New Deal or No Deal in the Cotton South: The Effect of the AAA on the Agriculture Labor Structure

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Abstract

The policies of the Agriculture Adjustment Act and mechanization have often been held responsible for the rapid reduction of agriculture tenants and croppers (laborers paid shares of the crop). However, this conclusion has come with little empirical backing. In this paper we estimate the impact of a AAA policy on the displacement of these workers in the cotton south. We motivate the empirical analysis by first analyzing a simple on-the-job search model which shows how the cotton reduction program of the AAA incentivized landlords to displace tenants. The distribution of AAA funds was not exogenous as they were distributed through local agents who may have been influenced by composition of farmers in the county. We construct an instrument based on the amount of funds that a county was supposed to receive under the AAA rules. The results suggest that the AAA played a significant role in the displacement of black and white croppers and black managing tenants. These results are of particular interest given that it was a violation of AAA contracts for landlords to displace these workers.

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1 Introduction

"A considerable amount of labor has inevitably been displaced as a result of acreage reduction. ... fewer bales of cotton require few hoe hands, fewer cotton pickers, not so many workers at the gin, fewer buyers, etc. ... The share-cropper type of tenant, who is virtually a farm laborer largely subject to the command of the landlord, has been the most affected of the tenant classes. (Gee 1935)"

The Agriculture Adjustment Act (AAA) was one of many new policies implemented as a result the New Deal. It promoted a redistribution of income to farmers who were struggling financially from low prices and continual domestic surpluses in major agriculture commodities. The major program of the AAA was to pay farmers to take land out of production with a goal of reducing agriculture output and therefore placing upward pressure on output prices. However, as with any policy, there are often indirect economic consequences. The AAA policies, specifically the cotton reduction program, have often been held responsible for the large reduction of tenants and croppers in the 1930s. However, these claims have been justified with scattered narrative evidence and some comparisons of state means. The focus of this paper is to estimate the effect of the cotton reduction program on the displacement of tenants and croppers in the cotton South. We focus on the cotton South because a large share of the claims of tenant displacement are centered there within the the hierarchical labor structure that existed.

Understanding the interaction of the cotton reduction program and the displacement of agriculture workers sheds light on the law and economics and political economy of the cotton South in the 1930s. The first year of the cotton reduction program began late in the growing season and thousand of acres of cotton were plowed up after they had been planted. Because of the haste of the 1933 cotton program, landlords had a large incentive to either displace workers mid-season in effort to obtain the full AAA payment or unfairly divide the payment

on arrival. In the following year farmers entered into contracts with the AAA to reduce cotton acreage. In general, for landlords to participate in the cotton reduction program they contracted to maintain the same number of employees although a significant share of land was being taken out of production. Managing share tenants were allowed to participate in the program and therefore obtain the prized AAA payments while sharecroppers were completely excluded from the program and had no claim to any AAA payments. Although landlords were under contract to maintain the same number of employees, they had a significant incentive to violate their contracts by employing fewer people than in previous years. It is likely that race played a role in the displacement decision of landlords. If the expected costs were less for violating the AAA contracts in favor of displacing one group relative to another, one would expect agents to follow through by discriminating in the displacement of workers. Also, the setting of the cotton South provided little legal protection for the lower rungs of the agriculture labor structure and for black workers in general.

In this paper we seek to answer questions about the role of the AAA in the displacement of these agriculture workers. we formulate a simple on-the-job search model which provides intuition about the incentives landlords had in displacing different types of workers. We then use county level data to empirically estimate the effect of the policy on the displacement of sharecroppers and managing tenants. Additionally, we are able to separately study these questions by race. The results suggest that the AAA program had a role in the displacement of agriculture workers. Sharecroppers, who occupied the lowest level in the labor structure, were generally more affected than managing tenants. We find no evidence that the AAA cotton spending led black sharecroppers to be displaced at a higher rate than white sharecroppers. However, the results suggest that black managing tenants were displaced at similar rates to sharecroppers (both black and white sharecroppers) while there is no statistical evidence that white managing tenants were affected by AAA payments.

2 Historical Setting and Previous Work

2.1 Agriculture Labor Structure

The agriculture labor structure during the early 1900's in the southern states was hierarchical. Movements up the hierarchical ladder were viewed as an increase in economic status. Alston and Ferrie (2005) find that farmers moved up as well as down the land/labor tenure ladder during the 1920s and 1930s. The accumulation of capital over the life of the worker is typically viewed as the sole reason for ascension up the ladder, however, Alston and Ferrie (2005) find that unobserved individual effects played a large role in mobility.[1]

Wage laborers on the lowest rung on the ladder were either hired off a spot market or contracted for extended periods. Wage laborers did not provide capital in production and were not involved in the management decisions on the farm. Sharecroppers, who were next to wage laborers on the land/labor ladder, did not provide any capital in production and were paid with a portion of the harvest. Share tenants rented land by paying a share of the crop to the land owner and typically provided their own capital in the production of the crop. Share tenants typically had an active role in the management of production. Cash tenants payed a fixed amount to rent or lease land from a landowner. Therefore, they held full claim and had full management decisions of the crop. The highest rung on the ladder was becoming an actual landowner.

The typical plantation landowner of the early 20th century did not allocate all of his land to one tenure. Alston and Higgs (1982) show in a sample of 22 Georgia plantations in 1911 that approximately 17 percent of the work force on the plantations were cash tenants, share croppers and share tenants consisted of 53 percent of the work force, while wage labor consisted 30 percent of the work force. However the contractual mix varied from region to

[1]See Alston and Higgs (1982) and Alston and Ferrie (1993) for more detail on agriculture labor ladder and contractual mix in the 19th and early 20th century.

region. The southern states employed a large number of sharecroppers and share tenants relative to wage laborers.

Alston and Higgs (1982) propose that share tenancy grew from the transaction costs that are associated with hiring wage labor. Transaction costs include the cost of the landlord to supervise and enforce contracts. They argue that in the late 19th and early 20th century, this occurred by landlords instituting share tenant contracts which encouraged self-enforcement and self-supervision.

Whatley (1983) propose that tenancy grew from landlords insuring that they would have adequate labor supplies when needed. Therefore, labor market frictions played a critical role in the allocation of workers in this context. The extent of the tenant mobility between growing seasons has been extensively studied see Fishback (1989) and Ransom and Sutch (1979).

