

Sequential sales as a test of adverse selection in the market for slaves

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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.

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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. Finally, 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 and the efficiency of the interregional slave market.

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 overestimated. 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. Finally, the extent of adverse selection may also reveal something about the demand for economic, political, and legal institutions to counteract it.

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.

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 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, which required certificates of good character for all imported slaves over the age of 12 years.¹

Although we originally intended to collect the records of all slaves sold in New Orleans in 1830, we decided to omit the records of some title transfers and those that failed to provide accurate price data. For example, 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.² In addition, we did not collection information on the release of mortgages on slaves, uncompensated manumissions, or marriage contracts involving slaves as property.³ 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.⁴ Finally, after removing the records of voids, annuls, rental agreements, and deposits – records which do not represent market transactions - we have 6174 observations in the working sample.

¹ 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.

² 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.

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 In comparison, the Fogel and Engerman (1976) sample includes the records of 5009 "principal" slaves.

Sequential Sales

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 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 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 Carlile 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 the (1) 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.

Slave Traders

Slave traders played a major role in the New Orleans market, both as seller 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.⁵ The local traders functioned as intermediaries between sellers and buyers and speculated on price changes. As we show in the following, 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. Because slave traders account for most sequential sales in our sample, it is important that we understand their market behavior. Specifically, we define a trader as anyone who sells 10 or more slaves in a single transaction or makes 10 or more sales involving one or more slaves. Using this definition, we identify 66 of the 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.

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. Traders did not decide to resell slaves because they had gained additional information about the slaves. In other words, these resold slaves were not adversely selected by the traders. Slave traders purchased slaves with the intention of reselling them.

We define buybacks as sequential sales where the buyer resells or returns the slave to the original owner. Such buybacks frequently occurred in New Orleans.⁶ Of the 833 paired transactions in

⁵ 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 that 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).

⁶ 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.

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.

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, donations or gifts of slaves, the joint sale of slaves and property, sales with special covenants, barter transactions, buybacks and records of slaves sold in groups or lots without individual price information are excluded from the sample. After making these exclusions, our working sample includes 578 paired transactions.

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.⁷ 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). 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. We predict a decrease in prices if the resold slaves were adversely selected by their owners.

⁷ 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.

Prices increased on average 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. Of course, the prices of some slaves decreased whereas other increased. Overall, approximately 60 percent of the slaves sold for higher prices, suggesting that the value of most slaves increased when resold.

Slave traders behaved differently than other market participants, purchasing slaves with the intent of reselling them. **** (fix in paper) **** Because traders purchased most slaves in our sample of sequential sales, 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.

Adverse selection should be most evident among the imported slaves purchased by non-traders. Instead of observing a decrease in market prices, however, 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.⁸ Finally, assume that if other buyers did not adversely select their slaves for sale, slave prices would have increased at the same rate as those of imported slaves purchased by traders.

⁸ The decrease in the price of local slaves purchased by traders is a puzzle. After all, local speculators would bankrupt if they consistently lost money on their purchases.

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.

Discussion and Conclusion

This paper does not address the possibility of adverse selection in other markets. Specifically, the imported slaves sold in New Orleans may have been adversely selected by their owners when first offered for sale to interregional slave traders (Greenwald and Glasspiegel, 1983). Indeed, this question has been addressed by previous authors who find little evidence to support adverse selection (Pritchett and Chamberlain, 1993). However, even if the original owners adversely selected their slaves for sale, asymmetric information regarding the slave's unobservable characteristics could still influence the resale prices of these slaves in New Orleans. Only if imported slaves were uniformly "lemons" and there were no variation in unobservable attributes would we expect no variation in the resale price.

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.

Table 1
 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
All slaves	568	0.033* (0.194)	---
Imported slaves, purchased by non-traders	35	0.031 (0.255)	-0.006
Imported slaves, purchased by traders	399	0.037* (0.191)	
Local slaves, purchased by non-traders	94	0.037 (0.184)	0.055
Local slaves, purchased by traders	40	-0.018 (0.195)	

Source: New Orleans Notarial Archives.

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

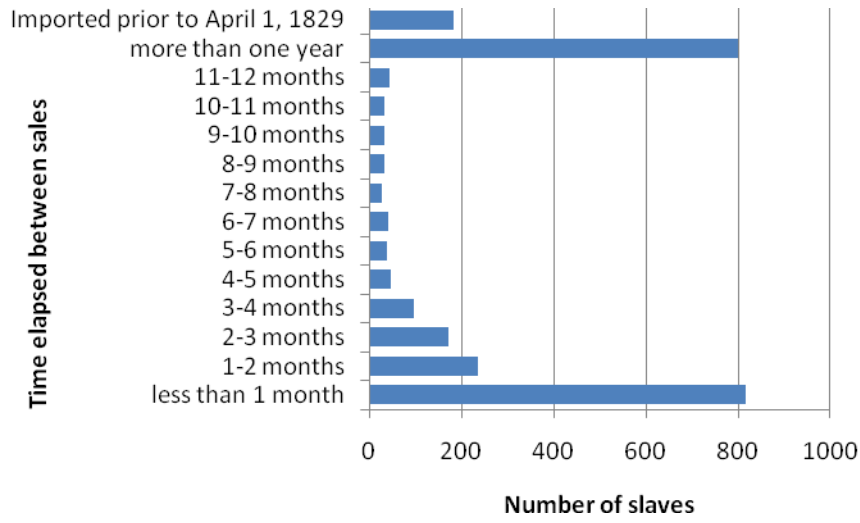


Figure 1 -- Frequency of resale for New Orleans slaves

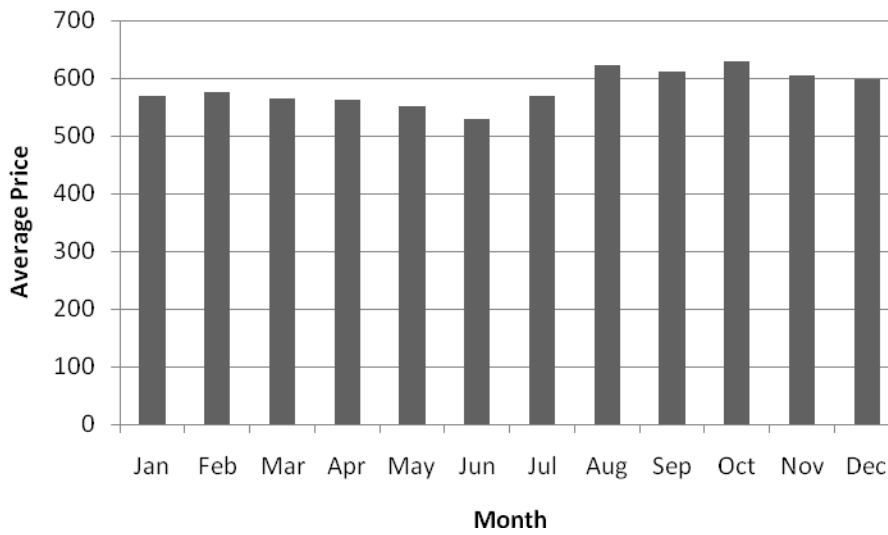


Figure 2 Average price of unskilled males, aged 18 to 30 years, sold with a guarantee in New Orleans during 1830

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