Credit Merchandising in the Post-Emancipation South: Structure, Conduct, and Performance*

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The last three decades of the nineteenth century witnessed only a miniscule growth in the agricultural output of the Cotton South.¹ By the beginning of the twentieth century, all dreams of a "New South" had been dashed and the region would be characterized by any reasonable criterion as economically backward. In One Kind of Freedom (Ransom and Sutch, 1977) we argued that this inability of the Southern economy to expand at the same pace as the rest of the nation stemmed from institutional flaws which stymied economic growth and development. We identified such flaws in the South's educational institutions, in its patterns and

* This article reflects the substance of our comments at the Duke University Symposium: One Kind of Freedom: The Economic Consequences of Emancipation. In preparing our remarks for publication we have benefited from the advice and comments of Claudia Goldin, Stanley Engerman, Peter Temin, Gavin Wright, and Joseph Reid, Jr. As will be clear to our readers, these individuals do not always agree with our interpretation and should not be held responsible for whatever misunderstandings remain.

¹ The Cotton South is defined in One Kind of Freedom as an area of over 200,000 square miles, incorporating 337 counties from the eleven former states of the Confederacy (pp. 273–283 and map on p. xx). Whenever data limitations force reliance upon statewide aggregates, we refer to the five states of South Carolina, Georgia, Alabama, Mississippi, and Louisiana. A discussion of the rate of growth of agricultural output in the Cotton South can be found in One Kind of Freedom (pp. 9–12 and Appendix F), as well as in Ransom and Sutch, 1979, "Growth and Welfare in the American South of the Nineteenth Century," Explorations in Economic History, to appear.
practices of land ownership and farm tenure, in the banking and capital markets, and in the rural merchandising system.

The institutional problems we pointed to have been discussed before, and indeed our attention to these issues did not represent a significant departure from the conventional historical interpretation of the period. Despite its long heritage, our analysis of the role of the rural merchant has become the focus of considerable controversy among our colleagues in economics. Our characterization of the merchant's credit business as a "territorial monopoly" which produced a system of "debt peonage" has been challenged as logically flawed and misleading. The debate has continued for several years now, with only limited progress towards a consensus. Since the symposium at Duke University extended the analysis of rural merchandising and produced a new round of critical discussion, this seems an appropriate place to expand on and hopefully to clarify our own position on the issues. In *One Kind of Freedom* our concern was not (as is the fashion in some quarters) to demonstrate that the standard theory of competitive market behavior could be applied to yet another historical situation. Rather, we hoped to better understand the performance of the South's agricultural economy by examining the structure and conduct of an important industry with which it interacted: rural merchandising. The outcome of this approach was an economic model specifically tailored to reflect the peculiar features of the time and industry under study. We presented that model in an earlier article in *Agricultural History* (Ransom and Sutch, 1975), and we relied heavily upon it in preparing our description of "territorial monopoly" for *One Kind of Freedom*. The *Agricultural History* model incorporates a number of features of the Southern credit merchandising business which we thought were of fundamental historical importance, particularly the crop lien and the dual price structure.

Our economist critics object, claiming that there is no need for a "new" theory, since the existing competitive models employed by economists to

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2 C. Vann Woodward's *Origins of the New South* (1951) is a highly regarded history of the period. The bibliography by Charles Dew (1971) and the review by Harold Woodman (1977) are also useful guides to the historical literature.

3 The basic elements of our debt peonage argument, together with supporting evidence, appeared in Ranson and Sutch (1972, 1975). Our conclusions were challenged by Brown and Reynolds (1973), DeCanio (1973; 1974a, pp. 111–113), and Higgs (1977, pp. 56–57, 184).

4 We do not intend to suggest that the other elements of our discussion in *One Kind of Freedom* were accepted without question or criticism. Some of the other issues raised at the symposium are dealt with in a second paper in this volume (Ransom and Sutch, 1979). Our original arguments on sharecropping and racism have been extended in Ransom and Sutch (1978a).

5 This methodological procedure has been standard in the field of industrial organization at least since the appearance in 1959 of Joe S. Bain's *Industrial Organization* (Bain, 1968). We employ the term "industry" in Bain's sense of that word. The output which defines this particular industry is seasonal agricultural credit secured by a crop lien.
study a wide range of problems explain the situation in the postbellum South "well enough." Claudia Goldin, Joseph Reid, and Peter Temin each raise this argument in the present volume, as did Stanley Engerman during the symposium. They differ, however, in their choice of the competitive model offered as an alternative. Temin seems to favor models of "spatial competition of the sort analyzed by Hotelling and Lösch" (Temin, 1979). Engerman spoke of "imperfect competition" and "monopolistic competitors"; terms which are commonly used to describe models associated with E. H. Chamberlin and Joan Robinson. Reid made the even bolder claim that credit was supplied "competitively" and "efficiently," suggesting that he was thinking of the model of pure competition developed by Smith and Marshall (Reid, 1979). Goldin offered no explicit competitive model, but took pains to argue that "merchants may not have been monopolists" (1979). As a consequence, a considerable portion of the debate has been directed toward the demonstration that some competitive model or another is an adequate framework within which to examine the issue of economic growth in the postbellum South.

