THE KILLING FIELDS OF THE DEEP SOUTH: THE MARKET FOR COTTON AND THE LYNCHING OF BLACKS, 1882-1930*

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We reconsider the relationship between economic conditions and the lynching of blacks in the Deep South from 1882 to 1930 using time series analysis. Net of other factors, lynchings were more frequent in years when the "constant dollar" price of cotton was declining and inflationary pressure was increasing. Relative size of the black population was also positively related to lynching. We conclude that mob violence against southern blacks responded to economic conditions affecting the financial fortunes of southern whites — especially marginal white farmers. These effects were significantly more important in the decades before 1900, possibly because of the declining importance of agriculture, the "Jim Crow" disenfranchisement of blacks, and the increasing out-migration of blacks and whites from the Deep South.

Between Emancipation and the Great Depression, about 3,000 blacks were lynched in the American south. Despite extensive commentary by contemporary observers of the lynching era (e.g., Ames 1942; Cutler 1905; Raper 1933; White [1929] 1969; Young 1927-28), and recent attention by social scientists, we still know little about the underlying causes of mob violence during this period. Some consensus has emerged that lynching was a response by white southerners to perceived *threats* from the black population. Recent empirical investigations have referred to: (1) the *political threats* of a large black population (Beck, Massey, and Tolnay 1989; Corzine, Creech, and Corzine 1983; Reed 1972; Tolnay, Beck, and Massey 1989); (2) *economic competition* between southern white and black laborers (e.g., Corzine, Corzine, and Creech 1988); or (3) maintenance of the *caste boundary* that assured whites superior social status, despite the often minuscule difference between the economic well-being of blacks and whites (e.g., Inverarity 1976). While this research has produced fragmentary evidence to support a "threat model" of black lynchings, that model largely remains a working hypothesis. A somewhat different emphasis is found in the perennial suspicion that mob violence responds to temporal swings in economic conditions, particularly cotton production, with lynchings increasing during times of sparse cotton revenues, and declining with increasing cotton profits. This hypothesis has an interesting history.

In the 1933 classic The *Tragedy of Lynching*, Arthur Raper presents graphic evidence apparently linking the incidence of lethal mob violence against southern blacks to variation in the value of southern cotton crops. Raper concludes " . . . periods of relative prosperity bring reductions in lynching and periods of depression cause an increase. Mathematically, this relationship is shown by the correlation of -0.532" (1933, p. 30). According to Raper (1933, p. 31), economic competition between marginal black and white laborers accounts for the association between economic conditions and lynching. The economic hardship caused by a poor profit from the cotton crop leads to an effort by whites to replace black workers with unemployed white laborers. Mob violence was a form of intimidation to facilitate this labor substitution.

Seven years later, Hovland and Sears (1940) used similar data to again demonstrate an association between swings in the southern economic cycle and lynching. They report impressive evidence that lethal mob violence against blacks became more acute during years of economic stagnation when the value of cotton was depressed. Unlike Raper, however, Hovland and Sears interpret the association as support for a

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goal-frustration model of aggression. When low cotton prices frustrated southern whites in their quest for economic security, they lashed out violently at the subordinate black population. They buttress their "goal-frustration" interpretation by noting, "By no conceivable stretch of the imagination could the victims of lynchings, either Negro or white, be considered responsible for the value of cotton or the general level of business activity" (Hovland and Sears 1940, p. 348). Clearly, Hovland and Sears had rather limited imaginations, since southern whites had a well-documented history of blaming blacks for social and economic problems for which they were not responsible. It was the empirical evidence offered by Hovland and Sears, however, that was challenged.

Mintz (1946) found Hovland and Sears' study methodologically wanting. By re-analyzing the lynching data using a different measure of association and allowing for nonlinearities and other methodological complexities, Mintz found that the relationship between the value of southern cotton and black lynchings was still negative, but substantially weaker than reported by Hovland and Sears. He concludes that the evidence does not support a linkage between the value of the southern cotton crop and lynching.

Despite the serious questions raised by Mintz, the assumption that black lynchings were partially a function of swings in the southern economic cycle (primarily the fortunes of cotton) persists in the social science literature. Reed and colleagues surveyed this literature and found the cotton price lynching association cited routinely and uncritically as an example of the frustration-aggression process (Reed, Doss, and Hulbert 1987). They dubbed this presumed relationship as "too good to be false." Still, a definitive assessment of the form or strength of association between southern cotton production and black lynchings has yet to be offered.

In this paper, we reconsider the relationship between lynching and economic conditions by examining annual trends between 1882 and 1930. We build upon earlier work by: (1) employing more accurate lynching data; (2) specifying more precisely the relationship between mob violence and the price of cotton by decomposing price changes into changes in the constant dollar price of cotton and changes due to inflation; (3) differentiating between the effects of cotton price changes and cotton productivity; and lastly, (4) exploiting analytical techniques unavailable to Hovland and Sears.

WHITE CLASS STRUCTURE AND ECONOMIC EXPLANATIONS FOR LYNCHINGS

The hypothesized link between temporal swings in the price of cotton and black lynchings assumes that southern whites responded to economic stress by resorting to racial violence. Their motives may have been "instrumental," as suggested by Raper (1933), or "emotional" as described by Hovland and Sears' (1940) frustration-aggression model. Is it naive, however, to believe that southern whites were unanimous in their economic interests and responses? Bonacich (1972, 1975) argues that rural southern white society was divided into two major classes — the dominating planters and employers, and a class of day laborers, sharecroppers, and tenants. Planters and employers were *dependent* on the cheap labor provided by blacks. But, white laborers were *threatened* by the competition from a cheaper black labor force. While the economic interests of these two white classes diverged in many important respects, periods of economic distress may have created a potential for convergence — at least with respect to racial violence. When cotton profits were down, both the white elite and the white poor may have perceived certain advantages to heightened racial hostility and mob violence.

