Agricultural Production, Supply, and Institutions in the Post-Civil War South

The period from the end of the Civil War to the start of World War I is crucial in Southern history. It was characterized by the dislocations immediately following the defeat of the Confederacy and abolition of slavery, the events of Reconstruction and Redemption, and finally by the rise and decline of Populism. These political developments cannot be explained in economic terms alone, but an adequate description of the economic climate in which they took place is a necessary first step in understanding them.

The bulk of the work summarized here is an attempt to distinguish between alternative hypotheses to explain the poverty of the Southern agricultural labor force in the period, particularly with regard to the freedman. The first of the competing hypotheses might be designated the "legacy of slavery" hypothesis. According to this account, the denial of education to the slaves and the systematic opposition by slaveowners to the development of initiative and independence among the slave population resulted after abolition in the emergence of a free black population with few skills, a lack of entrepreneurship, and generally low productivity. Thus, in the post-war market economy, competition and marginal productivity factor pricing resulted in a low standard of living and little potential for economic development among the Southern blacks. Poorer whites may also have suffered from similar lack of skills and training due to the low priority given to popular education during the slavery period. The land settlement patterns of pre-war days may have also persisted after the war, maintained by discrimination against blacks in the land market and by other obstacles to labor mobility. This settlement pattern would be important in determining incomes if output levels were mainly dependent on the fertility of the land being farmed.

The alternative hypothesis may be called the "exploitation hypothesis." It holds that Southern agriculture after the Civil War suffered from imperfections in some or all markets, particularly the labor market, with labor being exploited in the Robinsonian sense of the wage being less than the value of labor's marginal product. Such a labor system may have amounted to serfdom of the type outlined by Domar in his conjecture on the origins of slavery and serfdom, or it may have simply

1 This idea is developed in many of the more recent histories of the post-bellum South. For just one example, see Kenneth M. Stampp, The Era of Reconstruction (New York: Vintage Books, 1967).
2 Evsey D. Domar, "The Causes of Slavery or Serfdom: A Hypothesis," The Journal of Economic History, XXX, 1 (March 1970).
been a reflection of market power and politico-economic influence of Southern property owners which was not broken by the defeat of their rebellion.

These two hypotheses lead to very different readings of the laws and institutional arrangements that came into being after the war—the tenancy system of farming, the crop lien debt laws, and the entire complex of discriminatory “Jim Crow” legislation and customs. If the plight of the Southern blacks was due to the “legacy of slavery,” these laws can be seen as attempts by Southern property owners to minimize the risks associated with having to deal with an unskilled and unproductive labor force, with the social discriminations being holdovers from racial attitudes that evolved during the slavery period. The laws may even have represented a futile attempt by Southern merchants and landlords to regain market power advantages over the labor force which they had lost with the abolition of slavery.

On the other hand, if market exploitation of labor was the rule, these laws would be the legal instruments for exercise of market power by landlords and merchants: labor mobility restricted, farmers forced to deal with monopolistic and monopsonistic merchants by the crop lien laws, competition between landlords for labor restrained by the “anti-enticement” laws, and large segments of the work force prevented from appropriating the returns to land and capital by restrictions on borrowing and farm ownership, especially by blacks.

These hypotheses are tested by two methods. First, using the published county cross-sectional census data on agricultural inputs and outputs, it is possible to estimate production functions for each Southern state’s agricultural sector without using any information on wages and rents. From these production function estimates, the marginal products of each factor may be calculated. The specification of the production function is a modified Cobb-Douglas form, allowing for cross-county differences in soil fertility, skill differentials between white and black farmers and between farmers of each race growing different crops, and fertility differences associated with land suitability for different crops and cultivation by farmers of different race. The results from 1880 indicate that by that point in post-bellum Southern history, wage exploitation of the agricultural labor force as a whole can be ruled out. Preliminary results for subsequent census years confirm this result. The estimated marginal products of labor for 1880 are consistent with marginal productivity factor pricing and the known output shares received by sharecroppers. These 1880 estimates yield implied labor shares of between .26 and .53 of the output not fed to livestock in every state but Alabama and Florida. Sharecroppers did in fact receive roughly between one-fourth and one-half of their crop, depending on what supplies they provided themselves. 8

3 Eugene W. Hilgard (ed.), Report on Cotton Production in the United States, Also Embracing Agricultural and Physico-Geographical Descriptions of the Several Cotton States and of California, 2 vols. (Washington: U. S. Government Printing Office, 1884).
The production functions are estimated in such a way as to yield maximum estimates of the marginal product of labor. In short, the low standard of living of the labor force after the Civil war seems to have been more due to past exploitation and deprivation than to "current" exploitation.4

There definitely were productivity differences between blacks and whites, between the main different soil types, and between cotton and non-cotton land. For 1880 at least, there were differences in productivity between whites depending on whether they grew cotton or other crops. The labor efficiency differences were not a simple differential between the races. Again in 1880, blacks growing non-cotton crops were more productive than whites growing non-cotton crops, while whites growing cotton were more productive than any other group. These productivity differences may have been due either to differences in labor skill or to differences in land quality worked by the different groups, or both. The specification does not enable these two cases to be distinguished, unless further assumptions are made.

In addition to the production function estimates, cotton supply functions were estimated from USDA price and acreage data over the period 1882-1914. These estimates show that Southern cotton producers were about as price-responsive as United States wheat farmers in the midwestern states over roughly the same period.5 The speed at which farmers adjusted either their desired acreage levels or their price expectations was fast enough to cast doubt on the notion that the agricultural discontent of the 1880's and 1890's could have been caused by "overproduction" problems in which the farmers ignorantly kept to old cropping patterns in the face of relative price changes. In addition, the rise in cotton acreage throughout the South appears to have paralleled the increase in tenancy during that period, but the connection between the two is still rather unclear.

Thus, the basic methodology is to use econometric estimates of the parameters of the fundamental economic and technical relationships (production and supply functions) to test alternative hypotheses on the causes and effects of the institutional forms that characterized Southern agriculture in the late nineteenth and early twentieth centuries, and to account for the overwhelming impression of poverty and stagnation that one receives from accounts of the agriculture of that period. Choice between the alternative hypotheses will contribute to a better understanding of the post-bellum period's legal and political history, and the extent to which the patterns of racial interaction set after the abolition of slavery are the antecedents of the patterns that persist to the present day.

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4 It should be pointed out, however, that exploitation in other markets is not ruled out. For example, the country stores may have exercised market power against farmers in their capacity as consumers. The behavior and profitability of the country stores warrants more investigation.

5 For estimates of wheat supply functions, see Franklin M. Fisher and Peter Temin, "Regional Specialization and the Supply of Wheat in the United States, 1867-1914," Review of Economics and Statistics, LII, 2 (May 1970).