its effects on cotton prices: "In the last five years of the period cotton sold at prices that were highly remunerative, especially considering the fact that the average annual product of the five years was much larger than it had ever been before. In the Cotton Belt, therefore, as in other parts of the South, the Civil War brought to a close a period of exceptional prosperity." (p. 700).

The *changing* relationship between cotton and slave prices – something about which all of these researchers agree – raises potential problems for our counterfactual estimation. It is important to recognize that there is no theoretical presumption that the relationship between the two should be positive or that it should be constant over time. If cotton price variation were driven entirely by transitory shocks to supply and demand (that is, shocks viewed as transitory by slave market participants) then there should be no observed relationship between slave and cotton prices. If the *persistent shocks* affecting the price of cotton (that is, those that slave market participants expected to persist) were exclusively *demand-side* shocks, then the relationship between cotton and slave prices should be positive. If the persistent shocks were exclusively supply-side shocks, then the relationship between cotton prices and slave prices could be either positive or negative, depending on the elasticities of supply and demand in the cotton market (which would determine the relationship between supply shocks and revenue changes). Obviously, the mix between persistent supply and demand shocks can change over time, implying variation over time in the co-variation of cotton and slave prices.

To arrive at a better understanding of the relationship between cotton and slave prices, we first perform a simple analysis of the co-variation of the percentage change in cotton prices with the annual percentage change in the quantity of cotton produced. Figure 4 illustrates a striking fact: the correlation between the quantity and price of cotton is positive (0.319) from 1815 to 1850, but is negative (-0.217) from 1851 to 1861. From this admittedly simple analysis, it appears that demand shocks dominated the cotton market prior to 1850, but that supply shocks (related to changes in productivity) dominated the market after 1850.

Because slaves were valued as financial assets, supply shocks need not imply a negative correlation between slave prices and cotton prices. One would expect such a relationship only if

market participants anticipated that supply shocks would persist. Unfortunately, there is no independent measure of which we are aware to identify persistent supply and demand shocks in the cotton market. The only way to measure market participants' views of the changes in the nature of persisting shocks is to look at the connection between cotton prices and slave prices.

In light of the previous discussion, we estimate a counterfactual model of slave prices which includes covariates for the price of cotton and the price of the British consol.[12] (The consol is a long-term asset, and its price variation is likely to be largely but not entirely exogenous to political news coming from the United States.) The results for this model are presented in Table 2, regression 2.[13] The estimated regression coefficient for the logarithm of cotton prices is negative and statistically different from zero, suggesting that persistent supply-side shocks dominated the cotton market during this time period. Because higher consol prices imply lower discount rates, we predict a positive correlation between log of slave prices and the log of consol prices. The estimated regression coefficient is positive although it is not statistically different from zero.

The monthly average residuals for regression 2 are plotted in Figure 5. It is notable that the qualitative results derived regressions 1 and 2 are quite similar. In particular, we find that

[12] We employ de-seasonalized cotton prices, so that cotton price changes better reflect news. Changes due to seasonal factors would have been predictable.

[13] Our results are robust to a variety of alternative specifications, which we explored in earlier drafts of this paper. Those included other variables, such as railroad stock price indexes, which we constructed using Smith and Cole (1935). The problem with including these indexes is that, as Calomiris and Schweikart (1991) show, railroad stocks were themselves affected by political news having to do with the future of slavery. Thus, including them likely would bias our construction of a slave price residual intended to capture political news. We also included the New York commercial paper rate in some specifications. It did not display a large or statistically significant effect on slave prices. We also experimented with estimating the monthly seasonal adjustment for slave prices using Fogel and Engerman's (1974) database rather than our own. None of these alternative specifications affected the conclusions we draw from the results we report below.

slave prices decreased by 10 to 20 percent during the fall of 1860 and that they continued to decline during the early stages of the War. Of course, none of these approaches is perfect as a means of removing the influence of demand and supply shocks in the cotton market on slave prices. If some years – 1860, in particular – saw a mix of both persistent supply and demand shocks (which is consistent with the view of Wright 1978), then a counterfactual model that imposes a stable relationship between cotton prices and slave prices would understate the effect of the cotton market on slave price increases in 1860. This possible counterfactual misspecification could lead one to overstate the extent of the decline in slave prices from their 1860 peak. We return to this issue in our discussion of slave price changes below.

Surprisingly, when consol and cotton prices are included in the regression, seasonal changes for slave prices in the winter months are negative compared to the omitted month, which is August. This result is contrary to earlier studies of the New Orleans slave market and to the results in Regression 1. For this reason, in our discussion below, although we report findings from both sets of regressions, we place greater weight on those derived from Regression 1.

V. Political and Economic Events Seen through the Lens of Regression Residuals

Are there clear connections between the historical narratives of the political struggle over slavery and the various residual plots that are implied by our counterfactual models? Figure 5, which is based on the regression model that includes cotton and consol prices, displays rises and falls in slave price residuals that coincide in plausible ways with the major political events of the time. A broadly similar pattern of change in residuals is apparent when using either Regression 1 or Regression 2 specifications (as Table 3 shows), but as discussed above, when calculating changes at high frequency (where seasonal adjustments are relatively important) we rely on

Regression 1. Table 4 summarizes the slave price changes around key political events using the Regression 1 specification.

In an unreported regression, we include indicator variables that capture changes in the prices for slave sales made six weeks prior and six weeks following each political event. The differences in the regression coefficients for these indicator variables on either side of the political event being considered estimates the impact of each of these political events. Table 4 summarizes the statistical tests associated with these indicator variables.

Slave prices rose by less than five percent following the Dred Scott decision, and the effect is not statistically significant. Slave prices also rose less than five percent after the rejection of a slave constitution (the Lecompton Constitution) for Kansas. Although one might have expected a negative effect of Congress's rejection of the Lecompton Constitution, it is possible that the outcome was not surprising. Nor was it clear that the rejection of Lecompton would lead to a free-soil constitution for Kansas at that time.[14] Slave prices rose by about one percent in the six weeks following the raid on Harpers Ferry, suggesting that market participants discounted the importance of this event. Slave prices rose by more than five percent in the six weeks after Lincoln's nomination in May 1860, and the effect is statistically significant at the 5% level. This is a somewhat puzzling result, unless one interprets it to mean that observers initially believed that Lincoln's nomination would reduce the chance of Republican victory.

Secession was not associated with any significant change in slave prices (a statistically insignificant rise of two percent). The firing on Fort Sumter was associated with a small immediate decline in slave prices, but that decline grew over time (as shown in Figure 5 and

[14] See Gaeddert (1974).