The late 19th and early 20th centuries were years of shrinking fortunes for many southern rural whites. The rate of white farm tenancy increased throughout the period (U.S. Bureau of the Census 1975), and black and white labor was thrown into direct competition on a significant scale for the first time (Jaynes 1986). This was an undesirable situation for marginal whites during the best of times; when the cotton economy was slack it was virtually intolerable. Poor whites, suffering from reduced incomes, perceived neighboring blacks to be competitors for a shrunken economic "pie," as well as a challenge to their superior social station that was "guaranteed" by the caste system.

In some cases, the response of poor whites to financial stress was clearly instrumental, driven by a desire to reduce competition from blacks. Williamson (1984, pp. 441-42) notes,

> . . . the history of bust and boom [in the cotton economy] had something to do with the history of Radicalism. Heated anti-black sentiment in the early nineties was related to the fact that black men sought places that white men felt they needed

in order to live and support their wives and children.

Violence was used by marginal whites to force black tenant farmers off desirable land (Williamson 1984), or to drive away successful black businessmen or landowners (e.g., White 1969, pp. 11-2).

Worsening economic conditions for poor rural whites also emphasized the relatively small difference between their level of financial well-being and that of nearby blacks. This made more salient the superior social status that even desperately poor whites took for granted as members of the dominant southern caste. As White (1969, pp. 11-2) observed, "It is not difficult to imagine the inner thoughts of the poor white as he sees members of a race he has been taught by tradition, and by practically every force of public opinion with which he comes into contact, to believe inferior making greater progress than his own." Thus, violence in response to economic distress sometimes took on an "expressive" nature as well. In some cases, poor whites reacted out of frustration to the contradiction between their objective economic status and the expected benefits of white supremacy. In other cases, lynchings were intended as a message to the black community — reminding them of their inferior position in white society.

The white elite also benefitted from a heightened sense of racial antagonism and the violence that accompanied it. Most important was their perennial fear of a coalition between black and white labor. Such a coalition was perhaps the greatest threat to the social, economic, and political hegemony enjoyed by the southern white elite. It was in the interest of the white elite, therefore, to perpetuate hostility between black and white laborers. Raper (1933, p. 47) noted this function of lynching when he wrote, "Lynchings tend to minimize social and class distinctions between white plantation owners and white tenants . . . ." Shapiro (1988, p. 219) put it more directly, "When those committed to racial subordination saw the possibility of blacks and whites coming together for common purposes, their response most often was to reach for the gun and the rope." The threat of a coalition between black and white laborers likely increased when the poor of both races suffered from reduced cotton prices.

In sum, the economy of the Deep South was dependent upon the fortunes of the cotton crop. As "King Cotton" went, so went the region. Declining prices had serious consequences for *all* groups involved in the production of cotton. Rural blacks were the most vulnerable in a society stratified by class *and* caste. There is reason to believe that racial hatred and the violence it spawned served the interests of poor whites *and* the white elite during periods of economic stress. Of course, the motives and objectives of the two classes were not necessarily the same. For poor whites, violence was a response to fear of black competition for economic and social position. For the white elite, violence prevented a coalition between black and white laborers. Thus, the relationship between swings in the cotton economy and black lynchings does not assume participation by a single *class* of southern whites. Nor does it assume a coordinated response by all whites.

KING COTTON AND MOB VIOLENCE: GENERAL PATTERNS

The broad historical sequence is uncontested: the peak of black lynchings in the early1890s coincided with a softening demand for southern cotton, the rise of populism and agrarian protest, and the birth of radical racism (Gaither 1977; Hahn 1983; Shapiro 1988; White 1969; Williamson 1984; Wright 1986). The bloody 1890s were followed by several years of ballooning cotton prices and an apparent decline in violence against southern blacks. Following World War I, however, there was a significant reversal of this trend, when an alarming bottoming of the cotton market was accompanied by another wave of radical racism, signalled by the dramatic re-birth of the Ku Klux Klan and the popular acclaim lavished on D.W. Griffith's epic film, *Birth of A Nation.*

To examine this apparent relation, we employ newly available data on lynchings in the Deep South to trace trends in the annual number of black victims of lynch mobs and the price per pound of cotton during the years 1882 to 1930. The basic data are displayed in Figure 1.[1] Between the early 1890s and mid-1910s,

[1] Both time series have been twice-smoothed statistically using three-year moving averages in order to visually simplify the underlying trends. The Deep South is defined as the six states of Alabama, Arkansas, Georgia, Louisiana, Mississippi, and South Carolina. The cotton price data refer to December 1 average prices for years prior to 1909 and seasonal averages thereafter (U.S. Bureau of the Census 1975, Series K 555). Texas was also a major producer of