2.2 The Agriculture Adjustment Act

2.2.1 Evolution of the AAA

At the depth of the Great Depression in 1933 unemployment was at an unprecedented high and the farm sector had been hit especially hard. Net income of farm operators in 1932 was one-third of what it had been in 1929 (Bowers, Rasmussen and Baker 1984). The cotton south was particularly in rough shape as production surpluses weighed down farm prices on the eve of the AAA. Cotton prices were a quarter of what they had been prior to the war and the cotton carry-over from 1932 to 1933 was nearly 13 million bales (USDA 1936). In Roosevelt's Inaugural Address on March 4th, 1933, he stated, *"[W]e must frankly recognize the over-balance of population in our industrial centers and, by engaging on a national scale in a redistribution, endeavor to provide a better use of the land for those best fitted for the land. The task can be helped by definite efforts to raise the values of agricultural products*

and with this the power to purchase the output of our cities. ... We must act, and act quickly" (Roosevelt 1933). Soon after Roosevelt's inauguration in office, newly appointed Secretary of Agriculture, Henry Wallace, oversaw the drafting of the farm bill now known as the Agriculture Adjustment Act of 1933. The goal of the farm bill was to "restore farm prices to their pre-war level of purchasing power and thereby to promote national recover (USDA 1936)." Congress deliberated on the bill for two months before it became law in May of 1933. The bill granted the Secretary of Agriculture the right to pay farmers with Rental and Benefit payments collected from process taxes to take land out of production.

On January 6th, 1936, the Supreme Court ruled that the AAA, as drawn up in May of 1933, was unconstitutional. Shortly after, Congress passed the Soil Conservation and Domestic Allotment Act which was similar to the Rental and Benefit payment program previously established. Under the Soil Conservation and Domestic Allotment Act farmers were paid to shift land usage away from soil-depleting" crops to "soil-conserving" crops. Producers were paid to reduce production of the specific commodities that stifled parity. In 1938 the Soil Conservation and Domestic Allotment Act was reenacted with modifications to promote parity incomes among more areas of agriculture.

2.2.2 Cotton Contracts

With the cotton growing season well under way and projected output surpluses, the Agriculture Adjustment Administration chose not to delay the designs of the newly passed farm bill. In order to reduce output in 1933 they would have to plow-up the already planted cotton. The Extension Service of the USDA, which was located within each state, was selected to implement the cotton reduction program. States were assigned a quota of 30% of the 1931 cotton acreage. However, as stated by the Agriculture Adjustment Administration, this quota was simply just for guidance and was neither a minimum or maximum. The Extension Service then employed county agents to sign-up farmers in each county to plow-up

their cotton crops. The Agriculture Adjustment Administration directed the Extension Service to select men of "outstanding ability and integrity" and prominent community leaders as county agents. Often these county agents were bankers, merchants, and local farmers. County agents had the responsibility of enrolling farmers in the cotton reduction contracts, estimating past productivity for the land contracted to the AAA, and enforcing the contracts (Volanto 2005).

The 1933 cotton contracts were offered to all producers. A producer was defined as one "who owns or rents cotton lands and has or will have legal ownership of the cotton crop produced in the year 1933 on such land is eligible to become a party to a cotton contract with the secretary. Where ownership is in more than one person, all who are interested as owners must sign the offer either as principal parties or as consenting parties (*Contractual Features Book* 1936)." Producers that entered into contracts with the Secretary of Agriculture (through the county agents) chose the amount of acreage reduction, however, for 1933 the reduction had to be between 25% and 50% of the current cotton crop. The cotton crop to be taken out of production also had to be a fair average, as to estimated yield per acre, of the entire cotton crop currently planted. Famers were allowed to use the land which was taken out of production for food for home use of feed crops for livestock.

The AAA contracts provided two options to farmers in 1933. The first option was a "cash-only" plan which allowed the farmer to receive between seven dollars per acre to 20 dollars per acre depending on the productivity of the land. The second option was a "cash-and-option" plan which provided between six and twelve dollars per acre, conditional on past productivity, and the option to receive an amount of government-owned cotton equal to the expected amount that was plowed up for six cents per pound. Therefore, the farmer could have the government sell the option cotton when the price rose as consequence of the cotton reduction (Volanto 2005).

To avoid a cotton plow-up the following year, the Agriculture Adjustment Administration

drafted contracts for both 1934 and 1935 by the end of 1933. However, the 1934-1935 contracts differed significantly from the the 1933 contracts. First, the 1934-1935 contracts changed who was eligible to take part in the program. A producer had to be either a owner, landlord, cash tenant, or managing share tenant. A managing share tenant was defined as a "share-tenant who furnishes the work-stock, equipment, and labor used in the production of cotton and who manages to operation of th[e] farm (*Contractual Features Book 1936).*"

In 1934 the producer was able to reduce the acreage to be planted to cotton by not less than 35% and not more than 45% below the base acreage. The base acreage was determined by the average amount of acreage alloted to cotton for the years 1928-1932 or the amount of acres planted to cotton in 1933 before the plow-up. The government now allowed lower quality land to be taken out of production, reducing the minimum yield to 75 bales per acre from 100 for land removed. The 1935 contracts allowed for 25% to 35% of the base cotton acreage to be taken out of production. However, the rest of the 1935 contract was similar to the 1934 stipulations. For the most part, the same provisions were set for the use of land taken out of production in the 1934-1935 contracts as the 1933 contracts. The 1935 contracts also stated that feed crops could not be diverted to contracted land so cash crops could be grown on previous feed land.

The execution of the AAA empowered both federal administrators and local committees to influence the attractiveness of the program. The federal administrators determined the national price for each AAA commodity and the amount to take out of production nationwide. Local county agents had the power to determine the base-year yields for farmers who contracted land to the AAA. The attractiveness of the AAA programs is evident by the sign-up rates that accompanied the program. Sign-up rates were typically high across counties and across crops. The major reasons for failure to secure sign-ups as high as 90 percent or more in some areas were that many of the farms were always involved in leasing arrangements, estate management, or an extreme circumstance that made participation

difficult. Other regions where production was low also may have lacked high sign-up rates. The reasons for the lower sign-ups in the regions where production was limited was the lack of interest and preference not to be bothered with the details of participation for the sake of the relatively small benefit payments (Nourse, Davis and Black 1937). In 1935 a referendum on the continuation of the cotton reduction program was held for cotton farmers. Over 1.5 million votes were cast with 90% in favor of continuation in the program (USDA 1936).

2.2.3 Tenant Displacement

The 1933 Rental and Benefit payments were mailed to land owners giving landlords the responsibility to fairly distribute payments to the tenant farmers. With little enforcement, landlords had a large incentive to cheat by withholding payment from tenants. At the time, an observer stated that, "a considerable number of tenants did not receive the full amount specified by the contract. ... The landlord, under these circumstances, was able to make whatever settlements that he wished with the tenants (Hoffsommer 1935)." In 1933 landlords had the choice of whether or not to honor their tenant contracts. "The best option from the landlord's standpoint was to take the reduction from the tenants acreage but report it as coming from the wage-labor section. That way, the landlord got the entire benefit "off the top" and reallocated the remaining acreage so as to equalize marginal net revenue between the two systems (Wright 1986)."