The first point that needs to be made is that neither our approach nor that of any one of our critics can be said to be "incorrect." Each offers an "explanation" of the economic behavior of merchants and farmers in the South after 1865, and they all focus attention on the role which market forces played in shaping that behavior. Our interpretation concludes that competitive forces in the credit markets were stifled by certain institutional features; our critics tend to stress that powerful competitive pressures were nonetheless present and affected the economic outcome. We claim that the credit charges of merchants were higher than they would otherwise have been because of the merchant's exploitive monopolylike position; our critics insist that the magnitude of these charges can be justified by legitimate costs incurred in providing the credit services. We insist that farmers in the South, confronted by monopolistic prices, would have preferred to grow less cotton and more corn, but were forced to do otherwise; our critics insist that Southern farmers concentrated on growing cotton because they perceived the advantages of that crop in the South.

Brown and Reynolds (1973), DeCanio (1973, 1974b), and Higgs (1973, 1977) have made similar points elsewhere. For a more complete exposition of our views on the methodological issues at stake, see Ransom and Sutch (1978b).

Elsewhere, DeCanio has suggested the applicability of a model of "monopolistic competition" in which the "rate of profit is driven down to normal levels" (DeCanio, 1979). Though Higgs stresses the force of competitive pressures, he comes the closest of our critics to our own position by asserting that monopoly power played a role in explaining merchant behavior (Higgs, 1977, pp. 57-58). Brown and Reynolds do not offer an alternative model "derived from competitive theory," and they even agree with us when they say "it may be useful to describe the merchant-creditors as possessing some degree of monopoly power" (Brown and Reynolds, 1973, pp. 862, 866). Their tone, however, remains skeptical.
To some observers this dispute may appear as merely a metaphysical dialogue on the part of economists, each concerned to show that his or her abstract model of "competition" or "monopoly" best fits the "reality" of the postbellum South. However, we believe that there is more at stake than the theoretical elegance of economic models. The methodological issues which lie at the center of this debate are of importance to historians as well as economists, and the question of whether or not Southern farmers earned lower incomes than they might have in a different institutional environment is of considerable historical interest.

From the beginning our thinking about the role of the Southern merchant was influenced by the historical evidence (subsequently summarized in One Kind of Freedom, pp. 149–164), that farmers vociferously and repeatedly complained that merchants would not allow them to farm as they wished. The farmers explained that their need for seasonal credit and the absence of an alternative supplier of such credit compelled them to accede to the merchants' wishes. Since this description was consistent with other evidence, we accepted it as accurate, and intentionally constructed a model of the mercantile business to incorporate a form of monopolistic power and to offer an explanation for the farmers' complaints of exploitation. Throughout the debate, our critics have placed little weight on this historical evidence. Some of them ignored it outright; others dismissed the farmers' complaints with a non sequitur that "historically, 'middlemen' have not been held in high repute."\(^8\)

In this situation, one might at first be inclined to believe that our interpretation might best be defended by gathering even more evidence that the farmers' complaints were real, and that they accurately reflected the situation. Since no alternative model has adequately explained the farmers' outcry, such additional support might settle the issue. On the other hand, we recognize that conventional theories of economics do not admit the possibility that exploitation by a credit monopoly and the forced overproduction of cotton could have happened in the market economy of the postbellum South. Therefore, we concluded that what is needed is not more historical evidence that these phenomena were real, but rather a reasonable theoretical mechanism which explains how such things could happen.\(^9\)

\(^8\) Brown and Reynolds (1973, p. 866). DeCanio devotes a chapter of his book to an argument which suggests that contemporary literary evidence ought to be ignored as inherently unreliable by quantitative historians (1974a, Chap. 2). An analysis and rejection of DeCanio's argument can be found in Sutch (1975, pp. 402–406).

\(^9\) In this regard, consider Claudia Goldin's comment that "the crucial issue is not what merchants actually did, but whether [they] would have wanted to force tenants into overproducing cotton...." We believe that what merchants actually did is indeed the crucial issue, but we recognize the need to provide an explanation of their actions which is consistent with the basic principles of economic analysis.
We originally proposed such a mechanism in the *Agricultural History* article already mentioned (Ransom and Sutch, 1975), but our critics at the Duke University Symposium remained skeptical. As we understand it, their skepticism is based on a feeling that the theoretical model which we employ to describe the workings of the post–Civil War credit monopoly system is not applicable to the historical situation in the sense that it has implications which are inconsistent with evidence presented in *One Kind of Freedom*. Therefore, rather than offering new evidence, we shall try to respond to the specific questions directed by the symposium participants to the theoretical issues involved in our arguments. To order our remarks, we have organized them under three traditional headings: Structure, Conduct, and Performance.

