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The Occupations of Slaves Sold in New Orleans: Missing Values, Cheap Talk, or Informative Advertising

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Abstract

We propose an alternative test for adverse selection using notarial records for slaves sold in New Orleans in 1830. The experiment is simple and mimics the used car example originally proposed by Akerlof (1970). When first sold in New Orleans, buyers of imported slaves were uninformed of the slaves' unobservable characteristics. In time, the new owners learned more about their slaves and the "lemons" were sold and the "peaches" retained. Because buyers anticipate that the slaves offered for sale were of lower quality on average, they reduce their bids for these slaves. Consequently, we should observe a lower price for the slaves who were resold in the market. We test this proposition by linking the sequential sales records of 833 slaves sold in New Orleans. Through a comparison of initial and resale prices, we find that prices increased which suggests that adverse selection had a relatively small effect on the prices of slaves.

Keywords: slavery, human capital
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Sequential sales as a test of adverse selection in the market for slaves

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The value of a slave to his owner depended on unobservable traits such as skill, demeanor, or work ethic. These hidden characteristics only reveal themselves with time and interaction between the owner and the slave. Because sellers were better informed than potential buyers of the unobservable characteristics of their slaves, sellers may have adversely selected lower quality slaves for sale. If buyers anticipated that the slaves on the market were of lower quality, they would have shaved their bids for them. Consequently, the presence of adverse selection would have lowered the prices of slaves sold in markets when compared to the prices of slaves chosen randomly from the enslaved population.

Adverse selection, if it played a large role in the market, would affect the accuracy of previous studies on the rate of return to slavery. In its simplest form, the rate of return is approximated by the quotient of the annual rental rate and the market price of slaves (see, for example, Evans, 1962). If the slaves offered for sale were adversely selected whereas those offered for rent were not, then the calculated rate of return to slavery has been biased and overestimated. Previous research finds that slave owners earned the market rate of return on their investment in slaves (Conrad and Meyer, 1958; Evans, 1962; Fogel and Engerman, 1974). Consequently, the presence of adverse selection suggests that slave owners earned a below-market rate of return on their investment, indicating that they were not profit maximizers at the margin or had alternative reasons for owning a slave.

Furthermore, adverse selection may have reduced the efficiency of the interregional slave market. If buyers had anticipated that traders were selling lower quality slaves, they would have been reluctant to purchase them. As an impediment to the efficient transfer of enslaved labor from regions of lower productivity to those with higher productivity, adverse selection would have hindered southern economic growth. Inefficiency, however, can also promote social welfare. Owners, for example, may have preferred to move labor in entire plantations rather than deal with interregional slave traders. Consequently, if adverse selection reduced the probability that slaves were bought and sold, it also improved social welfare by increasing the stability of slave families.

The extent of adverse selection may also reveal something about the creation of economic, political, and legal institutions to counteract it. The economic institutions are evident in the nature of the transactions themselves. For example, if adverse selection prevailed in the market, buyers may have relied on the business reputation of traders to avoid the purchase of lower quality slaves. In addition, buyers could seek additional market information through the hire of buying agents. Furthermore, conditional or trial purchases provided buyers the opportunity to return a slave within a certain period of time. Legal institutions also protected buyers through implied warranties and a court system which enforced contract law. As discussed later, an 1829 Louisiana law required the certification of the slave's good moral character as an attempt to prevent the importation of criminal slaves into the state (Freudenberger and Pritchett, 1991). Therefore, buyers may have been wary of a seller's ability to adversely select lower quality or even criminal slaves for sale. Finally, the political system demonstrated the endogenous character of slave law – many legislators owned slaves and enacted laws to protect themselves and their investments in slavery (Fede, 1987).

The empirical evidence of adverse selection in the market for slaves is somewhat mixed. Greenwald and Glasspiegel (1983) test for adverse selection in the New Orleans slave market by comparing the prices of slaves originating from different regions of the South. They argue that slaves originating from low productivity areas were more likely to be sold and less likely to be adversely selected than slaves from the local area. Buyers in New Orleans offered higher prices for imported slaves, because they anticipated that these slaves were of higher quality than local slaves. Pritchett and Chamberlain (1993) test for adverse selection in the New Orleans slave market by comparing the prices of slaves sold at estate sales with those of slaves sold voluntarily. They argue that slaves sold voluntarily may have been culled from the seller's holdings whereas slaves sold at estate sales were less subject to adverse selection. They find no significant difference between the prices of these slaves from which they conclude that adverse selection was limited. More recently, Dionne, St-Amour,

and Vencatachellum (2009) find that slaves sold at estate sales in Mauritius commanded a significant 45 percent premium when compared to the prices of slaves sold voluntarily. The authors argue that the presence of informed buyers at public estate sales bid up slave prices whereas their absence signaled to other buyers that the slaves were of lower quality resulting in lower bids for them.