Table 3). The Confederate victory at Manassas was associated with significantly lower slave prices. Despite the southern victory, this northern attack demonstrated that Lincoln intended to invade the South to preserve the Union which caused slave prices to decline markedly by nearly 17 percent. The negative reactions of slave prices to events from mid-1860 through the summer of 1861, shown in the last row of Table 3, resulted in a cumulative price decline of roughly a third. We observe a similar pattern for railroad stocks in both the North and South during this same time frame. Over the period May 1860 to August 1861, the Smith and Cole index declines 15 percent. We also collected prices for southern railroad stocks quoted in New Orleans and constructed an equally weighted index of these stocks. From May 1860 to April 1861, this index declines by 23 percent.[15]

VI. War Expectations and the Relative Prices of Slaves

The decrease in slave prices during and after the summer of 1860 is consistent with increased pessimism regarding the future cash flows associated with owning slaves. Because slaveholders valued slaves as financial assets, slave prices should have equaled the discounted present value of their expected future earnings. To the extent that political news led buyers of slaves to think that they might lose ownership of their slaves at some future date as the result of emancipation without compensation (for slaveholders) that would have reduced the price they were willing to pay for slaves. On the other hand, it is not clear that the political news of 1860 and 1861 should be seen primarily as affecting the probability of emancipation without compensation. After all, emancipation without compensation would have been unprecedented. Given the legality of slavery in the rebel states and elsewhere, as of 1860 or 1861 it likely would

[15] The New Orleans index was calculated for the Carrollton, Pontchartrain, Opelousas, and Jackson railroads as reported in the New Orleans Price Current. New Orleans equity prices were not reported after April 1861.

have been seen as an illegal taking. As late as April 1862, emancipation of slaves in the District of Columbia was enacted with compensation for slaveholders.

An increase in the probability of emancipation without compensation is not the only possible explanation for the decrease in slave prices during 1860 and 1861. For example, the increased probability of regional conflict likely would have lowered expectations for the southern economy's ability to sell its produce on international markets, which would have reduced expected slave labor productivity and slaveholder income and, in turn, would have also reduced the prices of slaves. Furthermore, because slaves constituted a large part of southern wealth, any taxation to pay for the South's war efforts would have fallen largely on slaveholders. Whether taxes were expected to be levied on income or wealth, the effect would have been the same: even if the war was expected to end in a stalemate or a southern victory, a large and costly Civil War would have hurt slaveholders and reduced the market value of their slaves.

Was the decline in slave prices primarily due to fears of emancipation without compensation or some other expected consequence of the struggle over slavery? Unlike an expected decline in labor productivity, or expected government taxation of slave wealth to pay for the war effort, changing expectations regarding possible emancipation without compensation should have affected the prices of some slaves more than others. In particular, in response to news that increased the perceived likelihood of emancipation without compensation, the prices of children (and women of childbearing age) should have fallen by great percentages than those of other slaves. The earnings of young children, net of maintenance costs, were negative (Fogel and Engerman, 1974). They sold for positive market prices only because buyers anticipated increased future earnings from young slaves as they matured. Because emancipation without compensation would eliminate that source of future income for the slaveholder, political news

that increased the likelihood of emancipation without compensation should have reduced the prices of children relative to those of adults. Similarly, increased expectations of future emancipation without compensation should have reduced the market value of the childbearing capacity of a young adult female slave, thus decreasing her price relative to those of other slaves.

These considerations give rise to two testable implications about the "emancipation without compensation" hypothesis: if the probability of emancipation without compensation is rising over time, then (1) the age-price profile should change over time to reflect the declining relative value of children and young women, and (2) for a time invariant age-price profile, the regression residuals for children and childbearing women should decline more than those for other slaves.

Age-price profiles have been estimated by different researchers using a variety of different data sources (Fogel and Engerman 1974; Kotlikoff 1979; Levendis 2007; Choo and Eid 2008; Chenny, St-Amour and Vencatachellum 2003; Fraginals, Klein, and Engerman 1983; Margo and Steckel 1982; Newland and Segundo 1996; Calomiris and Pritchett 2009). Although the exact regression specification varies, most authors use a high order (6^{th} degree) polynomial to estimate this relationship (Fogel and Engerman 1974). The shapes of these age-price profiles are remarkably similar. The estimated price of a newborn infant is positive but relatively low – recall the debate between Fogel and Engerman (1974) and Gutman and Sutch (1976, pp. 158-161) regarding the value of a so-called "birthright". Prices rise with age and, for female slaves, reach a peak in their late teens or early twenties. The prices for males peak in their lower to mid twenties. For older slaves, prices decrease with age yet remain positive even for slaves in their fifties and early sixties.

Rising expectations of emancipation without compensation should affect the shape of the age-price profile in a predictable fashion. As argued by de Mello (1992), the prices of prime-aged slaves (those in their twenties) should fall relative to those of older slaves because of the reduced length of their working life under slavery. Indeed, de Mello finds precisely this empirical result for Brazilian slaves immediately prior to emancipation in that country. And as we point out above, the prices of children also should have fallen relative to those of adults. In unreported regressions, we estimate the age-price profiles that plot the relationship between a slave's age and his/her price for sale prior and post Lincoln's election and plot the estimated age-price profiles in Figure 6. Both profiles exhibit the same basic shape: Children command positive prices for all of the time periods, prices reach a maximum for slaves in their early twenties, and older slaves sold at discount relative to slaves aged twenty years. Note that we do not observe a flattening of the age-price profile over time, as predicted by de Mello (1992) if buyers increasingly expected slaves to be emancipated in the near future. The similarity of these profiles suggests that slave price declines were not the result of slaveholders reassessing the probability of the future emancipation of their slaves.[16]

A closely related test of the emancipation without compensation hypothesis focuses on the residuals of various subgroups in a model that does not allow the age-price profile to vary over time. Using regression 1 from Table 2, which assumes a time-invariant age-price profile, we plot the residuals for different subgroups of slaves. If the assumption of a constant age-price

[16] We perform a simple F-test for the equality of the age-price profiles by estimating separate polynomials for the time periods before and after Lincoln's election (November 1860). Not surprisingly, we reject the null hypothesis that the estimated regression coefficients of the polynomials are the same (as indicated in Figure 6, the post-November 1860 polynomial lies beneath the pre-November 1860 polynomial). We fail to reject the null, however, if we allow for different intercept terms before and after November 1860. In other words, the age-price profiles appear to be the same with the exception of their predicted heights.

profile were incorrect, then the residuals for the subgroups that include children (aged 0 to 12 years) and young women (aged 16 to 28 years) should decline faster than the other residuals. As seen in Figure 7, the residuals for both children and young women decrease at approximately the same rate as those for all slaves in the sample. (Note that the residuals for children appear to be more volatile than those for other slaves because relatively few children were sold separately.) The uniform decline in prices confirms the view that a rising expectation of emancipation without compensation was not the cause of the observed decrease in slave prices from the summer of 1860 to the summer of 1861.

VII. Conclusion

The Civil War remains a puzzling event in American political and economic history. Clearly, those who most pushed for secession – slave owners in the Deep South – were also the ones most harmed ultimately by the outcome of the Civil War. A close examination of slave prices from October 1856 through August 1861 shows that these prices can be a useful tool for gauging how slave market participants viewed the consequences of political events for the risks that attended slave ownership.