Unlike the 1933 payment, the 1934-1935 payments were mailed to the contracted producer and came in a number of installments through the year. However, sharecroppers were completely excluded from these contracts because they did not qualify as managing tenants. Although landlords were required to keep the same number of employees, it is likely that the cotton reduction program led to a large amount of sharecropper and tenant displacement. The 1934-1935 contracts site that "The producer shall ... endeavor in good faith to bring about the reduction of acreage ... in such a manner to cause the least possible amount of

labor, economic, social disturbance, and to this end, insofar as possible, he shall effect the acreage reduction as near ratable as practicable among tenants on this farm; (he) shall, insofar as possible maintain on this farm the normal number of tenants and other employees; [he] shall permit all tenants to continue in the occupancy of their houses on this farm, rent free, for the years of 1934 and 1935, respectively (unless any such tenant shall so conduct himself as to become a nuisance or a menace to the welfare of the producer)" (*Contractual Features Book 1936)*. However, the lawyers who drafted this contract were well aware of its ambiguity as evident in a letter from one to another: "[The provisions] which related to the manner in which the producer shall deal with his tenants were not legally enforceable and there were several vague words which would all be primarily matter of opinion (Irons 1993)". Enforcement of such vague wording would be difficult to resolve and justice would likely be absent in a confrontation.

Consider a landlord who employed a sharecropper over a set amount of acres in 1933. The 1934 contract allowed the landlord to contract up to 45% of the sharecropper's land with the government. The landlord would have received the full amount of Rental and Benefit payments from the 45% and the sharecropper would now have only 55% of the acreage for generating income. The landlord would therefore honor the AAA contracts by keeping the same number of tenants but shift them to less acreage. It is likely that a decrease in income through the reduced acreage caused tenants to willingly leave the land.

In a report on 14 southern states, 2098 complaints were reported to the Agriculture Adjustment Administration over 1934-1935 cotton reduction contracts. These complaints consisted of tenants accusing planters and operators of renting larger portions of land to the government under the AAA and maintaining a smaller number of tenants. Other complaints consisted of landlords changing tenant status or stipulated contracts in which landlords reaped the benefits of the Rental and Benefit payments of the AAA. Of the 2098 complaints, 1512 were deemed completely unjustified, 347 cases were adjusted by the county agent and

215 cases were adjusted by a field representative. In all, only 24 of the 2098 complaints resulted in the cancellation of the AAA contract (Gee 1935). The investigation into the complaints led the Agriculture Adjustment Committee to state: *"There has been no wholesale displacement of tenants or share-croppers due to the operation of the cotton and other adjustment programs in the South. Charges have been made by various organizations and individuals to the effect that thousands of tenants and share-croppers in the cotton belt had been thrown out of employment as a result of the cotton reduction program, feature stories have been published in newspapers and magazines in which a dark picture was painted of the effect of the reduction program upon this class. In very few cases did field representatives find a net displacement of tenants or share-croppers by cotton contract signers. In practically every case where one had been removed, the landlord had some good reason for doing so and has replaced him with another, and in most instance, a better one."*

Historians have consistently looked towards the AAA as a source for the displacement of tenants. There has also been some work in the theory of tenant displacement and the AAA, but little empirical work on the subject has been done. Whatley (1983) uses state level data to argue that the AAA policies, specifically the cotton Rental and Benefit payments, lead to tenant reduction. In addition to Whatley, Volanto (1996) analyzes the state of Texas and finds limited results that suggest that AAA spending led to displacement of share tenants and share croppers. The major drawback of Volanto (1996) work is his estimation strategy. The cotton reduction program simultaneously caused a reduction in acreage, larger farm sizes, and changes in the amount of wage labor available. However, Volanto (1996) includes all of these as controls in the least squares analysis, therefore, his estimates are likely biased. As shown later, the estimation strategy presented in the papers takes extra precaution to not confound the effect of the amount of Rental and Benefit payments on tenant displacement with other spurious AAA effects.

3 Model

To analyze the effect of the AAA policies on the agriculture labor market during the New Deal, we construct a simple on-the-job search model. The model is similar to Naidu's (2010) model which looks at the effect of anti-enticement laws on the mobility of croppers in the post-bellum South. By endogenizing the job offer arrival rate, Naidu (2010) shows how criminal fines for recruiting contracted workers decreased mobility. The focus of the model we present is the interaction of the AAA and the agriculture labor structure. Specifically, we endogenize the rate at which landlords displaced contracted tenant workers. Although the labor market for agriculture workers in the AAA era was much more complex than displayed in the model, the model does provide simple intuition to the underlying mechanisms of the AAA. The equilibrium solution shows the effect of the AAA policies on the displacement of contracted tenants, the rate at which landlords withheld AAA payments, and wages of agriculture laborers (wage workers).

We choose to model the labor market in a structural model because of the numerous effects the AAA had on both labor demand and labor supply. The AAA guidelines stipulated that landlords were to maintain the same number of tenants even though land was being taken out of production. Therefore, the demand for tenants should have remained constant. However, it is likely that contracts were not enforced and therefore the demand for tenants decreased. We model this by assuming that landlords have some expected penalty for illegal displacement of tenants. The labor supply side has two confounding effects. First, high AAA payments that were supposed to be received by tenants would have increased the labor supply of tenants as wage laborers and possibly individuals from other occupations would enter the occupation. However, the threat of landlords withholding payments would mitigate the increase in supply and likely reduce the supply of tenants.

3.1 Simple Search Model

There exists a unit mass of workers with common discount factor r. Workers are homogeneous and have constant productivity, $\tilde{\rho}$. A worker contracts with the land owner to either work as a wage worker or as a tenant farmer for a tract of land.[2] Wage workers advance to become tenants at rate λ. Tenants are displaced and become wage workers at rate δ. Tenants receive share σ of production which leaves landlords with $(1-\sigma)$ share of production. $\tilde{\rho}$, σ, λ and δ are exogenous.[3]

First, consider the supply side of the market. Workers have two states: wage worker and tenant farmer. The value function of a wage worker is defined as

$$V^w = \tilde{w} + \frac{(1-\lambda)V^w}{1+r} + \frac{\lambda V^t}{1+r} \tag{1}$$

where V^t is the value function of a tenant and $\tilde{w}$ is the present wage. The value function of wage worker depends on the wage today and the expected state in the next period. A wage worker will transition to a tenant at rate λ or stay a wage worker at rate $(1-\lambda)$. Equation 1 simplifies to,

$$V^w = \frac{w + \lambda V^y}{r+\lambda},$$

where $w = \tilde{w}(1+r)$.