The dissemination of private information to uninformed buyers, as proposed by Dionne, St-Amour, and Vencatachellum (2009), did not apply to participants in the New Orleans market. Contrary to the slave market in Mauritius, many New Orleans slaves were sold privately rather than at public auction. Traders in particular maintained jails or pens in the city in order to market their slaves (in an analogous fashion to today's car dealers). Because other bidders were not present during these private negotiations, they were not privy to private information indicated by the presence or absence of an informed buyer. In addition, informed buyers in Mauritius paid a penalty in the form of higher prices for their slaves, creating a strong incentive for them to conceal their participation in the market. Dionne, St-Amour, and Vencatachellum (2009; p. 1285) imply that the employment of buying agents was illegal in Mauritius whereas buying agents were frequently used in New Orleans.¹ Perhaps institutional differences between New Orleans and Mauritius accounts for the different empirical estimates of adverse selection, as estimated by Pritchett and Chamberlain (1993) and Dionne, St-Amour, and Vencatachellum (2009).

We propose an alternative test for adverse selection using notarial records for slaves sold in New Orleans in 1830. The experiment is simple and mimics the used car example originally proposed by Akerlof (1970). When first sold in New Orleans, buyers of imported slaves were uninformed of the

¹ As indicated by the following newspaper advertisement, some traders resented the employment of buying agents and encouraged planters to visit their pens without them. "Persons desirous of purchasing would do well to call and examine for themselves without being accompanied with a broker, unless they themselves feel disposed to pay the Brokerage, as they can always purchase a Slave for TWENTY-FIVE DOLLARS less without a Broker, than with one. And as far as regards the subscriber, he, (believing himself capable of transacting his own business) is determined, from this day forward, not to pay any broker a commission on Sale of SLAVES, unless specially employed by him to make such sale"(New Orleans Daily Picayune, May 27, 1838, p. 3).

slaves' unobservable characteristics. In time, the new owners learned more about their slaves and the "lemons" were sold and the "peaches" retained. Because buyers anticipate that the slaves offered for sale were of lower quality on average, they reduce their bids for these slaves. Consequently, we should observe a lower price for the slaves who were resold in the market. We test this proposition by linking the sequential sales records of 833 slaves sold in New Orleans. Through a comparison of initial and resale prices, we find that prices increased which suggest that adverse selection had a relatively small effect on the prices of slaves.

Notarial Sales Records

We derive our sample of sales records from the New Orleans Notarial Archives, a data source used by previous researchers, especially Fogel and Engerman (1976), to analyze the New Orleans slave market. Unlike the Fogel and Engerman sample for the years 1804 through 1862, we concentrate our efforts on the collection of all extant sales records for a single year - the 1830 calendar year. We believe that these data complement the earlier Fogel and Engerman sample by providing a census of all market participants including buyers, sellers, and slaves. In addition, when compared with Fogel and Engerman's earlier work, we benefit from technological changes which lowered our collection costs. Not only are we able to collect more information on each transaction (especially the names of the buyers and sellers by which we link the sales records), but we also have better information because of an unusual Louisiana law in effect during 1830.

The fear of slave insurrections led the Louisiana legislature to pass a law which required a so-called certificate of good moral character for each out-of-state slave. This peculiar Louisiana law was in effect from April 1, 1829 through March 24, 1831. As described in the legislative acts of 1829, the certificate was to be signed by two or more freeholders (other than the vendor) from the county of origin. The freeholders were to declare under oath that they had known the slave for several years and that the said slave was not guilty of any crimes, "but that he or she has a good moral character and is

not in the habit of running away" (Louisiana, 1829: p. 38). The certificate was deposited with the notary when the imported slave was first sold in New Orleans.² In addition to the required sworn affidavit for imported slaves, the 1829 law required that sellers of local slaves provide some evidence that the slave had previously resided in the state. Typically, the notary recorded information on the slave's prior sale within the state, including the names of the previous notary, seller, and date. In the following, we use this information to search the title of these Louisiana slaves.

In order to facilitate the matching of sequential sales records, our sample includes the records of all New Orleans slave sales for 1830. Title transfers which did not represent market transactions were omitted from the sample. For example, we did not collect information on the release of mortgages on slaves, uncompensated manumissions, or marriage contracts involving slaves as property.³ In addition, we did not collect information on the sales of entire plantations, the sales of partial ownership of slaves, and rental agreements for plantations and slaves.⁴ In most of these notarial acts, the slaves were located outside of New Orleans and the records fail to list their names and ages, thus limiting their use for the purposes of this project. Office fires destroyed the records of two of the fourteen New Orleans notaries, and as a consequence, their records are not included in our sample. In summary, our initial sample of invoices includes the records of 6226 slaves sold in New Orleans.⁵

Records which do not represent market transactions are excluded from the sample. Some sales, for example were annulled or voided prior to their completion – as indicated by margin notes on the

² The motivation of the law was to prevent the importation of "criminal" slaves, which in and of itself, would seem to indicate that Louisiana buyers were wary of adverse selection in the market. Under certain circumstances, the law did not require the presence of a certificate. For example, certificates were not required for children aged twelve years or less. Also, sellers could waive the requirement if the slave had been previously sold within the state, or had been imported prior to April 1, 1829. See Freudenberger and Pritchett, 1991.