Identifying linkages between slave prices and political events requires the construction of a counterfactual model of economic fundamentals to serve as a benchmark against which movements in actual slave prices related to political events can be gauged. Our model combines the attributes of individual slaves sold with data on cotton prices and consol prices to estimate slave price residuals, which reflected the role of other shocks on slave prices, including political events.

The slave price residuals reported in Table 3 and Figure 5 display patterns that coincide reasonably with some of the dominant political events of the time. Not all of the important

political events, however, had large effects on slave prices. The Dred Scott decision was associated with only a small and statistically insignificant increase in slave prices. The election of Lincoln was associated with a negative changes in slave prices, but the largest negative movements in the value of slaves came in the late spring and summer of 1861, after Lincoln took office and demonstrated a resolve to blockade and invade the South, which apparently was an unpleasant surprise to slaveholders.

The slave price decrease in 1860-1861 seems not to have been driven primarily by fears of emancipation without compensation for slaveholders. Rather, the price decrease was more generally the result of rising fear of war and its economic consequences for slaveholders—something that slave-owning advocates of secession had bet against.

References

Basler, Roy P. (2001). *Abraham Lincoln: His Speeches and Writings*. Cambridge, Massachusetts: Da Capo Press.

Calomiris, Charles W., and Jonathan Pritchett (2009). "Preserving Slave Families for Profit: Traders Incentives and Pricing in the New Orleans Slave Market," *Journal of Economic History*, 69, December 2009, 986-1011.

Calomiris, Charles W., and Larry Schweikart (1991). "The Panic of 1857: Origins, Transmission, and Containment," *Journal of Economic History*, December 1991, 807-34.

Chenny, Shirley & St-Amour, Pascal & Vencatachellum, Desire, 2003. "Slave prices from succession and bankruptcy sales in Mauritius, 1825-1827," *Explorations in Economic History*, Elsevier, vol. 40(4), pages 419-442, October.

Choo, Eugene and Jean Eid. "Interregional Price Difference in the New Orleans Auctions Market for Slaves." *Journal of Business and Economic Statistics* 26, no. 4 (2008): 486-509.

de Mello, Pedro C., "Expectation of Abolition and Sanguinity of Coffee Planters in Brazil, 1871-1881," in Fogel and Engerman, Without Consent or Contract: Conditions of Slave Life and the Transition to Freedom, vol 2 (Norton, 1992).

Deyle, Stephen (2009). "An 'Abominable' New Trade: The Closing of the African Slave Trade and the Changing Patterns of U.S. Political Power, 1808-1860." *William and Mary Quarterly*, 66 (Oct., 2009), pp. 833-850.

Dusinberre, William (1965). *Civil War Issues in Philadelphia, 1856-1865*. London: Oxford.

Fehrenbacher, Don E. (1962). *Prelude to Greatness: Lincoln in the 1850s*. Stanford: Stanford.

Fraginals, Manuel Moreno, Herbert S. Klein and Stanley L. Engerman, "The Level and Structure of Slave Prices on Cuban Plantations in the Mid-Nineteenth Century: Some Comparative Perspectives." *American Historical Review*, Vol. 88, No. 5 (Dec., 1983), pp. 1201-1218.

Freehling, William W., and Craig M. Simpson (1992). *Secession Debated: Georgia's Showdown in 1860*. New York: Oxford.

Freehling, William W., and Craig M. Simpson (2010). *Showdown in Virginia: The 1861 Convention and the Fate of the Union*. Charlottesville: University of Virginia Press.

Fogel, Robert W. (1989). *Without Consent or Contract: The Rise and Fall of American Slavery*. New York: Norton.

Fogel, Robert W., and Stanley L. Engerman (1974). *Time on the Cross: The Economics of American Negro Slavery*. Boston: Little Brown.

Gaeddert, G. Raymond (1974). *The Birth of Kansas*. Philadelphia: Porcupine Press.

Goldin, Claudia (1973). "The Economics of Emancipation," *Journal of Economic History*, vol. 33, no 1, (March), pp. 66-85.

Gray, Lewis C. (1933). *History of Agriculture in the Southern United States to 1860*. Washington: Carnegie Institution.

Kotlikoff, Laurence (1979). "The Structure of Slave Prices in New Orleans, 1804 to 1862." *Economic Inquiry*, 17, pp. 496-517.

Kotlikoff, Laurence (1992). "Quantitative Description of the New Orleans Slave Market, 1804 to 1862," in *Without Consent or Contract: Markets and Production, Technical Papers*, 1, Robert W. Fogel and Stanley L. Engerman (eds.), New York: W. W. Norton. pp. 31-53.

Levendis, John. "Qualities and Effective-Quantities of Slaves in New Orleans." *Southwestern Economic Review* 34, no. 1 (2007): 161-177.

Louisiana, *Acts*, 1st Leg., (New Orleans, 1806).

Louisiana, *Acts*, 1st Leg., (New Orleans: John Gibson, State Printer, 1827).

Margo, Robert A., and Richard H. Steckel, "The Heights of American Slaves: New Evidence on Slave Nutrition and Health," *Social Science History*, Vol. 6, No. 4, (Autumn, 1982), pp. 516-538.

Newland, Carlos and María Jesús San Segundo, "Human Capital and Other Determinants of the Price Life Cycle of a Slave: Peru and La Plata in the Eighteenth Century" *Journal of Economic History*, Vol. 56, No. 3 (Sep., 1996), pp. 694-701.

Phillips, Ulrich B. (1918). *American Negro Slavery*. New York: D. Appleton.

Jonathan Pritchett and Mallorie Smith, "Sequential Sales as a Test of Adverse Selection in the Market for Slaves," *Journal of Economic History*, 73 (June 2013), pp. 479-499.

Jonathan Pritchett and Jessica Hayes, "The Occupations of Slaves Sold in New Orleans: Missing values, cheap talk, or informative advertising?" Tulane University (2013), pp. 1-30.Ransom, Roger, and Richard Sutch (1988). "Capitalists Without Capital: The Burden of Slaver and the Impact of Emancipation." *Agricultural History* 62, no. 3, pp. 133-160.

Smith, Walter, and Arthur Cole (1935). *Fluctuations in American Business*. Cambridge, MA: Harvard University Press.

Stampp, Kenneth (1965). *The Causes of the Civil War*. Englewood Cliffs, New Jersey: Prentice-Hall.

Sutch, Richard and Herbert G. Gutman, "Victorians All? The Sexual Mores and Conduct of Slaves and Their Masters," in David, et. al., *Reckoning With Slavery*. Oxford, 1976.

Wahl, Jenny Bourne (2012), "Dred, Panic, War: How a Slave Case Triggered Financial Crisis and Civil Disunion," in Paul Finkelman, Donald R. Kennon. *Congress and the Crisis of the 1850s*. Athens Ohio University Press, 2012, pp 211-259.

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

Zarefsky, David (1990). *Lincoln, Douglas, and Slavery: In the Crucible of Public Debate.* Chicago: University of Chicago Press.

Yanochik, Mark, Brad Ewing, and Mark Thornton (2001). "A New Perspective on Antebellum Slavery: Public Policy and Slave Prices. *Atlantic Economic Journal* 29, no. 3 (Sept.), pp. 330-40.