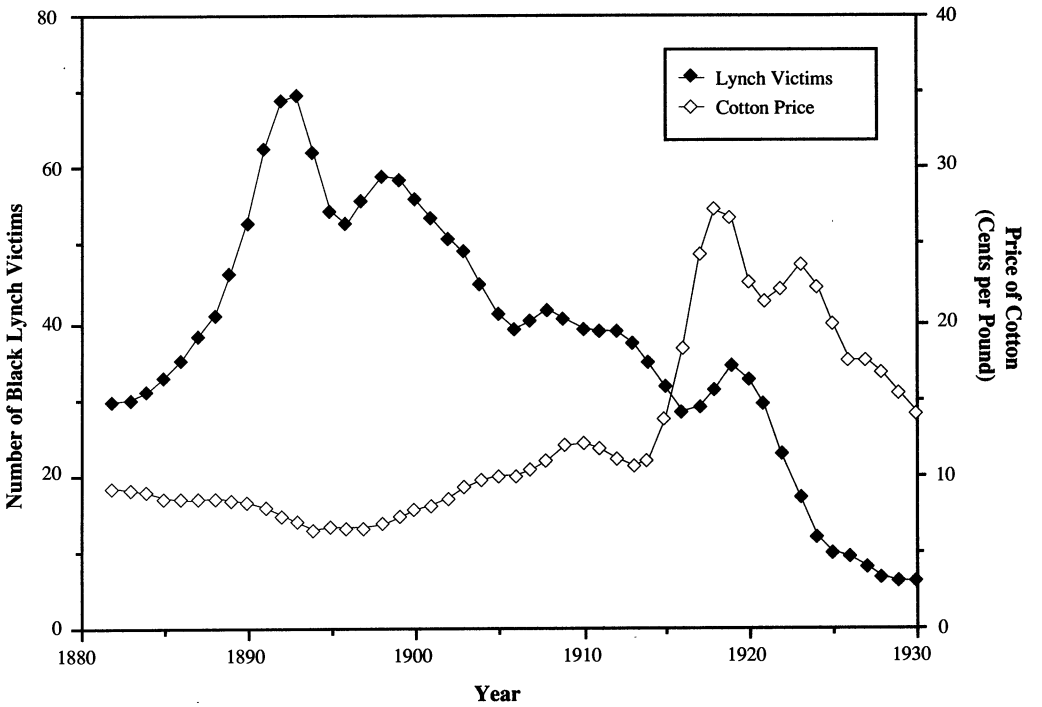

Figure 1. Number of Black Lynch Victims and the Price of Cotton in the Deep South, 1882-1930 [a]

[a] Both trends twice-smoothed statistically using three-year moving averages. Cotton prices per pound are unadjusted for inflation.

there was a broad downward trend in the number of black lynch victims, concurrent with a general upward swing in the market price of cotton. These two smoothed trends are linearly correlated -.67 over the entire 48-year period. Using the raw, unsmoothed series, the correlation is still a respectable -.52. Raper (1933) and Hovland and Sears (1940) based their conclusions on similar evidence.

It must be demonstrated, however, that this general historical correspondence between mob violence and the vagaries of the cotton market is something more than coincidence. Several problems must be considered before concluding that swings in the price of cotton actually drove corresponding swings in the level of mob violence against blacks. First, a correlation between any two time series is insufficient to establish a functional relationship. To reach conclusions about the covariation of two time trends, their dependence on time must be removed by "detrending" both time series.

Second, the overall negative correlation suggests that as prices rose, the likelihood of a black lynching diminished. But increasing cotton prices may reflect *inflationary* trends as well as changes in the *constant dollar* price of cotton. Would black lynchings decline if cotton prices increased solely as a result of inflation? Between 1917 and 1918, the average market price for cotton *increased* almost 1.8¢ per pound, but the deflated price actually *fell* close to 1.6¢ per pound. Thus an apparent increase in market price masked what was in reality a worsening condition for cotton producers and others whose livelihoods depended on a healthy King Cotton.

To the degree that advances in cotton prices were matched by inflation in the cost of staples, marginal whites experienced no net gain, and thus there would be no softening of racial antagonism. In fact, if inflation were sufficiently high, the plight of many agrarian whites would harden, and their tenuous position become even more precarious. Under these conditions, the frustration-aggression model predicts that increased hostility would be directed toward

cotton and could have been included in the time series. However, because of difficulties in locating suitable local newspapers, we have not been able to confirm a sufficient number of Texas lynchings to justify its inclusion in our analysis.

blacks, even though the apparent price of cotton was increasing. Thus, increases in the constant dollar price of cotton should be *negatively* correlated with lethal violence against blacks, while increases due to inflation should have the opposite effect. To adequately consider the cotton price lynching hypothesis, "price" data must be decomposed into two parts: the deflated price and an inflationary component, and each component related separately to the frequency of lynching.

The third problem is the lack of any considerations of the concentration of black population living in the Deep South. Although there is no logically necessary relationship between black population concentration and the frequency of black lynchings, dwindling black population might produce some lessening of black white competition (see e.g., Blalock 1967; Tolnay and Beck, forthcoming), as well as offer fewer targets for white aggression, resulting in fewer blacks killed by mob action.

Fourth, Figure 1 ignores the effects of changes in agricultural productivity that are not translated into price shifts. Changes in cotton productivity may affect lynchings net of their impact on prices. During the 1882-1930 period the amount of cotton harvested in the Deep South varied from a high near 9,000,000 bales in 1914 to less than 4,000,000 bales in 1923. The *total income* derived from the cultivation of cotton is determined by both the price per pound paid to farmers *and* the number of pounds produced. The potential economic hardship implied by declining cotton prices could be offset by higher yields — resulting in relatively stable *total* income.

Finally, while previous interpretations of the link between cotton prices and lynching assume a process of "black victimization" (either expressive or instrumental) at the hands of southern whites, alternative interpretations are possible. An increase in the number of lynchings during periods of economic distress could be a white reaction to an increasing incident of crime committed by blacks during these periods. If so, we would expect a significant attenuation in the association between cotton prices and lynching after controlling for the level of black crime. If the relationship persists, then the "black victimization" theory cannot be dismissed. (It is possible that both processes were operating.)

In sum, the apparently straightforward evidence demonstrating a linkage between the value of cotton and lynching, presented in Figure 1, is far from conclusive. In light of the issues discussed above, we have formulated an analytical model of black lynchings that incorporates: (1) a distinction between the deflated price of cotton and it's inflationary component; (2) a control for changes in the size of the black population; (3) a measure of cotton productivity; and (4) a proxy measure of the level of crime committed by blacks.

DATA AND METHOD OF ANALYSIS

Our dependent variable is the number of black lynchings each year between 1882 and 1930. We focus on the 1882-1930 period because: (1) there were no reasonable data on lynchings prior to 1882, and (2) 1930 marked the end of widespread lynchings in the South. For our purposes, a lynching is defined as the killing of one or more blacks at the hands of an extra-legal mob of three or more individuals. This definition is generally consistent with the definition adopted by the NAACP [1919] (1969), and does not include casualties of race riots, racially-motivated murders committed by fewer than three conspirators, or mob violence that did not end in the death of a victim.