³ For examples of the release of mortgages, see Christy, v. 5, p. 508, 509. For an example of a manumission, see Pollock, v. 33, 482. For a marriage contract involving the disposition of slaves, see Pollock, v. 32, p. 289.

⁴ For examples of sales of entire plantations, including slaves, see Pollock, v. 32, p. 117, 179; Pollock, v. 33, p. 83; Christy, v. 5, p. 447. For sales of partial ownership of slaves, see Pollock, v. 32, p. 270; Pollock v. 33, p. 83; Christy, v. 5, p. 447. For the rental agreement for an entire plantation and slaves, see Pollock, v. 33, p. 144.

⁵ In comparison, our sample is slightly larger than the Fogel and Engerman (1976) sample, which includes the records of 5009 "principal" slaves.

sales records and the absence of the required signatures at the bottom of the invoice. Typically, the voiding of a sale occurred when one of the parties to the transaction failed to meet the initially agreed on stipulations or because of changing circumstances between the time of sale and the recording of the deed. For instance, according to one record, a "boy got drunk and the purchaser refused to take him" (Boswell, vol. 11, p. 528). In order to meet the letter of the law, owners who imported slaves from outside Louisiana were required to provide certificates of good character even if they did not intend to sell them. Some of these certificates were deposited with public notaries. Because such deposits did not represent market transactions, these records were excluded from our sample. After removing the records of voids, annuls, rental agreements, and deposits, we have 6174 observations in the working sample.

We identify the import status of a slave by the presence of a certificate interleaved with the sales invoice in the notarial records. We classify 3078 slaves as imported from outside of the state of Louisiana – their records comprise 49.9 percent of our sample. Local slaves are identified by evidence of prior residence within the state. This definition is relatively inclusive because an imported slave, if subsequently resold, would be reclassified as a local slave. Using information on prior residence, we infer that the records of 2710 local slaves are included in our sample.⁶ However, we could not infer the origin of 386 slaves, or 6.2 percent of the sample. We could not account for the region of origin for a number of reasons. Some sellers simply state that they had owned their slaves for a number of years without indicating their length of residence within the state. Also, the law of 1829 did not require a proof of origin for slaves aged less than 13 years. Because the Louisiana Black Code required young children to be sold with their living mothers, we are able to infer their regions of origins from those of

⁶ Many local slaves had been previously sold in New Orleans. Of the 2710 local slaves, we know the previous purchase date for 2407 of them (or 89% of the locals). Instead of reporting the prior sale date, the owners of 182 slaves declared that their slaves were imported prior to April 1, 1829, the effective enforcement date for the Louisiana law. Finally, the length of residence of 118 local slaves (most of whom were children) was not recorded or could not be inferred by the authors.

their mothers (Louisiana, 1806). For most of the children aged 10 to 12 years, however, the region of origin cannot be determined. These children represent a large proportion of the slaves with missing information. Children of these ages comprise only 7.5 percent of our sample yet account for 46 percent of the slaves with missing information for their regions of origin.

Sequential Sales

Some local slaves were sold quite frequently whereas others had not been sold in years. For those invoices which list the previous purchase date, the average number of days since the previous sale was 446 days, the median was 84 days, and the mode was 1 day. The frequency of resale for local slaves is illustrated in figure 1. For the 2710 local slaves sold in 1830, we find that 1470 slaves had been previously sold during the past 8 months. These repeat sales represent 54 percent of the locals and 24 percent of the slaves in our working sample. The rapid turnover of the ownership of these slaves has a number of implications for previous research. Because some slaves were sold more than once, estimates of the total number of sales will overestimate the total number of slaves actually sold in the market.⁷ In addition, Fogel and Engerman (1974, p. 53) estimate that only 25 percent of the slaves sold in New Orleans originated from the exporting areas of the South. Because, as we will show, many local slaves were recently imported from outside of Louisiana, Fogel and Engerman have underestimated the relative importance of the interregional slave trade.

We construct our sample of sequential sales by matching the records of previously sold slaves to their subsequent sales records. The invoices of 2407 slaves indicate the date of previous sale within the state of Louisiana. Of these local slaves, 1244 were previously sold during the calendar year 1830, and consequently this number represents the maximum number of possible matches within our sample. Because of data limitations, however, we are not able to match all of these records. Office fires destroyed the records of two notaries, eliminating 131 possible matches. Missing information for the

⁷ For time period 1804 to 1862, Kotlikoff (1979, p. 497) estimates that “more than 135,000 slaves were sold in New Orleans.”

names of previous notaries rules out an additional 19 matches. Four previous sales were witnessed under a “private signature”, seven sales took place outside of New Orleans, and 12 sales were witnessed by court officials. Finally, an unknown number of sales records were recorded by the public notary Carlilie Pollock and lost due to a missing volume in the Notarial Archives. After these adjustments, we estimate a maximum of 1071 matches are possible for the slaves sold in 1830.