Table 1: Significant Political Events Related to the Civil War, 1857-July 1861

March 6, 1857	Supreme Court's *Dred Scott* decision is announced.
October 1857	Banking Panic of 1857
April 1, 1858	US House of Representatives rejects Kansas statehood under the Lecompton constitution
November 2, 1858	Stephen Douglas defeats Abraham Lincoln for US Senate. Douglas advocates so-called "Freeport Doctrine," a *de facto* rejection of the *Dred Scott* decision.
June 7, 1859	Kansas election of delegates to Wyandotte Constitutional Convention (in which Republicans elected 35 delegates against the Democrats' 17.
July 5, 1859	Wyandotte Constitutional Convention meets
October 4, 1859	Ratification (by popular vote) of Wyandotte Constitution, despite Democratic opposition
October 16, 1859	John Brown's Raid on Harpers Ferry
December 2, 1859	John Brown is executed
April 23-May 3, 1860	National Convention in Charleston splits the Democratic Party, helps to ensure Republican victory.
May 8, 1860	Abraham Lincoln nominated as US Republican Presidential Candidate
November 6, 1860	Lincoln wins the Presidential election
December 18, 1860	Crittenden Compromise proposed in US Congress to preserve slavery in South
December 20, 1860	South Carolina secedes
January 9, 1861	Mississippi secedes
January 10, 1861	Florida secedes
January 11, 1861	Alabama secedes
January 18, 1861	Georgia secedes
January 21, 1861	Louisiana secedes
January 29, 1861	Kansas becomes admitted as a state
February 1, 1861	Texas secedes
February 4, 1861	Confederate States of America are formed
February 1861	Attempted Peace Conference
March 2, 1861	Corwin Amendment Passed by US Congress
March 4, 1861	Abraham Lincoln is inaugurated
March 11, 1861	Confederate States Constitution adopted
April 12, 1861	Confederacy fires on Fort Sumter
April 15, 1861	Lincoln mobilizes federal troops
April 17, 1861	Virginia secedes
May 6, 1861	Arkansas secedes
May 7, 1861	Tennessee secedes
May 13, 1861	Queen Victoria recognizes the Confederacy as having "belligerent rights," signaling possible British intervention on their behalf.
May 20, 1860	North Carolina Secedes
May 23, 1861	West Virginia secedes from Virginia
July 21, 1861	First Battle of Manassas, Confederate victory
July 25, 1861	Crittenden-Johnson Resolution to preserve the Union

Table 2

Regression Results: New Orleans Conveyance Office Slave Sale Records

	Regression 1		Regression 2		Regression 3		Descriptive Statistics	
Covariate	estimated coefficient	Std. error	estimated coefficient	Std. error	estimated coefficient	Std. error	Mean	Std. dev.
Dependent variable: Logarithm of slave's price							6.907	0.502
Logarithm of monthly cotton price -- deseasonalized			-0.624*	0.040	-0.624*	0.141	0.272	0.083
Logarithm of British consol price			1.622*	0.151	1.622*	0.630	4.548	0.021
Male (1=yes, 0=no)	0.326*	0.031	0.318*	0.031	0.318*	0.073	0.468	0.499
Light-colored female (1=yes, 0=no)	0.029*	0.010	0.030*	0.010	0.030*	0.011	0.147	0.354
Light-colored male (1=yes, 0=no)	-0.018	0.012	-0.020	0.012	-0.020	0.012	0.090	0.287
Male sold with guarantee (1=yes, 0=no)	0.115*	0.023	0.144*	0.022	0.144*	0.050	0.446	0.497
Female sold with guarantee (1=yes, 0=no)	0.314*	0.022	0.334*	0.022	0.334*	0.048	0.510	0.500
Number of children, ages 1-2, sold with mother	0.033	0.019	0.026	0.018	0.026	0.017	0.057	0.245
Number of children, ages 3-5, sold with	0.174*	0.019	0.167*	0.019	0.167*	0.016	0.038	0.204

Table 2

Regression Results: New Orleans Conveyance Office Slave Sale Records

	Regression 1		Regression 2		Regression 3		Descriptive Statistics	
Covariate	estimated coefficient	Std. error	estimated coefficient	Std. error	estimated coefficient	Std. error	Mean	Std. dev.
mother								
Number of children, ages 6-9, sold with mother	0.344*	0.018	0.339*	0.018	0.339*	0.017	0.039	0.217
Sold on credit (1=yes, 0=no)	0.064*	0.008	0.065*	0.008	0.065*	0.007	0.242	0.428
Skilled worker (1=yes, 0=no)	0.295*	0.072	0.266*	0.071	0.266	0.150	0.002	0.045
Female with household occupation (1=yes, 0=no)	0.173	0.116	0.172	0.114	0.172	0.095	0.001	0.028
Male with household occupation (1=yes, 0=no)	0.346	0.190	0.262*	0.186	0.262*	0.123	0.000	0.017
Unskilled worker (1=yes, 0=no)	-0.049	0.189	-0.054	0.186	-0.054	0.090	0.000	0.017
Sold with family member (1=yes, 0=no)	-0.051*	0.021	-0.037	0.020	-0.037	0.020	0.104	0.305
Buyer from New Orleans (1=yes, 0=no)	-0.069*	0.008	-0.065*	0.008	-0.065*	0.011	0.659	0.474
Sold at estate sale (1=yes, 0=no)	-0.067*	0.020	-0.065*	0.019	-0.065	0.035	0.029	0.168
Emancipation or self purchase (1=yes, 0=no)	-0.169*	0.036	-0.172*	0.035	-0.172*	0.061	0.009	0.092

Table 2

Regression Results: New Orleans Conveyance Office Slave Sale Records

	Regression 1		Regression 2		Regression 3		Descriptive Statistics	
Covariate	estimated coefficient	Std. error	estimated coefficient	Std. error	estimated coefficient	Std. error	Mean	Std. dev.
Sold in group of 2 to 5 slaves (1=yes, 0=no)	0.127*	0.011	0.118*	0.010	0.118*	0.012	0.226	0.419
Sold in group of 6+ slaves (1=yes, 0=no)	0.140*	0.011	0.126*	0.011	0.126*	0.015	0.139	0.346
Age in years	0.322*	0.018	0.327*	0.018	0.327*	0.025	25.452	10.827
$Age^2 \cdot 10^{-2}$	-1.551*	0.193	-1.594*	0.189	-1.594*	0.266	7.650	6.732
$Age^3 \cdot 10^{-3}$	0.373*	0.096	0.391*	0.094	0.391*	0.139	26.556	36.908
$Age^4 \cdot 10^{-4}$	-0.053*	0.024	-0.057*	0.024	-0.057	0.036	103.848	204.588
$Age^5 \cdot 10^{-5}$	0.004	0.003	0.005	0.003	0.005	0.005	446.368	1183.410
$Age^6 \cdot 10^{-6}$	-0.0001	0.0001	-0.0002	0.0001	-0.0002	0.0002	2067.32	7180.360
January (1=yes, 0=no)	0.017	0.020	-0.038	0.020	-0.038	0.054	0.114	0.318
February (1=yes, 0=no)	0.021	0.020	-0.005	0.020	-0.005	0.051	0.125	0.331
March (1=yes, 0=no)	0.013	0.020	0.004	0.019	0.004	0.052	0.141	0.348
April (1=yes, 0=no)	0.048*	0.020	0.034	0.020	0.034	0.048	0.109	0.311
May (1=yes, 0=no)	0.042*	0.021	0.018	0.020	0.018	0.053	0.091	0.288
June (1=yes, 0=no)	0.013	0.021	-0.002	0.021	-0.002	0.060	0.076	0.265
July (1=yes, 0=no)	-0.014	0.023	-0.028	0.022	-0.028	0.043	0.051	0.220
September (1=yes, 0=no)	0.051*	0.025	0.046	0.024	0.046	0.052	0.034	0.182
October (1=yes, 0=no)	0.024	0.023	-0.015	0.022	-0.015	0.059	0.054	0.226
November (1=yes,	0.039	0.022	-0.002	0.021	-0.002	0.072	0.067	0.250