The value function of a tenant farmer is defined as

$$V^t = \sigma\tilde{\rho}(1-\alpha) + \sigma\tilde{\tau}\alpha(1-\gamma) + \frac{\gamma V^w}{1+r} + \frac{(1-\gamma)\delta V^w}{1+r} + \frac{(1-\gamma)(1-\delta)V^t}{1+r}$$

[2]For simplicity we assume that wage laborers receive stewardship over a tract of land in a similar way to tenants.

[3]We only model wage workers and tenants although the labor ladder in the South was much more complex. The actual share of the output that tenants received varied by region and was conditional on the amount of capital the tenant provided. Sharecroppers are thought of as share tenants who provide no capital and receive a smaller share of the output. The other extreme is cash tenants who received the full share of output, but also paid a fix amount to essentially rent the land.

where $\tilde{\tau}$ represents the Rental and Benefit payment and α is the proportion of the tenants land contracted to the AAA. The amount of the Rental and Benefit payment was set by the government and because of high take up rates, we assume that α and τ are exogenous and $\tilde{\tau} > \tilde{\rho}$. γ is the rate at which tenants are exploited by Rental and Benefit payments being withheld from them. Therefore, a $\gamma = 1$ means that the tenant receives none of the Rental and Benefit payment. Tenant contracts are also destroyed when they do not receive their full payment. Therefore, the rate at which tenants transition to wage workers is γ through not receiving payments and $(1-\gamma)\delta$ for when payments are received but the job terminates exogenously through δ. $\sigma\rho$ represent the flow payoff from a tenant contract. Equation 3.1 simplifies to

$$V^t = \frac{\sigma(\rho(1-\alpha) + \tau\alpha(1-\gamma)) + (\gamma(1-\delta)+\delta)V^w}{r+\gamma+\delta-\gamma\delta}, \tag{2}$$

where $\rho = \tilde{\rho}(1+r)$ and $\tau = \tilde{(}1+r)$.

Similar to Naidu (2010) we assume a competitive labor market; therefore employers contract with wage workers to fill vacancies with a take-it-or-leave-it offer. Thus, the value of a wage worker must therefore equal the value of a tenant contract, $V^w = V^t$. Therefore,

$$V^w = \frac{w}{r} \tag{3}$$

$$V^t = \frac{\sigma(\rho(1-\alpha) + \tau\alpha(1-\gamma))}{r}. \tag{4}$$

In a steady state, the mass of tenants, N^t, is characterized by its flow of workers as follows,

$$\frac{dN^t}{dt} = \lambda N^w - \gamma N^t - (1-\gamma)\delta N^t = 0 \tag{5}$$

$$N^t = \frac{\lambda}{\lambda+\gamma+(1-\gamma)\delta}. \tag{6}$$

By combinining equations 3 and 4, the wage is,

$$w = \sigma(\rho(1-\alpha) + \tau\alpha(1-\gamma)). \tag{7}$$

The rate of exploitation, γ, is endogenous and therefore an additional assumption is needed to solve for an equilibrium. Employers of tenants receive revenue from their share of the yield, $\rho(1-\sigma)$, and from withholding rental benefit payments at rate γ. By allowing for free-entry into employing tenants and a competitive labor market, the expected returns to employing a tenant must equal the expected cost. Therefore,

$$\rho(1-\sigma)(1-\alpha) + \tau\alpha(1-\sigma+\gamma\sigma)) = K\gamma \tag{8}$$

where $\rho(1-\sigma)(1-\alpha) + \tau\alpha(1-\sigma+\gamma\sigma))$ represents the benefit to employ a tenant and K represent the expected penalty employers receive for withholding AAA payments from the tenant.

The steady state equilibrium solution contains γ^*, N^{t*}, and w^*. From equations 6, 7 and 8 the equilibrium outcomes are

$$\gamma^* = \frac{(1-\sigma)((1-\alpha)\rho + \alpha\tau)}{K - \alpha\sigma\tau}, \tag{9}$$

$$N^{t*} = \frac{\lambda}{\lambda + \delta + \frac{(1-\delta)(1-\sigma)((1-\alpha)\rho+\alpha\tau)}{K-\alpha\sigma\tau}}, \tag{10}$$

$$w^* = = \sigma\rho(1 - \alpha - \frac{\alpha(1-\sigma)((1-\alpha)\rho + \alpha\tau)}{K - \alpha\sigma\tau}). \tag{11}$$

To understand the effect of the AAA policies on the agriculture labor market we are interested in how the equilibrium solutions are effected by τ, the amount of the Rental and Benefit payments, and α the proportion of land that was contracted to the AAA. The equilibrium solutions imply the following:

$$\frac{d\gamma^*}{d\alpha} > 0 \text{ and } \frac{d\gamma^*}{d\tau} > 0 \tag{12}$$

The rate at which share tenants are exploited and displaced increases as the proportion of land contracted to the AAA, α, and increasing in the payments for the contracted land, τ.

$$\frac{dN^{t*}}{d\alpha} < 0 \text{ and } \frac{dN^{t*}}{d\tau} < 0 \tag{13}$$

The proportion of tenant workers to wage workers decreases in both the proportion of land contracted to the AAA, α and the Rental and Benefit payments for the contracted land, τ.

The effect of τ and α on the wage of wage workers is not as straight forward. They depend on the relative size of the exogenous parameters. The wage decreases when α and τ increase for a relatively small K. In practice, K is expected to be small as very little evidence show that landlords were punished for exploiting tenants.

To analyze whether black tenants were displaced at a higher frequency than white tenants the model can easily be extended. If black tenants were more likely to be displaced it is likely that that all exogenous parameters, besides K are homogeneous across race. However, if landlords faced different penalties for displacing white tenants compared to black tenants then landlords would have a different value of K for each race. The effect of a change in K with respect to equilibrium solutions are:

$$\frac{d\gamma^*}{dK} < 0, \ \frac{dN^{t*}}{dK} > 0, \text{ and } \frac{dw^*}{dK} > 0. \tag{14}$$

Therefore, if landlords faced a greater penalty for withholding AAA payments from white workers relative to black workers one would expect that fewer white workers were exploited, the relative proportion of white tenants to black tenants is greater, and wages of wage laborers are greater in areas with larger amount of white tenants.

4 Empirical Strategy

The simple on-the-job search model in section 3 suggests that the AAA policies had negative effects on tenants. In this section we make no attempt to structurally estimate the search model but instead we use the outcomes of the model to provide intuition on the interaction of the labor market and test some of the comparative statics it presents. To estimate the effect of the AAA polices on tenant displacement we use an instrumental variable to overcome the endogenous distribution of AAA payments. However, the AAA policies had a large effect on the entire landscape of agriculture in the south. Therefore, we take particular care to not over-specify the regression with covariates that were simultaneous determined with displacement.