We match sales records using (1) the date of the previous transaction, (2) notary’s name, (3) buyer’s and seller’s names, (4) the slave’s name, (5) gender, (6) skin color, and (7) age (plus or minus one year). The initial procedure results in 951 matches – however, some of these matches represent duplicates. Some large transactions listed more than one slave with the same name, age, and skin color, resulting in non-unique matches. After removing these duplicates, our sample includes the records of 833 paired sales. Compared with the maximum number of possible matches, our match rate is at least 77.8 percent.

Buybacks

We define buybacks as sequential sales where the buyer resells or returns the slave to the original owner. Such buybacks were common in New Orleans.⁸ Of the 833 paired transactions in our sample, we find that 52 pairs (or more than 6 percent) represent transactions where buyers returned slaves to the original owners. The buyer, as the previous owner of the slave, would have been fully informed of the slave’s unobservable characteristics and consequently, there is no asymmetry of information. Including buybacks in our sample reduces the probability of finding adverse selection because prices would fully reflect the slave’s known characteristics and the seller had no incentive to adversely select his slave for resale.

Buybacks have broader implications regarding the presence of adverse selection in the market for slaves. In many cases, the buyer’s motive for returning the slave (or selling him back) to the original

⁸ Because they required a title transfer, buybacks had to be notarized. Consequently, the notarial records provide evidence of the number of slaves returned by buyers.

owner was due to a possible violation of the implied warranty. Under Louisiana law, sellers were required to disclose any vices or maladies suffered by the slaves at the time of sale. If a dissatisfied buyer could prove that the slave's undisclosed condition preexisted the sale date, he could sue to rescind the sale or demand compensation (Schafer 1987: pp. 307-308). By protecting the buyer from false claims by the seller, an effective warranty tends to mitigate the effect of adverse selection. Under such circumstances, sellers would not make false claims for fear of being sued and prices would reflect the unobserved characteristics of the slaves. Buybacks indicate an effective warranty, reducing the incidence of adverse selection among all slaves sold in New Orleans.

Price Changes for Sequential Sales

We need accurate prices in order to estimate price changes for sequential sales. Unfortunately, many of the more unusual (and interesting) transactions fail to provide useful price data and are excluded from the sample. For example, we excluded the records of donations or gifts of slaves, some of which occurred between family members. Sometimes prices were omitted from these records, and because many were not arms length transactions, the prices may not be accurate. The joint sale of slaves and other property or sales with special covenants were also excluded.⁹ Because prices were often missing in barter transactions, these records were also removed.¹⁰ As discussed previously, we excluded the records of buybacks because buyers, as previous owners of the slaves, were fully informed of the slave's characteristics. Finally, some slaves were sold in groups or lots without individual price information. We removed the records of these slaves from our sample. After making these exclusions, our working sample includes 578 paired transactions.

⁹ When James Augustin Lee sold Bill, Hezekiah, and George, he included three horses, three carts, four mules, and their harnesses in the purchase price (Seghers, vol. 3, p. 163). George Baumgard, in an example of a sale with special covenant, sold his bakery, including 15 slaves, to Paul Dardennes Poincy, with the restriction that Baumgard not compete against the new owner (by baking bread) for the next 5 years (Pollock, vol. 33, p. 387).

¹⁰ Examples of slaves exchanged for property include the slave trader Joseph Meek, Jr., who traded one of his slaves for an American piano (O. de Armas, vol. 6, p. 209). In exchange for his slave, Pierre Marnett was promised 26 "bulks" of buffalo meat, to be delivered via flatboat (Caire, vol. 12, p. 329).

We adjust all prices to reflect their real, present value equivalents. Because they include the opportunity cost of the borrowed funds, the prices for credit sales may be inflated. Instead of the prices quoted for these sales, we substitute the present value of the payment stream discounted at the prevailing market interest rate of 10 percent per annum.¹¹ We also deflate nominal prices for changes in the general level of slave prices. Following Engerman, we construct an index using the average price for males without skills, aged 18 to 30 years, fully guaranteed as without physical or other infirmity (Ransom and Sutch, 1988, p. 156). As seen in figure 2, we observe a slight upward trend in prices during the calendar year 1830 -- prices are approximately 5 percent higher in December than in January. Seasonality is also evident as prices decrease during the summer months when health conditions worsened and business activity declined in the city (Pritchett and Tunali, 1995). For each pair of transactions, we divide the initial and final prices by the monthly index and the difference is expressed as a percentage of the initial price.

The mean percentage change in price between the initial purchase and resale is presented in Table 1. As discussed previously, if buyers acquire more information regarding the unobserved characteristics of their slaves over time, they will resale their lower quality 'lemons' and retain the higher quality 'peaches.' Because potential buyers anticipate that slaves offered for resale are of lower overall quality, they bid lower prices for them. Consequently, we predict a decrease in prices if the resold slaves were adversely selected by their owners. As seen in Table 1, prices increased on average by 3.3 percent between the initial purchase and resale, which is contrary to the prediction. In addition, the mean price change is statistically greater than zero at the 0.1 percent level of significance. After removing outliers, the 90 percent trimmed mean equals 4.5 percent, which is also contrary to the prediction. Of course, the prices of some slaves decreased whereas other increased. Overall,

¹¹ Most invoices do not quote an explicit market interest rate for credit sales. Among those with a quoted rate, 76 percent specify an annual rate of 10 percent.

approximately 60 percent of the slaves sold for higher prices, suggesting that the value of most slaves increased when resold.