Table 2

Regression Results: New Orleans Conveyance Office Slave Sale Records

	Regression 1		Regression 2		Regression 3		Descriptive Statistics	
Covariate	estimated coefficient	Std. error	estimated coefficient	Std. error	estimated coefficient	Std. error	Mean	Std. dev.
0=no)								
December (1=yes, 0=no)	0.002	0.020	-0.029	0.020	-0.029	0.052	0.103	0.304
Intercept	4.206*	0.071	-3.020	0.689	-3.020	2.869	1	
Number of observations	10177		10177		10177		10177	
F-statistic	361.860*		388.680*		387.450*			
R^2	0.576		0.593		0.593			
Root MSE	0.328		0.321		0.321			

Source: Slave sale data: New Orleans Conveyance records. Cotton prices: L. C. Gray, History of Agriculture in the Southern United States to 1860 2 (Carnegie Institution of Washington, Washington, 1933), p. 1027. The British consol price is the end-of-month closing price on 3% consols.
Note: The dependent variable is the logarithm of the slave's price. The omitted variable refers to an unguaranteed dark-colored female, sold singly for cash to an out-of-town buyer in August. For Regression 3, standard errors are clustered by month of sale.
* indicates the regression coefficient is statistically different from zero at the 5 percent level.

Table 3
Price Trends, 1856 -- 1861

Time Period	Change Over Time in Average Monthly Residuals: Regression 1	Regression 2
Oct. 1856 – Mar. 1857	0.107	0.176
Mar. 1857 – Nov. 1857	-0.130	-0.101
Nov. 1857 – May 1860	0.326	0.154
May 1860 – Nov. 1860	-0.155	-0.091
Nov. 1860 – Apr. 1861	-0.012	0.048
Apr. 1861 – Aug. 1861	-0.219	-0.278
May 1860 – Aug. 1861	-0.386	-0.321

Source: Table 2.

Table 4
Event Analysis
Estimated percentage price change six weeks prior and six weeks post event

Date	Event	Estimated Price Change
March 6, 1857	*Dred Scott*	0.048
April 1, 1858	Congress rejects Kansas statehood under Lecompton constitution	0.046
October 16, 1859	John Brown's raid on Harpers Ferry	0.012
May 8, 1860	Lincoln nominated for U.S. President	0.057*
November 6, 1860	Lincoln elected U.S. President	-0.132*
December 20, 1860	South Carolina secedes from U.S.	0.020
April 12, 1861	Confederacy fires on Ft. Sumter	-0.045
July 21, 1861	First Battle of Manassas, Confederate victory	-0.168*

Source: New Orleans Conveyance records. The changes are the differences between indicator variables that are added to a regression otherwise identical to the first regression in Table 2.

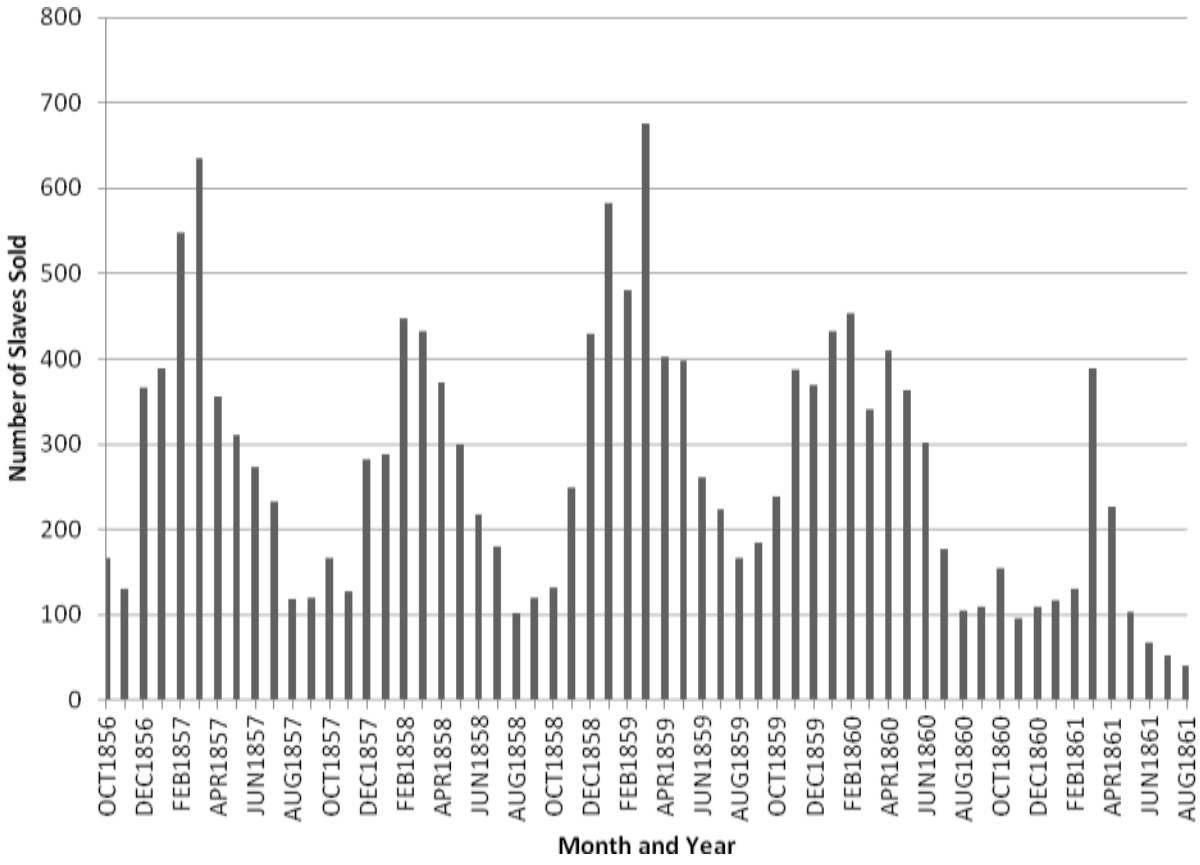

Figure 1 -- Frequency of New Orleans slave sales, 1856 – 1861, Conveyance records