4.1 The Effect of the AAA on Tenant Displacement

The model in section 3 shows that landlords had an incentive to displace share tenants in effort to reap a greater share of the AAA payments. First, consider the following reduced form equation that represents the number of tenants in 1930, prior to the AAA, in county c and state s,

$$y_{c,s,30} = \alpha_0 + \alpha_1 C_{c,s,30} + \delta T_{c,s,30} + \psi_c + \phi_s + \mu_{c,s,30}. \tag{15}$$

In the above equation, $C_{c,s,30}$ represents the acres of cotton harvested in 1929 and $T_{c,s,30}$ represents the number of tractors in 1930. ψ_c and ϕ_s respectively represent county and state time invariant effects such as policy and agriculture structure and development.

The model for 1935 is not as straightforward because the AAA contracts stipulated that landowners must maintain the same number of tenants as in the previous years. Also, farmers were restricted from increasing the number of acres planted to crops for the land not contracted to the AAA. Given the large support for the cotton program, evidenced by the 1935 state referendums, the number of tenants in a county in 1935, absence of tenant

displacement, should be similar to 1930. The following linear model represents the number of tenants in 1935,

$$y_{c,s,35} = \alpha_0 + \alpha_1 C_{c,s,30} + \beta AAA_{c,s,35} + \delta T_{c,s,35} + \psi_c + \phi_s + \mu_{c,s,30}, \tag{16}$$

where AAA represents the amount of Rental and Benefit payments to cotton for the 1933 and 1934 seasons. A large component determining the number of tenants in a county is the number of acres in cotton. However, the 1935 level of tenants was supposed to be a function of the 1930 level of acres, notice how C is subscripted at the 1930 level.

To estimate the effect of the Rental and Benefit payments on tenant displacement consider the following first difference of equations 15 and 16 where c indexes county and s indexes state,

$$y_{c,s,35} - y_{c,s,30} = \Delta y_{c,s} = \beta_0 + \beta_1 AAA_{c,s} + \delta \Delta T_{c,s} + \varepsilon_{c,s}. \tag{17}$$

Notice that the cotton acreage C for 1930 and the state and county fixed effects are differenced out of the equation. Δy and ΔT are the change in number of tenants and the change in the number of tractors between 1930 and 1935, respectively.[4] ε is a vector of unobserved variables that effect Δy. Variables that both affect the distribution of funds and the likelihood of tenant displacement are not differenced out but rather captured in ε. OLS estimation of equation 17 would therefore lead to bias estimates of the parameter of interest, β_1.

4.2 Identification

To estimate 17 consistently, we need an instrument that ultimately disposes of the endogenous variation in cotton Rental and Benefit payments to a county. Although this assumption

[4]The Agriculture Census did not collect information on the number of tractors for 1935. We use values from 1930 and 1940 to interpolate the 1935 value for the number of tractors.

is typically difficult to satisfy without some type of experiment or discontinuity, in this case we can exploit the structure of the Rental and Benefit contracts to plausibly satisfy the condition.

The structure of the AAA was carried out at the local level. Local county agents, chosen by the state Extension Service, had the task of providing all farmers with the opportunity to contract a fixed portion of land to the Secretary of Agriculture. The 1933 contracts allowed farmers to rent between 25% and 50% of the current cotton crop to the Secretary of Agriculture. The 1934 contract allowed farmers to rent 35% to 45% of the base acreage to the government. The base acreage was determined through either the amount of cotton grown in 1933 prior to the plow-up, or the average cotton planted from prior years. The 1934 contracts stipulated that the land taken out of production must be representative of the entire cotton production land on the farm as well as having historic average yields of at least 75 bales per acre. The amount of the Rental and Benefit payment depended on average expected yield from previous years, typically 1928-1932. However, the contracted expected yields were determined through the discretion of the county agent and the price for the expected yield was set at a national level.

The distribution of AAA payments were determined through two channels 1) the agriculture structure in the county and, 2) the discretion of county agents who set the expected yield per acre for the land taken out of production and approved the land to be contracted to the AAA. Endogeneity issues may arise through both of the mentioned channels. The first channel deals with omitted variables that are correlated with the distribution of AAA payments and are also correlated with changes in the number of tenants. For example, intense cotton growing ares, which received large amounts of AAA payments as a result, were more likely to provide less protection to tenants for wrongful displacement. Therefore, landlords could have more easily displaced these types of workers. Endogeneity though this channel would likely cause the OLS estimates to be biased in a negative direction.

The second channel in which endogeneity issues arise are the result of county agents not properly assigning yield rates. County agents were likely influenced by the farmer with whom they were contracting. Therefore, counties with a large proportion of tenants were likely to receive less spending per acre than counties with a large number of landowner operators, holding land quality constant. This would cause the OLS estimates to be biased in a positive direction toward zero. The two channels of endogeneity are likely to bias the OLS estimates in opposite directions. To overcome this endogeneity problem we implement an identification strategy that uses information about the structural characteristics of the county as well as the characteristics of the cotton Rental and Benefit contracts.

4.2.1 Instrumental Variable

To address the first channel of endogeneity we include county level characteristics directly into the regression equation 17. The amount of cotton Rental and Benefit payments in a county depended on county characteristics which describe the agriculture setting in the county. We include the 1930 levels of farm population, average farm size, the proportion of land in farms and the amount of acres producing cotton as they adequately describe the agriculture setting in each county on the eve of the AAA policies. The relationship of these variables with the distribution of cotton Rental and Benefit payments is testable and is found in Table 2. The regression equation of interest (adapted from equation 17) is now,

$$y_{c,s,35} - y_{c,s,30} = \Delta y_{c,s} = \beta_0 + \beta_1 AAA_{c,s} + \delta \Delta T_{c,s} + X_{c,s,30}\Gamma\varepsilon_{c,s}, \tag{18}$$

where $X_{c,s,30}$ are the 1930 levels of the four covariates described above.

To overcome the endogeneity issue that results from county agents distributing discriminative levels of Rental and Benefit payments we instrument the actual Rental and Benefit payments for each county with the amount that should have been distributed. Specifically,

county agents were suppose to distribute payments based on the previous productivity of the land being taken out of production. We instrument with the actual productivity of the county in the years 1928 through 1932. The actual productivity of the land acts as a valid instrument because it is simply a scale of the amount of Rental and Benefit payments that should have been paid.