Slave Traders

Slave traders played a major role in the New Orleans market, as both sellers and buyers of slaves. In 1830, a majority of the slaves sold in New Orleans were imported from outside of the state, and interregional slave traders imported most of them.¹² The local traders functioned as intermediaries between sellers and buyers and speculated on price changes. Traders turned over their inventory relatively rapidly which limited their knowledge of the slaves' unobservable characteristics. Experts in the buying and selling of slaves, traders are differentiated from other market participants in order to estimate the amount of adverse selection in this market.

Professional traders made their living from the buying and selling of slaves. Identifying which of the market participants were traders, however, is problematic at best. Searching the secondary literature on the slave trade for the names of traders is unsatisfactory for the simple reason that many traders are not identified.¹³ In the following, we use the frequency of market participation to identify professional slave traders. Specifically, we define a trader as anyone who sells 10 or more slaves in a single transaction or makes 10 or more slave sales. Using this definition, we identify 66 sellers as slave traders (a list of the traders is found in the appendix). We use different definitions of slave traders in order to check the sensitivity of our empirical results. We find that the qualitative results are not affected by using these different definitions.

¹² A comparison on the number of sellers of imported slaves with the number of different previous owners of the imported slaves, as listed on the certificates of good character, indicates approximately nine different owners for every seller of imported slaves in New Orleans. This evidence suggests that interregional traders were purchasing slaves in the exporting areas and reselling them in New Orleans. For information regarding the number of slaves originating from the exporting areas, see Freudenberger and Pritchett (1991).

¹³ For example, James Barnes Diggs, one of the largest traders in New Orleans, is not identified in the secondary literature. Indeed, his descendents and genealogists were unaware of Diggs's occupation until recently.

Professional slave traders sold many more slaves than other sellers in New Orleans. Although only 6 percent of the sellers are identified as traders, they sold 61 percent of the slaves. What accounts for the large number of slaves sold by traders? On average, traders sold more than twice as many slaves per transaction than other sellers (3 slaves per transaction for traders versus 1.4 slaves per transaction for other sellers). More significantly, traders were, on average, much more active in the market than other sellers. Traders averaged more than 19 transactions during the 1830 calendar year, compared to an average of only 1.7 transactions for other sellers. Although slave traders were relatively few in number, they supplied the majority of slaves sold in New Orleans.

In addition to selling, traders purchased a large number of slaves sold in New Orleans. Interestingly, the traders were much more likely to resale their slaves than other buyers. In New Orleans during 1830, traders bought 1157 slaves and resold 609 of them, or approximately 53 percent of their total purchases.¹⁴ In contrast, non-traders retained more than 95 percent of the slaves that they purchased. Most sequential sales in our sample can be characterized by slave traders purchasing and reselling slaves within the city. Of the 833 sequential sales identified in our sample, slave traders account for 73 percent of them. Because slave traders account for most sequential sales in our sample, it is important that we understand their market behavior.

If we restrict our attention to those buyers who resold slaves during 1830, we find that slave traders resold their slaves much faster than other buyers. For traders, the median length of time between purchase and resale was only 7 days whereas for other buyers the median length between purchase and resale was 43 days. In addition, most slaves purchased by traders were imported. Almost 90 percent of the slaves purchased by traders were imported whereas only 33 percent of the slaves purchased by other buyers were imported. Finally, traders purchased most of their slaves from other

¹⁴ One, of course, might wonder why slave traders did not resale all of the slaves that they purchased. Indeed, some may have been sold after December 31, 1830, the last day in our sample period. Alternatively, some traders transported their slaves outside of New Orleans for resale. In both cases, such sales would be censored and not included in our matched sample.

traders (rather than local sellers). Almost 80 percent of the slaves purchased by traders were sold by other traders whereas local buyers purchased only 26 percent of their slaves from traders.

In summary, these descriptive statistics suggest the following: many of the slaves purchased and resold by slave traders represent intermediate or wholesale transactions rather than final transactions. Instead of residing in New Orleans during the selling season, some interregional traders sold their slaves to other traders, who in turn retailed them to local buyers. It was not because traders gained additional information about the slaves that they decided to resell them. In other words, these resold slaves were not adversely selected by the traders.