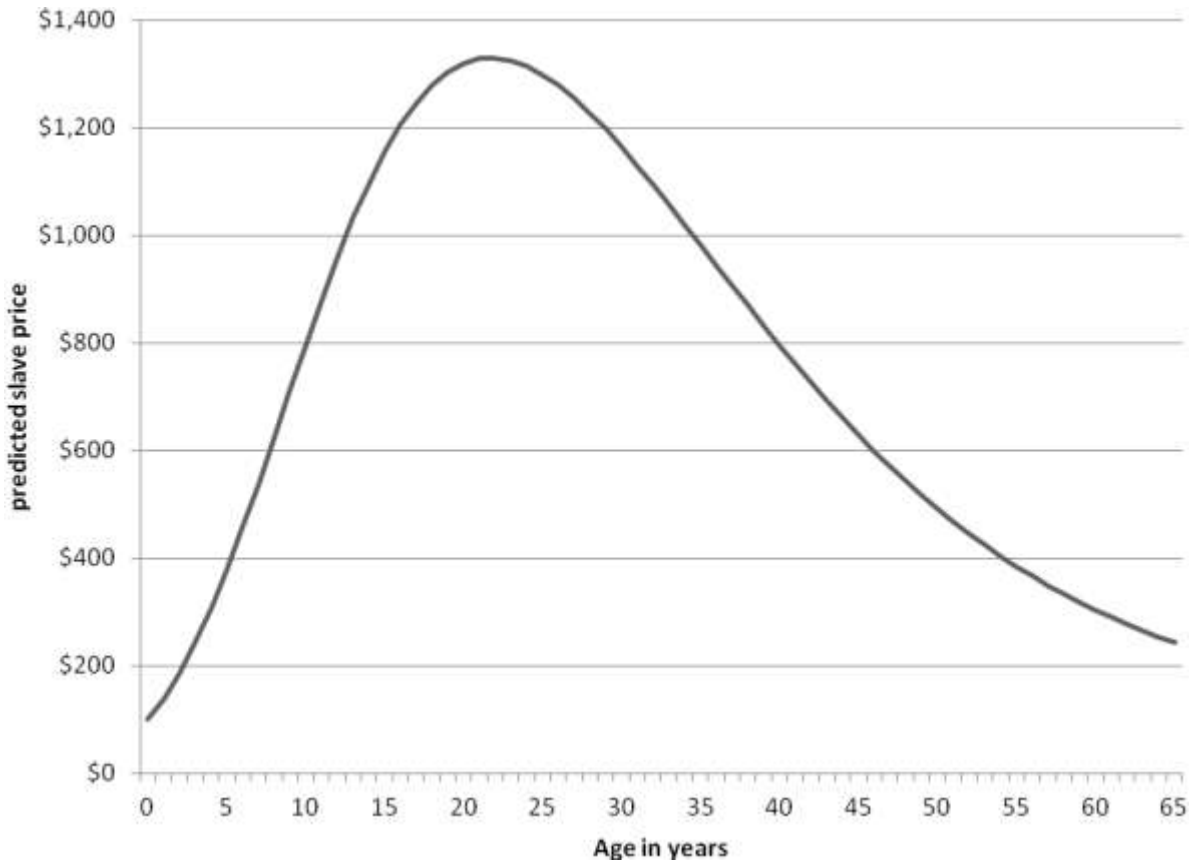

Figure 2 -- Predicted Age-Price Profile from Regression 1, Table 2.

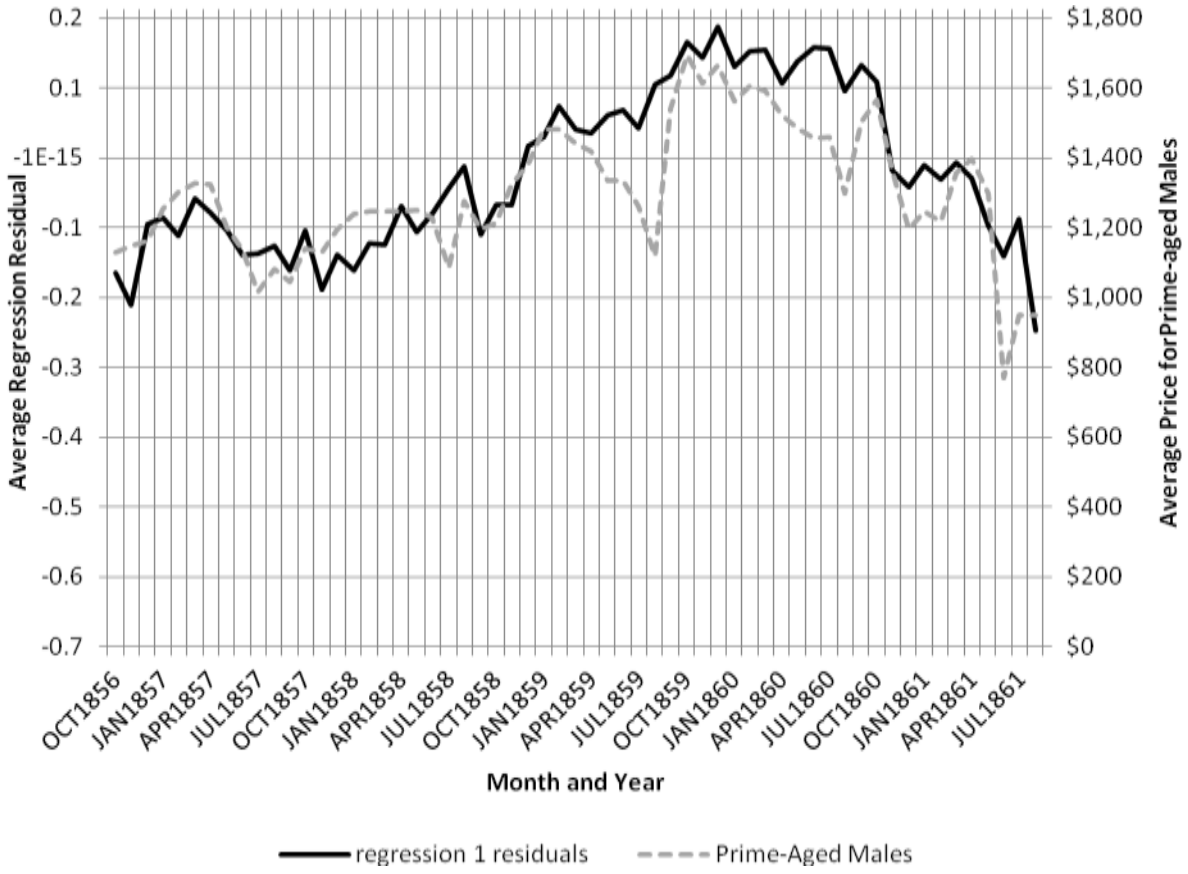

Figure 3 – Plot of monthly means of residuals from Regression 1, Table 2.