It is debatable whether the most appropriate measurement of the dependent variable is the number of *incidents* in which at least one black was killed by collective action, or the number of blacks killed at the hands of a mob. In most instances the two are identical since most lynchings involved only one victim. Preliminary analysis using both variables demonstrated that it did not matter which dependent variable was used. We report the results using the number of black lynching victims as the dependent variable.

There are three public sources of data on lynchings. The best known is the inventory distributed by the NAACP (1969) covering the years 1889 to 1918, and the annual supplements thereafter. From 1882 through 1918, the Chicago *Tribune* newspaper published a list of lynchings in their year-end summaries. Finally, there is an inventory compiled by Daniel Williams (unpublished) of Tuskegee University. Initially we planned to use these three files as cross-checks for accuracy, but quickly learned that the sources were not independent. Williams's list utilized data from both the Chicago *Tribune* and NAACP, as well as from newspaper clipping files at Tuskegee. It also appears that the NAACP relied upon the *Trib-*

une with some frequency.

Starting with these three sources, we compiled a master list of reported lynchings, noting discrepancies in details. Next, we verified every lynching on our master list using local and regional newspapers of the period. During this process, we found that the three sources contained many factual errors. We also discovered lynchings that had been overlooked by all three sources. The analysis presented here includes only those black lynchings we were able to confirm. Our inventory consists of 2,041 victims killed by lynch mobs in the Deep South between 1882 and 1930 of whom 1,844 were black. While these data are subject to revision in light of new information, we believe they are now the most reliable and accurate data on southern lynchings.

The independent variables in our analysis were chosen in consideration of the issues discussed above. The overall price of cotton was decomposed into the constant dollar (deflated) price per pound and the inflationary component of the price per pound. The inflationary component is the simple difference between the unadjusted market price and the deflated price. Information to determine the inflationary component of cotton prices was drawn from annual consumer price deflators for the relevant years (U.S. Bureau of the Census 1975, p. 210).

Two measures of the size of the black population are included — the absolute size of the black population and the percent of the population that is black. Statistics on the size of the black population were obtained from decennial census data (U.S. Bureau of the Census 1975, pp. 23-37). Black population for inter censal years was estimated by linear interpolation.

Total annual production of cotton is measured by the number of bales of cotton (in 1000s) ginned in the Deep South. These data are from *Statistics on Cotton and Related Data* (U.S. Department of Agriculture 1951-52).

Our measure of the annual level of black crime is necessarily less precise than the other explanatory variables. Annual statistics on crimes committed by blacks in all six states are not available for this historical period. We constructed a somewhat imperfect proxy based on the number of blacks legally executed annually in the Deep South:[2]

$$\text{Black crime rate}_t = 10{,}000\ (\text{black executions}_{t+1} / \text{black population}_t)$$

This proxy has two weaknesses: (1) by using executions we capture only the *most serious* crimes and thus underestimate the actual amount of crime committed by blacks; and (2) blacks were executed for crimes against blacks as well as crimes against whites so that using black executions overestimates the rate of black against white crime. This variable must be interpreted with caution.

We estimated a time-series model that could have both auto-regressive and moving-average components:

$$Y_t = \phi_0 + \Sigma\phi_k(X_{kt}) + \alpha_1 u_{t-1} + \alpha_2 u_{t-2} \ldots + \alpha_p \mu_{t-p} + e_t - \beta_1 e_{t-1} - \beta_2 e_{t-2} \ldots - \beta_q e_{t-q} \quad (1)$$

where t is a given year from 1882 to 1930, Y_t is the number of black victims of lynch mobs in year t, ϕ_0 is a constant, ϕ_k are effect parameters, X_{kt} are the exogenous factors (size of black population$_t$, percent black$_t$, deflated price of cotton$_t$, inflation in cotton price$_t$, cotton bales produced$_t$, and the black crime rate$_t$), u_{t-p} are auto-regressive disturbances, α_p are the p^{th}-order auto-regressive coefficients, e_t is random noise, and the β_q are the q^{th}-order moving-average coefficients that permit the random components to be serially related. We examined a variety of auto-regressive and moving-average specifications before settling on the differenced, first-order moving-average models presented in Table 1.[3] These models produced the most parsimonious and conceptually meaningful results.

[2] The numerator of this ratio uses the number of black executions in year (t+1) to reflect black crime in year (t). Considering the lag between the commission of a crime and the executions, executions in period (t+1) reflect criminality in year (t). The execution data are from Watt Espy's Capital Punishment Research Project. Espy conducted a detailed examination of local records and archival collections in an attempt to identify every legal, non-military execution conducted in the United States. His inventory is considered the most complete enumeration of executions currently available (Bowers 1984).

[3] Taking first differences removes trends that could lead to spurious conclusions (see Gottman 1981, and McCleary and Hay 1980). We used iterative nonlinear least squares to estimate the auto-regressive and moving-average models, using the Box Jenkins routine in the R.A.T.S. (Regression Analysis of Times Series) software produced by VAR Econometrics, Inc. We also explored various lags for the exogenous variables, but none of these models proved superior to the ones reported here.

RESULTS

The results of the time-series analysis of the effects of cotton prices, cotton productivity, and demographic factors on the frequency of lynchings for the 1883-1930 period are presented in Table 1.[4] All variables have been differenced to produce stationarity and then lynchings modeled as a first-order moving-average process, as described above.

Model A includes the main effects of the exogenous variables, ignoring any interactions between changes in the real price of cotton and changes in productivity. In this model, the coefficients for the constant dollar price of cotton, the inflationary component of cotton price, and the quantity of cotton harvested are in the expected direction, although the effect for cotton production is not significant. The interpretation of the coefficients for the black population measures in Model A is muddled because of a strong correlation between change in the absolute and relative size of the black population over this historical period. This collinearity introduces undesirable redundancy into the analysis. Model B re-estimates the equation omitting the absolute population size variable. The t-ratio for percent black increases from 1.01 in Model A to 2.31 in Model B, and the t-ratios for the remaining variables increase as well. Model C includes an interaction term between constant dollar cotton price and cotton production to allow the effect of cotton price on lynchings to vary depending on the amount of cotton harvested.