In addition to the endogeneity issues that result from the distribution of cotton Rental and Benefit payments, it is also a concern that the change in tractors is endogenously determined. Given that farmers used AAA funds to purchase tractors (Sorensen, Fishback and Kantor 2008), if the estimate on the change in tractors is biased then the bias may also contaminate the estimate on cotton Rental and Benefit payments (AAA). Therefore, we choose an estimation strategy which employs three specifications. The first specification includes the amount of cotton Rental and Benefit payments and state fixed effects. The second specification includes the 1930 levels of farm population, average farm size, the proportion of land in farms and the amount of acres producing cotton. The final specification includes the potentially endogenous change in tractors as an additional control.[5]

4.3 Race and Tenant Labor Ladder

To this point we have classified sharecroppers, share tenants, and cash tenants as tenants. However, it is likely that the AAA policies may have displaced certain groups at different rates. The expected cost of displacement, K, was different for sharecroppers than for other tenants.To analyze the effect of the AAA policies for different classes of tenants we use the above defined identification strategy for sharecroppers and share/cash tenants which are defined as managing tenants.[6]

In the Cotton South it is likely that K also differed by race as black farm workers may

[5]As a robustness check we instrument the change in tractors from 1930 to 1935 with the level of tractors in 1925 and find similar results on both the change in tractors and cotton Rental and Benefit coefficients.

[6]The 1935 census did not distinguish between cash tenants from share tenants.

have had limited legal rights relative to white farm workers. If landlords faced greater expected costs for displacing white workers relative to black workers ($K_w > K_b$), then black workers would be more negatively affected by the AAA policies. The value of K can be attributed to aspects such as expected legal repercussions or discrimination. Therefore, we follow this same identification strategy when analyzing classes of tenants by race.

5 Data

The data for this paper largely comes from the 1930 and 1935 United States Agriculture Censuses where each observation is a county. Table 1 displays summary statistics for variables used in the paper. In the table managing tenants are defined as the both share tenants and cash tenants.[7] The data are limited to 635 counties that reportedly produced a positive level of cotton, were located in a Southern State and reported a positive number of sharecroppers and managing tenants in each census. We focus on Southern States because of the prevalence of the hierarchical labor structure among farm workers. The data from the cotton Rental and Benefit payments are from the Mimeographed reports on AAA payments found in the National Agricultural Library. Data from prior cotton productivity was obtained from United States Department of Agriculture county reports (USDA 1939).

Table 1 shows that the number of black and white sharecroppers decreased from 1930 to 1935. Similarly the number of black managing tenants decreased from from 1930 to 1935, but the number of white managing tenants substantially increased. The number of tractors substantially increased from 1930 to 1935. This may be due to landlords using Rental and Benefit payments to purchase tractors (Sorensen et al. 2008). The 1935 census did not report information on tractors. Therefore, the 1935 value of the number tractors within the county is interpolated from the 1930 and 1940 levels.

[7]The 1935 U.S. Agriculture Census did not distinguish between share tenant and cash tenant.

6 Results

In this section we present the results from the estimation strategy outlined in section 4 which analyze the effect of the cotton Rental and Benefit payments on the different classes of farm workers by race. In each specifications, we use the natural log of both the dependent variable and the sum of the Rental and Benefit payments for cotton for the years 1933, 1934 and the first half of 1935. Therefore, the estimates for cotton Rental and Benefit payments are interpreted as an elasticity. We present three OLS specifications in which the first specification only controls for state fixed effects, the second specification additionally controls for the 1930 level of the county farm population, average farm size, the amount of land in farms within the county and the amount of cotton acres in the county and the third specification includes the change in the number of tractors between 1930 and 1935. We weight each regression by the amount of cotton acres harvested in 1929.

Also located in each table of results are the Instrumental Variable estimates that correspond to the three OLS specifications. The excluded instrument is the the natural log of the average cotton output for the years 1928 through 1932. We expect a high F statistic on the first stage because cotton Renal and Benefit payments were suppose to be based on the value of the cotton output. However, the discretion of the county agent likely caused the distribution of the payments to be endogenous.

The First Stage estimates are found in Table 2. These results show that the cotton Rental and Benefit payments are highly correlated with the average cotton output in 1928-1932. The first specification provides an F-stat on the excluded instruments of 813.9. The second specification shows that the 1930 level agriculture structure characteristics played a large role in determining both dependent variables. In specification 2 the F-stat on the excluded instruments is 513.4. It is of interest to note that counties with large average farm size were received higher payments. Large farms typically employed wage labor and had

powerful landlords that may have been able to influence county agents. The results from the third specification are similar to the second specification, however, it also shows that an increase in tractors was correlated with cotton Rental and Benefit spending.

6.1 All Tenants

Table 3 presents the results for the change in the natural log of all tenants. The results suggests that the cotton Rental and Benefit payments played a significant role in the displacement of tenants and mechanization may have increased the number of tenants. Comparing the OLS estimates to the IV estimates shows the general pattern of the expected endogeneity bias. County agents likely distributed lower amounts of Rental and Benefit payments per acre to counties that had a higher density of tenants and therefore the IV estimate should be larger in magnitude. The results from the second and third IV specifications suggest that a 10% increase in cotton Rental and Benefit payments decreased the number of tenants by 1.1% and is statistically significant at the 1% level. This result seem to suggest a lower than expected economic impact. However, a one standard deviation increase in cotton Rental and Benefit payments results in a 0.875 standard deviation decrease in the number of tenants. A table of the standardized beta coefficients for each set of results is found in Table 10.

The signs of three added control variables are in the expected direction. We see that an increase in population in the county led to less displacement and counties with high amounts of cotton acres and land in farms had more displacement. The coefficient on average farm size is not statistically significant.

6.2 Sharecroppers and Managing Tenants

The number of all tenants is made up of both sharecroppers and managing tenants where managing tenants are defined as the sum of both share tenants and cash tenants. Table 4

and 5 present the results for sharecroppers and managing tenants respectively.

Table 4 shows that sharecroppers were displaced at a higher rate than managing tenants. This is not surprising for two reasons: first, sharecroppers were on a lower rung of the labor ladder and therefore likely had less legal protection for wrongful displacement, and second, sharecroppers were more likely to leave the land due to the fact that they were completely excluded from AAA contracts and payments. Although landlords were required to keep the same number of employees, it is likely that landlords contracted significant portions of sharecropper land to the AAA and therefore income of sharecroppers substantially decreased. The results suggest that a 10% increase in cotton Rental and Benefit payments led to a 1.6% decrease in the number of a sharecropper and is statistically significant at the 1% level. Additionally, a one standard deviation increase in the cotton Rental and Benefit payments lead to approximately a 0.621 standard deviation decrease in the number of sharecroppers. The results also show that the point estimate for the effect of tractors, from specification (3), is positive but is both economically and statistically insignificant.

Table 5 show that managing tenants in general were not displaced at the same rate as sharecroppers. If landlords did not violate contracts, then one would also expect that the point estimates for the effect of cotton Rental and Benefit payments on managing tenants to be very small. The results in 5 suggest that a 10% increase in cotton Rental and Benefit payments led to a 0.9% decrease in managing tenants. This estimate is also statistically significant at the 1% level. The standardized beta coefficient is 0.610 suggesting that the standardized effect on managing tenants was similar to that of sharecroppers.