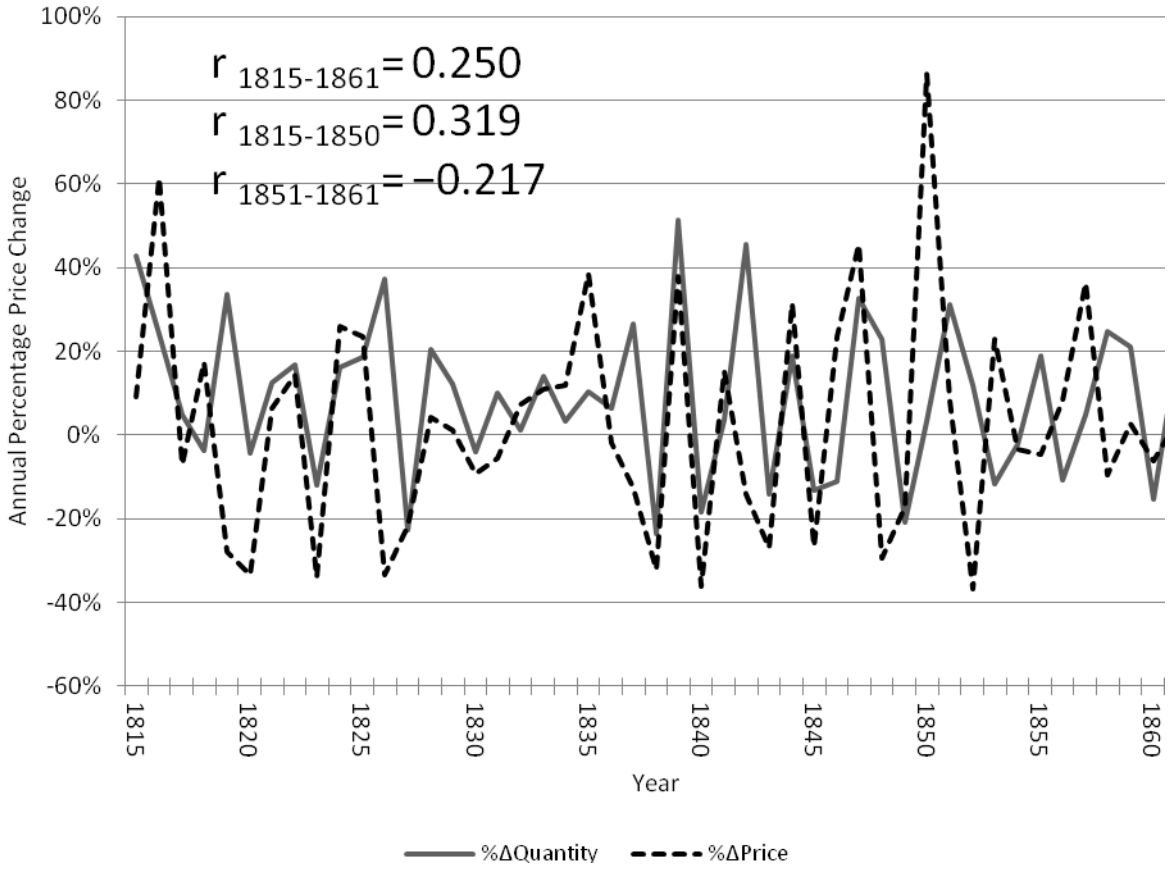

Figure 4 -- Annual Cotton Prices and Production

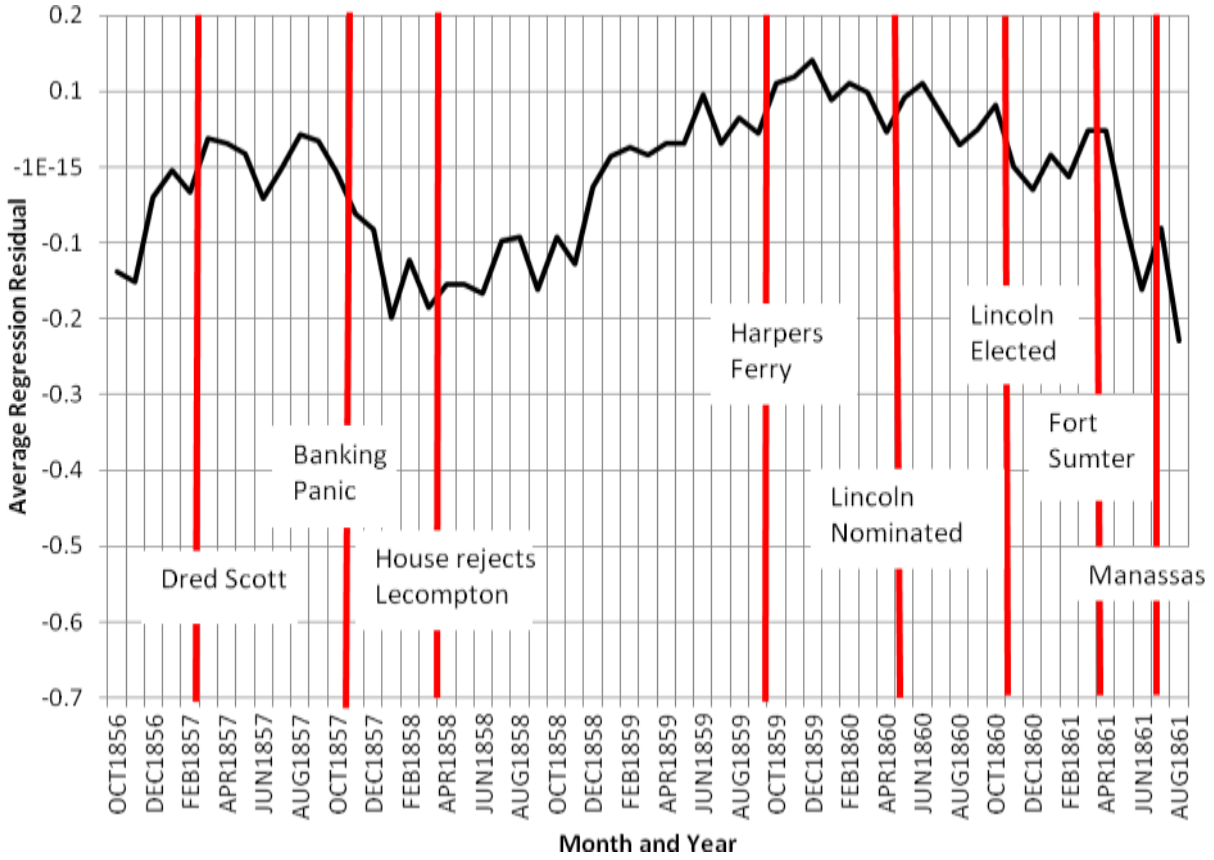

Figure 5 - Index of slave prices, Oct. 1856 - Aug. 1861
Source: regression 2, Table 2.