Slave traders behaved differently than other market participants, purchasing slaves with the intent of reselling them. Because most slaves in our sample of sequential sales were purchased by traders, the sample means might mask the adverse selection practiced by other market participants. In addition, the slave's origin might be correlated with the information available to buyers at the time of initial purchase. New Orleans buyers had no prior knowledge of recently imported slaves whereas buyers *might* be informed of the unobservable characteristics of the local slaves. In other words, the probability of finding adverse selection should be greatest for the imported slaves for whom buyers were uninformed. In the following, we discern the trading status of buyers and the import status of the slaves sold in New Orleans. Specifically, we predict that adverse selection should be most evident among the imported slaves purchased by non-traders. As seen in Table 1, however, instead of observing a decrease in market prices for those slaves, we find that the prices of imported slaves purchased by non-traders increased on average between initial purchase and resale in New Orleans. In addition, the mean percentage change in the prices of these slaves is not statistically different from the mean percentage price change for imported slaves purchased by traders, or for that matter, the local slaves purchased by non-traders. Only the local slaves purchased by traders experienced a price decrease – however, the average percentage change in price was less than 2 percent and not statistically different

from zero.¹⁵ Finally, assume that absent adverse selection, slave prices would have increased at the same rate as those of imported slaves purchased by traders. We deem this group to be an appropriate counterfactual because, as discussed previously, traders did not adversely select their slaves for resale. Compared with this control group, the prices of imported slaves purchased by non-traders decreased by less than 1 percent. In addition, the difference in the means is not statistically different from zero. In summary, these simple descriptive statistics suggest that adverse selection, if present in the New Orleans market, had a relatively small effect on the prices of slaves.

Regression analysis

Our matched data set enables us to estimate a fixed effect model for the change in slave prices. Because we observe sequential sales for the same slave, his unobserved characteristics are the same for both transactions. Consequently, price changes can be attributed to the owner's discovery of new information and the adverse selection of the lower quality slaves for sale. We need, however, to allow for the possibility that the characteristics of the slaves may have changed between the date of initial purchase and final sale.¹⁶ In fact, the prices of some slaves may move in a predictable fashion depending on the slave's observable characteristics. For example, a younger slave might increase in value as he ages whereas an older adult might become less valuable. In the following, we adjust for these predictable changes when comparing the initial and final transaction prices. In addition, the slave's characteristics may have been affected by his tenure in New Orleans. For example, "acclimation" to the Louisiana disease environment may have increased the value of some slaves. In New Orleans, the greatest threat to new arrivals was yellow fever, which appeared on a regular basis during each summer. We account for the slave's exposure to yellow fever by controlling for his presence in New Orleans during the summer months.

¹⁵ The decrease in the price of local slaves purchased by traders is a puzzle. After all, local speculators would be bankrupt if they consistently lost money on their purchases.

¹⁶ Because our sample is limited to sales for the 1830 calendar year, the owner's duration of ownership for these sequential sales was less than one year.

The percentage change in the slave's price is estimated using OLS and the regression results are presented in Table 2. In addition to covariates indicating the trading status of the buyer and the origin of the slave, the regression includes covariates for the slave's individual characteristics at the time of initial sale in New Orleans. As indicated by the regression coefficient, prices of male slaves fell approximately 3.6 percent between initial purchase and resale. The prices for older slaves increased faster than those for younger slaves, with the maximum predicted price increase occurring at 31 years of age. Interestingly, prices for skilled slaves increased by more than 25 percent between purchase and resale. Potential buyers might have acquired more information regarding the slave's skill after observing him in New Orleans, thus accounting for the higher resell price. Acclimation to New Orleans had little effect on slave prices as indicated by the estimated regression coefficient for the summer residence of the slave. Finally, new owners learned more about the slave's unobservable characteristics with the passage of time. Consequently, the duration of ownership should have increased the probability of adverse selection and decreased the resale price of the slave. As seen by the estimated regression coefficient, the number of days elapsed between sale and resale had little effect on the percentage price change.

The mean percentage price change, conditional on the slave's individual characteristics, is presented in Table 3. We evaluate the effect of individual characteristics at the sample means for the independent variables. The predicted average percentage change in price is once again positive for the imported slave purchased by non-traders. After controlling for the slave's observable characteristics, the prices for slaves purchased by non-traders increased faster than the prices for those slaves purchased by traders. This result is contrary to our earlier predictions, that adverse selection would have decreased the average resale price for slaves sold in New Orleans.

Discussion and Conclusion

In this paper, we exploit perceived differences in the knowledge of buyers to estimate the extent of adverse selection in the slave market. In this regard, our paper has much in common with the recent paper by Dionne, St-Amour, and Vencatachellum (2009). Because imported slaves were newly introduced to the state, all New Orleans buyers would have been ignorant of the slaves' unobservable characteristics. In time, the new owners would have learned more about their slaves hidden characteristics, which in turn would have affected their perceived value of the slaves. Owners practiced adverse selection when they resold slaves with hidden defects while retaining those without them.¹⁷ If buyers anticipated that the slaves were adversely selected for sale (and subject to hidden defects), they would have reduced their bids for them. Consequently, if owners adversely selected slaves for sale (and buyers recognized this), we should observe lower prices for those slaves who were resold in New Orleans.