Several findings are noteworthy. First, changes in the constant dollar price of cotton have the expected negative effect on black lynchings, while inflationary changes in cotton price have the anticipated positive relationship. This indicates that when the constant price was climbing the likelihood of black lynchings declined. During hard times when the price of cotton stagnated, or when inflation was a significant problem, black lynchings in the Deep South were more frequent.[5] Furthermore, the coefficients for Model C indicate that a one-cent advance in the constant dollar price of cotton had a larger effect in reducing lynching victims (-4.70) than a one-cent rise in the inflationary component for increasing mob violence (+2.42).[6]

Table 1. Regression of Number of Black Lynching Victims on Cotton Price and Production, and Related Variables: 1883-1930 [a]

Variable	Model A	Model B	Model C	Model D
Constant	3.499	2.794	2.851	2.797
	(0.56)	(1.66)	(1.74)	(1.94)
Size of black population	-0.00001	----	----	----
	(-0.12)			
Percent black	17.945	16.056	16.194	15.453
	(1.01)	(2.31)	(2.39)	(2.57)
Market price for cotton:				
Constant dollar price	-2.130	-2.148	-4.699	-5.353
	(-2.22)	(-2.31)	(-1.57)	(-1.81)
Inflationary component	2.371	2.374	2.420	2.327
	(2.42)	(2.46)	(2.52)	(2.55)
Cotton bales produced	-0.002	-0.002	-0.005	-0.007
	(-1.05)	(-1.08)	(-1.21)	(-1.54)
Constant dollar price × cotton bales	----	----	0.0004	0.001
			(0.90)	(1.24)
Black crime rate proxy	----	----	----	113.665
				(1.87)
Moving-average coefficient	-0.463	-0.465	-0.483	-0.541
	(-3.21)	(-3.26)	(-3.37)	(-3.89)
R^2	0.738	0.738	0.743	0.763
Adjusted R^2	0.699	0.706	0.705	0.721
Ljung-Box Q Coefficient	20.04	19.82	18.23	19.65
Durbin-Watson Statistic	1.78	1.78	1.77	1.89

[a] First-order moving-average models, all variables differenced once; t-ratios in parentheses; N = 48.

[4] Since the variables in the empirical models in Table 1 have been differenced once, the actual time period covered is 1883 to 1930, rather than 1882-1930.

[5] To examine the effect of decomposing cotton prices, we replaced the two components (deflated price and the inflationary component) with the unadjusted price of cotton and re-estimated each of the models in Table 1. The results show little relationship between change in the *unadjusted* price of cotton and black lynchings, suggesting that if cotton price had not been decomposed into constant dollar changes and inflationary changes, we would have missed the significant relationship between the market for cotton and mob violence against blacks.

[6] While the coefficient for the deflated price of cotton in Model C is not twice its standard error, this is due to its collinearity with the interaction term. If the interaction term is omitted from Model C (as in Model B), the coefficient for the deflated price of cotton has a t-ratio of -2.31.

Second, changes in the racial composition of the population influenced the likelihood of lethal mob action. Net of price factors, increases in percent black are associated with more frequent black lynchings. This finding is consistent with the conflict perspective of social control that suggests that a high proportion of blacks in the population represents a "threat" to white hegemony and leads to stern measures of social control, such as lynching (e.g., Blalock 1967). Naturally, we cannot decipher from these results the social or economic processes represented by the strong impact of percent black on lynchings.

Third, net of price shifts, cotton productivity had a negative relationship with lynchings, but this effect is not large relative to the amount of variation in the time series, as shown by the coefficient's small size relative to its standard error. We also found a positive interaction, albeit small, between cotton productivity and constant dollar price indicating that during years of enhanced production, the inhibiting effect of the deflated price of cotton on lynchings weakened. In other words, the link between the deflated price of cotton and the frequency of black lynchings was strongest during periods of slowed cotton production. Thus, it appears that higher levels of production were able to "blunt" the sensitivity of agrarian whites to the farm price of a pound of cotton.

These findings are consistent with an interpretation of lynching behavior that stresses the victimization of blacks at the hands of whites. Sour market prices threatened the life chances of many southern whites, especially those on the margins of society. Economic distress also raised the possibility of a coalition between black and white labor, which threatened the social, economic and political advantages held by the white elite. The combination of these forces, which cut across class lines, generated aggressive and hostile behavior directed at the most vulnerable and powerless targets — southern blacks. The most radical form of this aggression was lethal mob violence, lynching.

The Role of Crimes Committed by Blacks. While these findings are consistent with the "black victimization" model of lynchings, they are also consistent with a radically different perspective that rests on the victimization of whites at the hands of black criminals. This interpretation rests on a different presumption, one that permeated the mentality of many whites in the Deep South (see e.g., DuBois 1969; Williamson 1984). Contemporary newspaper accounts and editorials often refer to crime committed by blacks, and to fears within the white community of the black "brute" criminal. In the popular mind of the times, lynching was a morally justified solution to virtually all crimes perpetrated by blacks against whites, ranging from insolence and petty theft to murder and rape. If worsening economic conditions produced more crime by blacks against whites and if there was little confidence in the criminal justice system, then increases in the frequency of lynching could be a logical although radically reactionary consequence. In this scenario, the role of commodity market factors is indirect.

Model D in Table 1, includes the proxy for the crime rate among blacks as an additional predictor of lynchings. If the "black crime" hypothesis is correct, inclusion of this factor should diminish or eliminate the net effect of cotton prices on black lynchings. This is not the case. In fact, including the crime rate proxy *increases* the coefficient for the constant dollar price of cotton, and reduces or has no effect on the standard errors of the remaining variables.[7]

Even if our indicator of black crime, however flawed, is only partially reflective of crime by blacks against whites, these findings suggest that black lynchings were not a simple reflection of criminal activity by blacks and that economic factors played an important and independent role in affecting mob violence.[8]

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[7] There is considerable collinearity between the deflated price of cotton and the interaction term. Re-estimating Model D without the interaction term, the t-value for the deflated price coefficient is -2.05 (detailed results not reported here but available from first author).