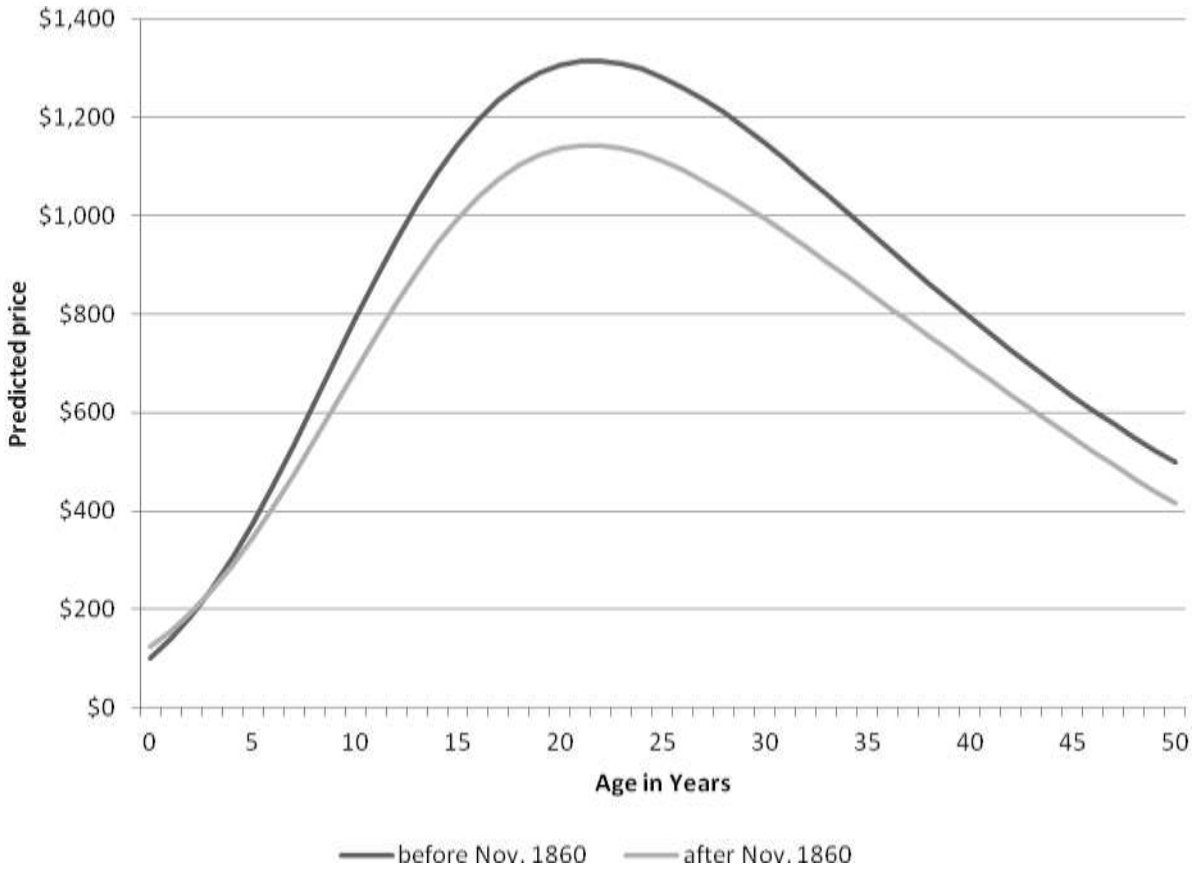

Figure 6 -- Predicted Age-Price Profiles for Unskilled Males sold with Warranties

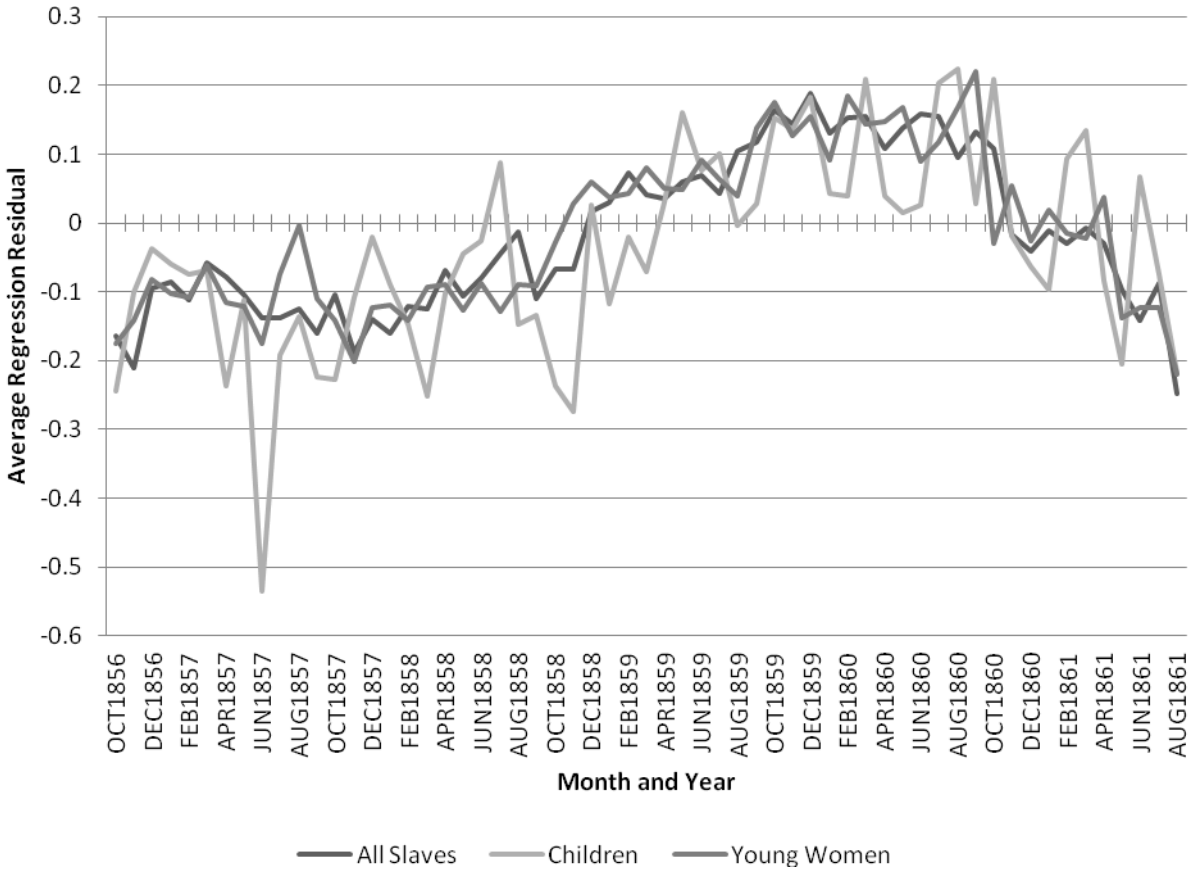

Figure 7 - Plot of monthly mean of residuals for Regression 2, Table 2.