Our predictions are similar to those made by Greenwald and Glasspiegel (1983) although the mechanism by which sellers adversely selected their slaves is somewhat different. According to Greenwald and Glasspiegel, local planters retained all but their worse slaves because of the region's high labor productivity whereas planters from the Old South were willing to sell nearly all of their slaves. If New Orleans buyers anticipated that the local slaves were adversely selected for sale, they would have lowered their bids for them. Consequently, Greenwald and Glasspiegel test for adverse selection by comparing the prices of local and imported slaves. In our paper, we improve their original test in two ways. First, the Fogel and Engerman sample (1976) used by Greenwald and Glasspiegel is subject to measurement error with respect to the slaves' origins. For most years, notaries were not required to record the origins of the slaves sold in New Orleans and in fact, most did not do so. As a consequence, nearly two-thirds of the observations in Fogel and Engerman's sample have missing values for the slave's region of origin. Because of the 1829 Louisiana law that required imported slaves be accompanied by a

¹⁷ Resale was quite common in this market. Recall that over half (54 percent) of the local slaves sold in New Orleans had been previously sold within eight months.

so-called certificate of “good moral character,” the Hayes and Smith sample includes accurate information regarding the origin of slaves sold in New Orleans. Consequently, our estimates are not biased by potential measurement error. Secondly, the imported slaves sold in New Orleans may be subject to other forms of selection bias. According to Alchian and Allen’s theory, a fixed transport cost applied to two goods of differing quality lowers the relative price of the higher quality good in the destination market. Pritchett and Chamberlain (1993) use this theory to account for the higher prices of imported slaves sold in New Orleans. For our sample of sequential sales, we observe the prices of the same slave twice: once when he was initially introduced into the state and a second time when his status changed to that of a local slave. Other than this change in status, the characteristics of the slave should have remained unchanged.¹⁸ Consequently, by comparing the initial and resale prices, we control for other forms of unobserved heterogeneity such as those resulting from other forms of selection bias (such as transportation costs).

In this paper, we perform a relatively simple experiment. We compare the prices of slaves for whom all buyers were uninformed with their subsequent resale prices. We propose that if the initial buyers adversely selected their slaves for resale, the subsequent resale price should be less than the original price. Using sequential price data from the New Orleans slave market, we find the opposite – the resale price of slaves actually increased. From this result, we conclude that adverse selection, if present in the New Orleans market, had a relatively small effect on the prices of slaves.

¹⁸ Using regression analysis, we control for possible changes in the slave’s characteristics resulting from his tenure in New Orleans.

Table 1
 Percentage change in price between initial purchase and subsequent resale
 Matched records for slaves sold in New Orleans during 1830

Sample	N	Mean percentage change in price	Trimmed mean percentage change in price
All slaves	568	3.3*	4.5*
Imported slaves, purchased by non-traders	35	3.1	7.8*
Imported slaves, purchased by traders	399	3.7*	5.0*
Local slaves, purchased by non-traders	94	3.7	3.9*
Local slaves, purchased by traders	40	-1.8	-2.6

Source: New Orleans Notarial Archives.

Note: Standard deviations in parentheses. * Mean percentage change is statistically different from zero at the 5 percent level.

Table 2
 OLS Regression Analysis: Percentage price change for sequential sales
 Matched records for slaves sold in New Orleans during 1830

Covariate	Regression Coefficient	Mean & Std. Dev.
Intercept	-0.154* (0.068)	1.000
Imported slave (1=yes, 0=no)	0.007 (0.039)	0.764 (0.425)
Purchased by slave trader (1=yes, 0=no)	-0.055 (0.039)	0.773 (0.419)
Imported slave and purchased by slave trader (1=yes, 0=no)	0.039 (0.050)	0.702 (0.458)
Individual characteristics		
Male (1=yes, 0=no)	-0.036* (0.018)	0.604 (0.490)
Age of slave in years	0.017* (0.006)	20.732 (6.247)
Age ²	0.0003* (0.0001)	468.783 (319.331)
Skilled slave (1=yes, 0=no)	0.258* (0.087)	0.009 (0.093)
New Orleans summer residence of slave (1=yes, 0=no)	0.001 (0.067)	0.026 (0.160)
Days elapsed between sale and resale	0.000 (0.000)	28.923 (48.285)
Adjusted R ²	0.035	
Number of observations	568	568

Source: New Orleans Notarial Archives.

Note: The dependent variable is the percentage change in price. The omitted variable refers to local slaves purchased by non-traders. Skilled slaves the occupations blacksmith, bricklayer, carpenter, caulker, cooper, plasterer, mechanic, tinsmith, mason, shoemaker, butcher, and painter. New Orleans summer residence refers to slaves initially sold prior to July and resold after September. Standard errors are listed in parentheses.

* indicates the regression coefficient is statistically different from zero at the 5 percent level.

Table 3
 Predicted Percentage change in price between initial purchase and subsequent resale
 Matched records for slaves sold in New Orleans during 1830

Sample	N	Average percentage change in price	Diff in Diff: non-traders – traders
Imported slaves, purchased by non-traders	35	0.049	0.015
Imported slaves, purchased by traders	399	0.034	
Local slaves, purchased by non-traders	94	0.043	0.055
Local slaves, purchased by traders	40	-0.012	

Source: Table 2.