6.3 Race and Tenant Displacement

Tables 6 and 7 contrast the effects on white sharecroppers and black sharecroppers respectively. If landlords faced lower costs in displacing black workers relative to white workers or practiced racial discrimination, then we would expect that the magnitude on the estimate of

cotton Rental and Benefit payments would have been greater for blacks sharecroppers than white sharecroppers. The results from the preferred IV specification show that the point estimates for the effect of the cotton Rental and Benefit payments are not statistically different from each other across race. These point estimates are statistically significant at the 1% level and 5% for white and black sharecroppers respectively. Therefore, the results suggest that landlords did not discriminate by race but displaced both black and white sharecroppers at similar rates. It is also interesting to note that although the effect is not statistically significant, black sharecroppers were more likely to be displaced as a result of an increase in tractors than white sharecroppers.

Managing tenants had a higher social status than sharecroppers and were more likely to have access to legal protection. The results in Table 8 and 9 contrast the different effects on white managing tenants to black managing tenants and thus provide intuition if this higher class of workers were treated differently by race. Table 8 shows that the rate at which white managing tenants were displaced was much smaller than for sharecroppers. A 10% increase in cotton Rental and Benefit payments in the county resulted in a statistically significant 0.7% decrease in white managing tenants. However, the results suggest that black managing tenants were displaced at a rate which was very similar to sharecroppers. A 10% increase increase in cotton Rental and Benefit payments led to a statistically significant decrease of 1.5% in black managing tenants.

7 Conclusion

The Agriculture Adjustment Act caused unintended consequences in the labor market. Sharecroppers and tenant farmers, who were supposed to be protected from displacement in the AAA contracts, were displaced as a result of the distribution of AAA payments through the cotton Rental and Benefit program. This is the first paper to causally estimate the effect of AAA spending on the amount of displacement.

Although the effects from the cotton reduction program did not result in a "wholesale displacement" of farm workers in the cotton south, the results do suggest that the cotton reduction program did have a significant effect on displacement. In fact, the results refute the statements of the Agriculture Adjustment Committee that for every tenant removed the landlord "replaced him with another." In addition the results suggest that workers on the lower rung of the labor ladder were more negatively affected by the AAA cotton reduction program. We find no evidence that black and white share croppers were differentially affected by the AAA, however, the results suggest that black managing tenants were more affected than white managing tenants. In fact, the results show that landlords displaced black managing tenants at a similar rate to black and white sharecroppers. In addition to the AAA policy, the results also suggest that the adoption of tractors played a very limited role in changing the agriculture labor structure in the cotton South in the 1930s. This is consistent with the view that the affects from mechanization were felt in the 1940s and 1950s.

The overall results provide insight into the political economy of the cotton South in the 1930s as it suggests that the legal protection from displacement was similar for workers on the lower rung of the labor ladder regardless of race. However, for managing tenants, who were above sharecroppers in status, only white workers may have had access to the legal protection as black managing tenants were displaced at similar rates to share croppers.

8 Tables

Table 1: Summary Statistics

	Year	Mean	St Dev	Min	Max	N
Sharecroppers White	1930	417.91	364.29	1	2481	635
Sharecroppers Black	1930	560.55	893.70	1	9300	635
Managing Tenants White	1930	590.50	508.09	19	2732	635
Managing Tenants Black	1930	420.06	563.82	1	5445	635
Tractors	1930	88.56	117.45	1	1152	635
Sharecroppers White	1935	361.57	295.56	9	2036	635
Sharecroppers Black	1935	527.19	846.39	1	8292	635
Managing Tenants White	1935	697.91	556.09	29	2963	635
Managing Tenants Black	1935	348.74	434.95	1	4389	635
Tractors	1935	136.00	183.38	3	1129	635
AAA Cotton	1930	406602.79	436045.17	19	3508490	635
Average Output	1928-1932	16830.87	18784.48	10	130000	635
Farm Population	1930	15.28	8.34	2	56	635
Farm Size	1930	90.71	69.78	23	738	635
Land in Farms	1930	59.92	18.83	7	100	635
Acres of Cotton	1930	49.89	51.13	0	325	635