[8] The black crime explanation suffers from two other weaknesses. First, the southern criminal justice system was not lax in punishing blacks convicted of crime. Blacks received the same discriminatory treatment in southern courts that they received in the rest of society, including disproportionate imposition of the death penalty. Thus, it is unlikely that lynching was necessary to control crime. Second, if lynching was used to combat increasing crime, why was lynching used almost exclusively against blacks after 1900? Surely, criminal activity by whites should also have peaked during periods of economic stagnation or recession. A definitive investigation of the role of criminal behavior by blacks — either real or imagined — in mob violence against blacks awaits better measures.

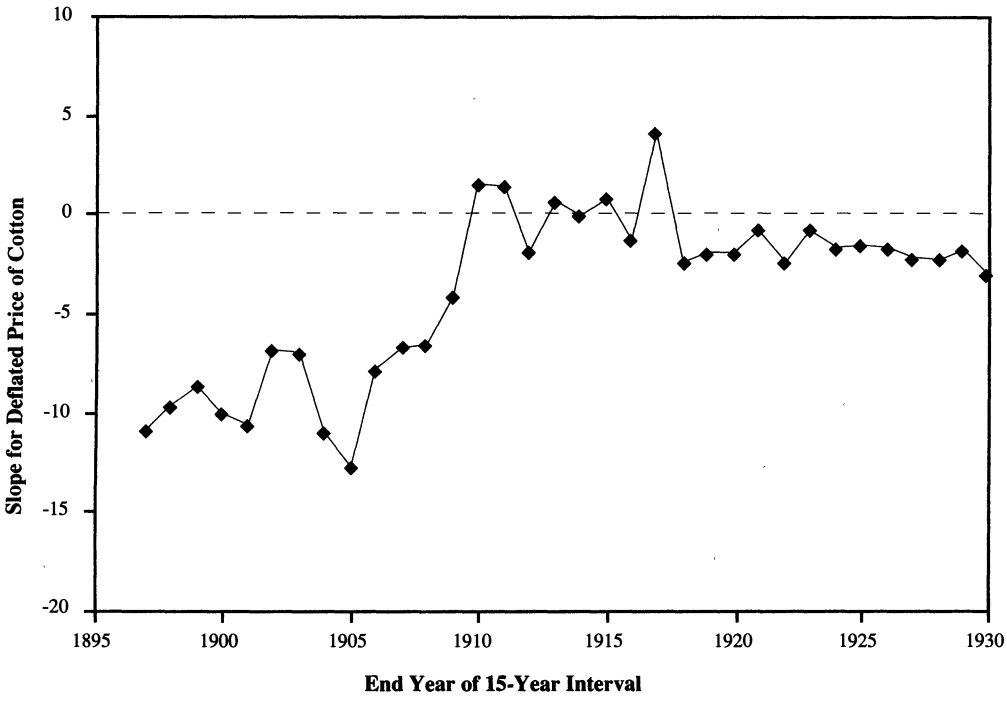

Figure 2. Effect of Deflated Price of Cotton on Number of Black Lynch Victims, 1883-1930 [a]

[a] The x-axis represents the end year of 15-year intervals, e.g., 1900 for the 1886-1900 interval, etc.

Historical Effects. Table 1 provides evidence that between the early 1880s and 1930, the frequency of black lynchings was influenced by the market for cotton. If this relationship was stable over this period, the results are informative. But if there were significant historical episodes that altered that basic relationship, our conclusions may be in error. This uncertainty is caused by the ahistorical nature of traditional time-series analysis.

The time-series model portrayed by equation (1) is "ahistorical" in the sense that there is no provision for changes in the functional relationship between black lynchings and the market for cotton. In other words, it precludes any interaction between "time" and the explanatory variables and implies that the relationship between mob violence against blacks and the southern cotton economy was the same during the 1920s as it was during the 1880s. This is a very restrictive assumption for a historical process.

One method for coping with this problem is to follow a "moving" time-series strategy that estimates the model parameters using successively incremented and overlapping time points over a fixed-length time interval. This procedure is the same as the "diagonal" model discussed by Isaac and Griffin (1989, p. 879) in their timely discussion of the ahistorical properties of traditional time-series analysis. We first estimated the parameters for Model B for the 15-year interval 1883-1897. We then computed a second set of parameter estimates using the incremented 15-year interval 1884-1898, a third set for the interval 1885-1899, and so forth until the parameters of the last 15-year interval (1916-1930) had been estimated.[9] Using 15-year intervals and following this incremental procedure, we obtained 34 sets of coefficients. These coefficients were then plotted chronologically to show the longitudinal consistency of the relationship between lynchings and the explanatory variables.

[9] Model B was chosen to conserve degrees of freedom. Like the times-series findings reported in Table 1, the variables in the moving-regressions were differenced once, and the model estimated assuming a first-order moving-average specification. We also investigated alternative moving-regression specifications. Instead of a moving-regression with a fixed-length interval (e.g., 15 years) and floating beginning and end points, we also estimated models with a fixed starting point in 1883 but with variable inter-