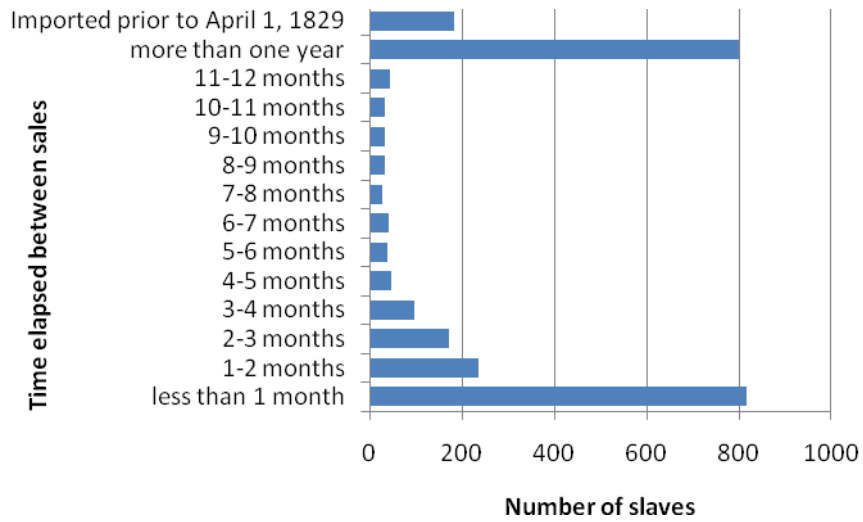


Figure 1 -- Frequency of resale for New Orleans slaves

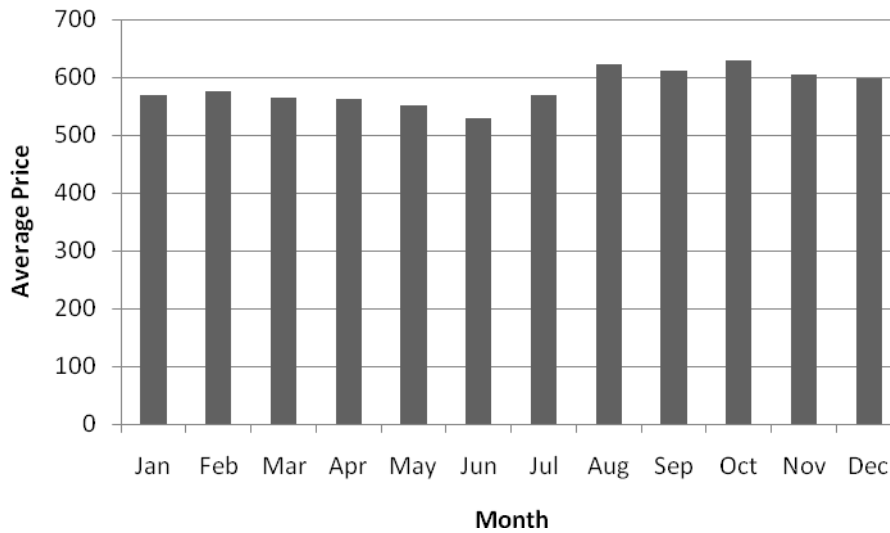


Figure 2 Average price of unskilled males, aged 18 to 30 years, sold with a guarantee in New Orleans during 1830

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Appendix: Names of identified slave traders

Last Name	First Name
Alexander	Thornton
Bacon	Langston Parke
Bauduc	Joseph Theodore
Baumgard	George
Beasley	Richard Renard
Benthall	Robert
Bishop	William
Boudar	Thomas
Boyce	Robert
Carter	John Rigger
Chabert	Leon
Cooper	Richard
Coote	Thomas
Cotton	William
Cox	James
Davis	George
Diggs	James Barnes
Dudley	Frederick James
Eaton	Benjamin C.
Foxwell	Stephen
Franklin	Isaac
Franklin	James Rawlings
Grigsby	Lewis Kemp
Grimes	William Garland
Harris	Samuel Shelton
Hatcher	Charles Francis
Heath	Williamson Bonner
Huie	James
Huie	Josiah
Huie	Robert
Johnson	Henry
Johnson	John Brown
Jones	John
Jones	Thomas Martin
Kelly	William Frohock
Kenner	Henry Bollinger

Legrand	Edwin Osborn
Ligon	Seth Ward
Lund	Oliver
Maydwell	John
Meek, Jr.	Jesse
Meek, Jr.	Joseph
Mercer	William D.
Nash	William Junius
Payne	Moses
Peillon	Stephen
Phillippi	Giovanni Baptiste
Pierce	Granville Sharpe
Priddy	William
Puryear	Alexander Bannister
Reynolds	Samuel
Robinson	Abner
Simington	Robert Webb
Small	Thomas Boniface
Swann	William
Tate	Garland
Tigner	George Washington
Townsend	Clement
Turner	Josiah
Webb	John Vivian
Wilkinson	James Park
Williamson	John Breedlove
Woolfolk	Austin
Woolfolk	John
Woolfolk	Joseph Biggers
Wright	Robert Austin