Table 2: First Stage Regression

	$\mathbf{AAA}_{Cotton}$ **(1)**	$\mathbf{AAA}_{Cotton}$ **(2)**	$\mathbf{AAA}_{Cotton}$ **(3)**
Cotton Output (IV)	0.9221***	0.7917***	0.7967***
	(0.0154)	(0.0308)	(0.0301)
Farm Population_{30}		-0.0020	0.0010
		(0.0029)	(0.0024)
Farm Size_{30}		0.0010***	0.0009***
		(0.0002)	(0.0002)
$\text{Land in Farms}_{30}$		-0.0006	-0.0009
		(0.0010)	(0.0010)
Cotton Acres_{30}		0.0027***	0.0013**
		(0.0005)	(0.0005)
Δ Tractors			0.0006***
			(0.0002)
State Effect	Yes	Yes	Yes
F-Stat	813.877	513.448	515.615
R-squared	.9097012	.9287445	.9322188
N	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 3: Dependent Variable: Δ in the ln Number of Tenants$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.0922***	-0.0625***	-0.0719***	-0.1029***	-0.1148***	-0.1107***
	(0.0088)	(0.0159)	(0.0151)	(0.0082)	(0.0182)	(0.0182)
Farm Population$_{30}$		0.0032**	0.0054***		0.0045***	0.0065***
		(0.0015)	(0.0014)		(0.0014)	(0.0013)
Farm Size$_{30}$		0.0002	0.0001		0.0002	0.0001
		(0.0002)	(0.0002)		(0.0002)	(0.0002)
Land in Farms$_{30}$		-0.0014**	-0.0015**		-0.0010	-0.0012*
		(0.0006)	(0.0006)		(0.0007)	(0.0007)
Cotton Acres$_{30}$		-0.0006**	-0.0014***		-0.0003	-0.0012***
		(0.0002)	(0.0003)		(0.0003)	(0.0004)
Δ Tractors			0.0004***			0.0004***
			(0.0001)			(0.0001)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.328	0.365	0.411	0.325	0.348	0.402
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 4: Dependent Variable: Δ in the ln Number of Sharecroppers$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.1263***	-0.0767**	-0.0812**	-0.1403***	-0.1607***	-0.1584***
	(0.0174)	(0.0342)	(0.0330)	(0.0180)	(0.0418)	(0.0407)
Farm Population$_{30}$		0.0088***	0.0099***		0.0109***	0.0120***
		(0.0032)	(0.0029)		(0.0029)	(0.0028)
Farm Size$_{30}$		0.0004	0.0004		0.0004	0.0004
		(0.0005)	(0.0006)		(0.0005)	(0.0006)
Land in Farms$_{30}$		-0.0050***	-0.0051***		-0.0045***	-0.0046***
		(0.0013)	(0.0013)		(0.0013)	(0.0013)
Cotton Acres$_{30}$		-0.0011**	-0.0015**		-0.0006	-0.0011
		(0.0005)	(0.0008)		(0.0006)	(0.0008)
Δ Tractors			0.0002			0.0002
			(0.0003)			(0.0003)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.353	0.412	0.414	0.352	0.403	0.407
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 5: Dependent Variable: Δ in the ln Number of Managing Tenants$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.0860***	-0.0526***	-0.0590***	-0.0940***	-0.0926***	-0.0898***
	(0.0129)	(0.0190)	(0.0192)	(0.0144)	(0.0267)	(0.0270)
Farm Population$_{30}$		-0.0010	0.0006		0.0000	0.0014
		(0.0018)	(0.0019)		(0.0018)	(0.0019)
Farm Size$_{30}$		-0.0002	-0.0003**		-0.0002	-0.0003**
		(0.0001)	(0.0001)		(0.0001)	(0.0001)
Land in Farms$_{30}$		0.0009	0.0008		0.0012	0.0010
		(0.0007)	(0.0007)		(0.0007)	(0.0007)
Cotton Acres$_{30}$		-0.0005**	-0.0011***		-0.0002	-0.0009***
		(0.0002)	(0.0003)		(0.0002)	(0.0003)
Δ Tractors			0.0003***			0.0003***
			(0.0001)			(0.0001)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.300	0.312	0.324	0.299	0.306	0.321
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 6: Dependent Variable: Δ in the ln Number of White Sharecroppers$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.1378***	-0.1006**	-0.1075***	-0.1541***	-0.1916***	-0.1883***
	(0.0178)	(0.0394)	(0.0380)	(0.0175)	(0.0485)	(0.0483)
Farm Population$_{30}$		0.0068**	0.0085***		0.0091***	0.0107***
		(0.0032)	(0.0030)		(0.0030)	(0.0030)
Farm Size$_{30}$		0.0003	0.0003		0.0004	0.0003
		(0.0006)	(0.0006)		(0.0006)	(0.0006)
Land in Farms$_{30}$		-0.0034**	-0.0035***		-0.0028**	-0.0029**
		(0.0013)	(0.0013)		(0.0014)	(0.0014)
Cotton Acres$_{30}$		-0.0009**	-0.0015**		-0.0003	-0.0011
		(0.0004)	(0.0007)		(0.0006)	(0.0008)
Δ Tractors			0.0003			0.0003
			(0.0003)			(0.0003)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.279	0.313	0.318	0.277	0.301	0.309
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 7: Dependent Variable: Δ in the ln Number of Black Sharecropper$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.1607***	-0.1402**	-0.1364*	-0.1382***	-0.1727**	-0.1742**
	(0.0287)	(0.0708)	(0.0709)	(0.0300)	(0.0814)	(0.0794)
Farm Population$_{30}$		0.0186***	0.0177***		0.0194***	0.0187***
		(0.0063)	(0.0061)		(0.0057)	(0.0058)
Farm Size$_{30}$		-0.0010	-0.0009		-0.0009	-0.0009
		(0.0009)	(0.0010)		(0.0009)	(0.0010)
Land in Farms$_{30}$		-0.0058**	-0.0058**		-0.0056**	-0.0055**
		(0.0025)	(0.0024)		(0.0026)	(0.0025)
Cotton Acres$_{30}$		-0.0023***	-0.0020		-0.0021**	-0.0018
		(0.0008)	(0.0012)		(0.0009)	(0.0012)
Δ Tractors			-0.0002			-0.0001
			(0.0006)			(0.0006)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.299	0.405	0.405	0.298	0.404	0.405
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 8: Dependent Variable: Δ in the ln Number of White Managing Tenants$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.0542***	-0.0290	-0.0319*	-0.0603***	-0.0678***	-0.0664***
	(0.0108)	(0.0191)	(0.0189)	(0.0116)	(0.0253)	(0.0255)
Farm Population$_{30}$		0.0011	0.0017		0.0020	0.0027
		(0.0015)	(0.0016)		(0.0017)	(0.0017)
Farm Size$_{30}$		-0.0001	-0.0002		-0.0001	-0.0002
		(0.0001)	(0.0001)		(0.0001)	(0.0001)
Land in Farms$_{30}$		-0.0017***	-0.0018***		-0.0015**	-0.0015**
		(0.0006)	(0.0006)		(0.0006)	(0.0006)
Cotton Acres$_{30}$		-0.0003*	-0.0006**		-0.0001	-0.0004
		(0.0002)	(0.0003)		(0.0002)	(0.0003)
Δ Tractors			0.0001			0.0001
			(0.0001)			(0.0001)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.312	0.342	0.345	0.311	0.335	0.340
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 9: Dependent Variable: Δ in the ln Number of Black Managing Tenants$_{35-30}$

	OLS (1)	**OLS (2)**	**OLS (3)**	**IV (1)**	**IV (2)**	**IV (3)**
ln(AAA$_{Cotton}$)	-0.1367***	-0.1635***	-0.1427**	-0.1153***	-0.1493*	-0.1580*
	(0.0270)	(0.0593)	(0.0556)	(0.0258)	(0.0889)	(0.0857)
Farm Population$_{30}$		0.0107	0.0058		0.0104	0.0062
		(0.0081)	(0.0076)		(0.0070)	(0.0070)
Farm Size$_{30}$		-0.0006	-0.0004		-0.0006	-0.0004
		(0.0010)	(0.0010)		(0.0010)	(0.0010)
Land in Farms$_{30}$		0.0008	0.0011		0.0007	0.0012
		(0.0022)	(0.0021)		(0.0024)	(0.0023)
Cotton Acres$_{30}$		-0.0013	0.0005		-0.0014	0.0006
		(0.0013)	(0.0016)		(0.0016)	(0.0017)
Δ Tractors			-0.0009*			-0.0009*
			(0.0005)			(0.0005)
State Effect	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.097	0.133	0.157	0.096	0.133	0.157
N	635	635	635	635	635	635

[1] Robust standard errors are reported in parentheses.

[2] *10%, **5% and ***1% denote significance levels.

Table 10: Standardized Beta Coefficents of $ln(AAA_{Cotton})$

	Coefficient	St Error	Beta
All Tenants	-0.111	0.018	-0.875
Sharecroppers	-0.158	0.041	-0.621
Managing Tenants	-0.090	0.027	-0.610
White Sharecroppers	-0.188	0.048	-0.711
Black Sharecroppers	-0.174	0.079	-0.472
White Managing Tenants	-0.066	0.026	-0.498
Black Managing Tenants	-0.158	0.086	-0.590

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