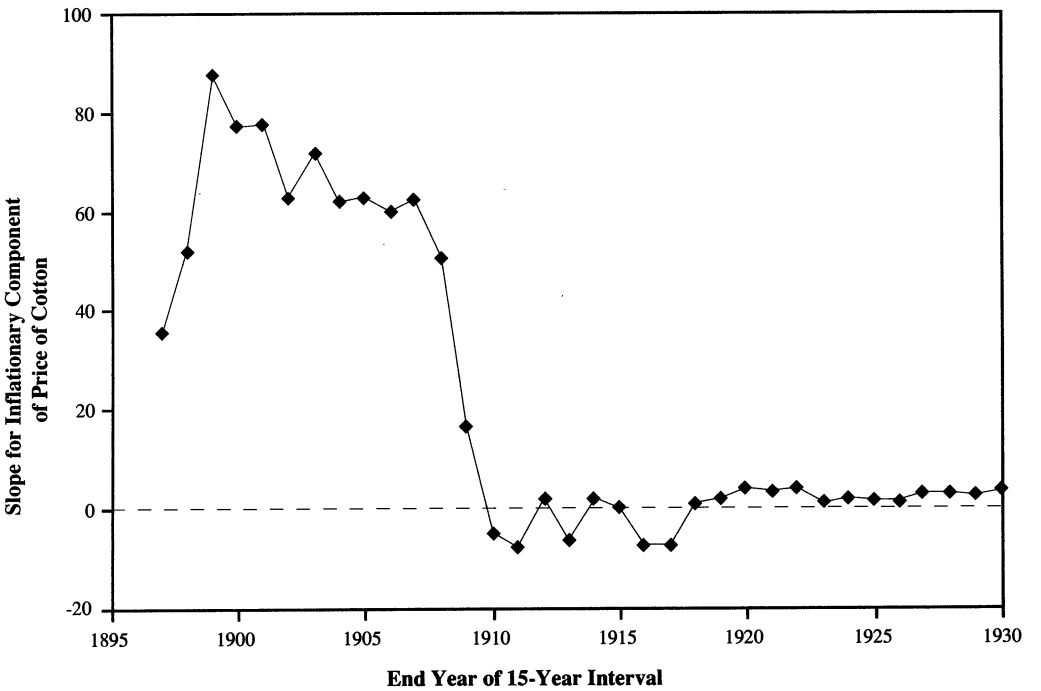

Figure 3. Effect of Inflationary Component of Cotton Price on Number of Black Lynch Victims, 1883-1930 [a]

[a] The x-axis represents the end year of 15-year intervals, e.g., 1900 for the 1886-1900 interval, etc.

In Figure 2, we plot the moving time-series for the effect of the deflated price of cotton on black lynchings, based on Model B. This graph clearly shows that the negative effect of the constant dollar price of cotton on mob violence was much stronger in the 1880s and 1890s than in the years following 1905. For example, for the fifteen years between 1891-1905, the effect of the deflated price of cotton on the number of black lynching victims was -12.72, while for the fifteen years ending in 1920, the effect was much weaker at -1.93.

In Figure 3, we graph the moving time-series effect of the inflationary component of cotton price on black lynching victims. This coefficient was not longitudinally stable either — it follows the same general declining trend as Figure 2, i.e., inflation's positive effect on lynchings is considerably stronger in the 1880s and 1890s than in the later decades.

In sum, although gains in the constant dollar price of cotton were associated with declines in the annual toll of blacks lynched between 1882 and 1930, the effect was greatest during the last two decades of the nineteenth century. Similarly, inflation in cotton prices was associated with heightened lynching activity, but the link was stronger in the 1880s and 1890s than afterwards. These plots indicate that lethal mob violence against blacks was more tightly linked to the market for southern cotton before 1900 than later.

What social and economic trends might account for the weakening effect over time of the deflated price of cotton *and* inflation on black lynchings? While a definitive answer is beyond the scope of this paper, we advance some possible explanations that might be pursued in subsequent research. First, by the end of the first decade of the 20th century, these states had enacted measures that effectively disenfranchised blacks (Kousser 1974).[10] The politi-

val lengths ranging from 13 years (1883-1895) to 48 years (1883-1930). The results revealed the same patterns as shown in Figures 2 and 3. We also explored a "backwards" specification in which the end point was anchored at 1930, but the interval varied backwards (e.g., 1883-1930, 1884-1930, etc.). The results of these regressions suggested much less change over time in the model's parameters. Results of the moving-regressions are available from the first author.

[10] For some southern states, the "official" dates of

Table 2. Selected Characteristics of the Deep South Economy, 1880 to 1930

Characteristic	1880	1890	1900	1910	1920	1930
Percent of workers in agriculture [a]	80.2	71.8	70.6	65.8	56.8	49.5
Percent of improved land in cotton [b]	34.1	36.1	33.2	35.1	31.6	34.2
Wage earners in manufacturing (1000s) [c]	66.1	136.5	268.7	397.2	478.5	541.5
Net migration of native whites (1000s) [d]	-19.1	-99.3	-187.5	-132.5	-243.2	-452.5
Net migration of blacks (1000s) [d]	1.0	22.7	-134.4	-134.8	-401.8	-685.6

[a] Source: Lee, Miller, Brainerd, and Easterlin (1957), Volume 1, Table L-4.

[b] Source: Census Office (1883, 1895, 1902); U.S. Bureau of the Census (1913, 1922, 1931, 1932).

[c] Source: Lee et al. (1957), Volume 1, Tables L-4 and M-2.

[d] Source: U.S. Bureau of the Census (1975). Net migration estimates for blacks and whites apply to the decade *preceding* the year shown. For example, net migration for 1900 refers to the decade 1890 to 1900.

cal neutralization of blacks may have allayed fears among the white elite about a political coalition between white and black labor.

A second possible explanation for the reduced influence of the cotton economy on black lynchings centers around the changing character of the southern economy during the late 19th and early 20th centuries. If the grip of King Cotton on the economy relaxed, its salience for lynchings would decline. Table 2 presents trends in selected characteristics of the southern economy from 1880 to 1930. In general, the evidence in Table 2 is consistent with this perspective. Although the percent of improved land planted in cotton remained relatively stable during this period, greater numbers of southern workers engaged in non-agricultural occupations. The percent of all workers employed in agriculture dropped from 80.2 percent in 1880 to 49.5 percent in 1930. The number of wage earners in manufacturing grew from 66,100 in 1880 to over 541,500 in 1930 — far outstripping the overall growth in the southern labor force.

A final potential explanation lies in the history of migration from the South during this period. Table 2 reveals increasing net *out-migration* for blacks and whites after 1890, with the pace of out-migration accelerating sharply after 1900. The out-migration of both races may have altered the association between swings in the cotton economy and black lynchings. White migration may have acted as a "safety valve" of escape for marginal whites, while black migration reduced competition between blacks and agrarian whites.[11]

CONCLUSION

Using annual time-series data for the period 1882-1930 for six Deep South states, we find evidence that advances in the constant dollar price of cotton are associated with *fewer* black lynchings, while inflationary shifts in the price of cotton are associated with *increased* mob violence against blacks. After removing price fluctuations, changes in cotton production had little direct effect on lynchings, but there was a modest interaction effect between the deflated price of cotton and cotton production on black lynchings. In other words, increases in deflated cotton prices per pound had a deleterious effect on black lynchings, but the strength of this relationship was mediated somewhat by cotton crop productivity: as productivity grew, the salience of cotton price for mob violence declined. Finally, racial composition was also found to have an effect on lynching, with relatively large concentrations of black population accompanied by more lynchings.

We also examined an interpretation that lynchings were a white response to a perceived increase in crimes by blacks against whites. Controlling for a measure of crimes by blacks did not diminish the net importance of cotton prices or other predictor variables suggesting that powerful economic factors influence lethal

voter disenfranchisement post date actual measures to reduce black political participation. For example, 1908 is generally considered the date of disenfranchisement for Georgia, since several restrictive voting statutes were approved in that year. In fact, blacks had been voting in very small numbers in Georgia long before 1908 (Kousser 1974).

[11] See Tolnay and Beck (forthcoming) for a discussion of the effect of black out-migration on the southern economy and lethal violence against blacks.

mob behavior that cannot be reduced to simple issues of crime by blacks against whites.[12]

These findings are consistent with the view stressing the victimization of blacks in southern society. Economic downturns negatively impact all cotton producers, but the small farmer, sharecropper, or tenant suffers disproportionately because of a lack of capital resources. This economic squeeze not only threatens current standards of living, but jeopardizes the future as well. In Hovland and Sears' (1940) view, this represents "goal-frustration" and produces aggressive behavior. Although Hovland and Sears impute no "rational" motive to such aggressive behavior, Raper (1933) suggests it was related to attempts by white laborers to reduce competition from black laborers, and to replace blacks with unemployed whites. While this "marginal" class of southern agrarians contained both blacks and whites, blacks were relatively powerless to protest their plight or externalize their aggression. Whites, on the other hand, had options.

Marginal whites could direct their rage toward the powerful class of whites — large land owners, merchants, and bankers — but the costs of such hostility were clear.[13] Given the Deep South's racial caste structure, whites could harass and assault blacks with virtual impunity. Blacks were considered legitimate, and even deserving, objects for white wrath. White workers were in more direct economic competition with black laborers than with the white elite [see Bloom (1987) for a competing view]. Not only were black laborers a more immediate economic threat, but as the financial fortunes of poor whites and blacks converged, the superior status of whites was endangered.

According to the black victimization interpretation, the white elite also benefitted from increased racial hatred and violence during hard times. A coalition of poor whites and blacks threatened the privileged social, economic, and political position of the white elite. Such a coalition seemed most likely during the early stages of the Populist movement when poor whites and blacks in the south temporarily focused on a common antagonist. This racial alignment was quickly scuttled, however, as the southern Populist movement turned radically racist (Gaither 1977). During this same period — the early 1890s — black lynchings reached new highs.

Finally, our analysis suggests that the association between lynchings and cotton prices was not invariant throughout the time period examined here. The response of black lynchings to shifts in the deflated and inflationary components of the price of cotton weakened considerably after 1900. While this is not inconsistent with a linkage between the southern cotton economy and racial violence, it introduces a need for more exhaustive exploration into the precise nature of the linkage. We suggest several possible explanations, based on the changing character of the Deep South economy and the history of out-migration from the Deep South.

In future research we shall investigate the motivations underlying the relationships found in this analysis, especially the significance of the "cotton culture" for black lynchings. In the frustration-aggression hypothesis, cotton is a convenient indicator of economic conditions in the rural South. Yet Daniel (1985) advances a compelling argument that cotton had its own distinctive culture and historical legacy — that while sharing some features with the tobacco and sugar cultures in the South, it remained somehow "different." This raises an interesting question: Did lethal mob violence vary among the three agrarian "cultures" independent of shifts in the market price of southern crops? If

[12] Based on accounts of lynchings, it is clear that whites didn't congregate at the gin to lament the soft price of cotton, then decide to murder a black to relieve their psychological stress. Lynch mobs reacted to some supposed infraction of the norms governing caste relations, whether it be a minor act of racial imprudence or the major crime of murdering a white man. In this sense, it can be argued that black lynchings were a function of crimes committed by blacks. This perspective, however, goes on to argue that the prime reason for lynching was the inability of the existing system of criminal justice to cope with crime, and the motivation of lynch mobs was deeply rooted in a desire to maintain law and order. In the alternative "black victimization" view, such "crimes" were only specific triggering incidents that focused and justified outbreaks of violence toward blacks. The powerful dynamics driving these repressive forces originated in the southern economic system.

[13] This is not to argue, however, that there was no hostility between marginal whites and local elites. As early as the 1870s, there was growing conflict between these groups, and yeoman farmers began to organize for collective action. The swelling membership of the Southern Farmer's Alliance during the 1870s and 1880s is testimony to this conflict (Hahn 1983; Wright 1986). The point is that hostile actions toward the white elite risked retribution, while penalties for hostility against blacks were minimal.

so, cotton in the Deep South may have a dual role in the dynamics leading to mob violence: first, as an indicator of general economic conditions, and second, as representing a unique set of social relations and cultural values. Investigation of these "economic" and "cultural" roles await a time-series, cross-sectional analysis using disaggregated county-level data for the 1882-1930 period.

Our demonstration of a longitudinal association between cotton production and black lynchings resurrects an interesting relationship that had been prematurely laid to rest (Reed et al. 1987). Perhaps the relationship between "King Cotton" and black lynchings really is "too good to be false."

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