**STRUCTURE**

The issues raised with respect to our description of the industrial structure of credit merchandising are captured in the rhetorical question: "How can an industry with thousands of small firms, each located only a few miles from its nearest counterpart, an industry frequently experiencing both new entry and failures of existing firms, and exhibiting rapid growth be characterized as "monopolistic"?" Since none of the critics took issue with the quantitative data we presented to describe the structure of merchandising (*One Kind of Freedom*, pp. 132–146), the dispute must involve the way in which we and our critics interpret the evidence. As we see it, there are at least three substantive issues involved. One regards the size of the firm, the second regards barriers to competition, and the third involves the frequent entry of new firms and the growth of the industry.

*Size*

It is true that the typical country store in the postbellum South was small. It served fewer than seventy farms, and probably did less than $6,000 of business annually (*One Kind of Freedom*, p. 137). But we maintain that small size is not incompatible with monopoly power. In the South stores were isolated from direct competition with each other by the high costs of transportation and information. In our view, this isolation gave each merchant a monopoly within his own limited market area. We characterized this type of geographically constrained monopoly as a "territorial monopoly." Small size, of course, makes entry easier for potential competitors. However, this point should not be exaggerated. The "optimal-sized" firm seemed to require a net worth of between $5,000 and $10,000; a sum well beyond the means of most southerners (*One Kind of Freedom*, p. 138). In any case, there were substantial barriers to competition.
Barriers to Competition

According to our argument in *One Kind of Freedom*, the localized monopoly of the rural merchant was protected from direct competition by various barriers to successful entry. We believe that the most important of these barriers were: (1) the particularistic nature of Southern society that excluded most outsiders from participation in the social life of the community and thus made economic life there less attractive (*One Kind of Freedom*, pp. 117, 120); (2) a coincidence of interest between landlords and merchants that made it difficult to shift tenant farmers away from their established merchant without the landlord’s cooperation (*One Kind of Freedom*, pp. 127–128, 146–148); (3) the political and social power of established merchants that made it unwise (and even dangerous) for customers to shift their patronage elsewhere (*One Kind of Freedom*, pp. 126–127, 147–148); and (4) economies of scale which made firms capitalized at less than approximately $5,000 poor risks (*One Kind of Freedom*, pp. 137–140). Of these four arguments, only one—the coincidence of interest between landlord and merchant—has been questioned by our critics.

Goldin and Reid both ask why the landlord would not have had an incentive to prevent the exploitation of tenants by the merchants.\(^\text{10}\) Although these authors presented neither evidence nor an argument suggesting that landowners actually did have an economic interest in protecting their tenants, one possible argument along these lines was offered by Stanley Engerman. He suggested that exploitation of tenants by merchants might have lowered the land rent which could be charged by landowners. Such an argument presumes a significant elasticity in the demand for rented land, so that lower expected incomes for tenants would lead to lower demand for tenant farms. Engerman’s conjecture also presumes that landlords perceived their class interest in making tenant farming more attractive, and acted in concert against merchants to achieve this end. We think there is a good reason to reject both of these presumptions.

It is misleading to think of Southern farmers as freely choosing to pursue an agrarian life from some number of other alternatives. Most farmers, particularly the newly emancipated blacks, were trapped into agricultural occupations by their poverty, ignorance, and immobility. To suggest that the level of income which they expected to earn from farming had much impact on the aggregate demand for land rentals strains the

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10 Goldin (1979) draws on the work of Jonathan Wiener (1975) for evidence of planter–merchant conflict. However, we interpret the conflict which Wiener focuses on as being political and social rather than economic in nature (*One Kind of Freedom*, p. 346, footnote 34). In *One Kind of Freedom* we discussed merchant–landlord relations on pp. 146–148.
historical evidence. If the demand for land was elastic, why did it take over a generation for a sizable outmigration from Southern agriculture to develop?¹¹

Even though the aggregate demand for tenant farms—and therefore rents—was unlikely to be very responsive to the level of expected income, it might still have been possible for an individual landlord to charge higher rents than were generally prevailing if he could promise a less exploitive merchandizing arrangement. The farmer would be indifferent to the choice, however. In one case he would be exploited by the merchant charging an exhorbitant price for credit, in the other he would be exploited by the landowner charging an exhorbitant rent for land. While the possibility of increasing rents might have an obvious appeal to landlords, the problem they faced was finding a way to successfully force the merchant to provide better terms to the farmer. In principle, one can imagine the use of political or physical force; or the effective use of moral suasion to accomplish this end. However, there is no evidence that such attempts were common. Apparently landlords who were not themselves merchants did not typically have the power to countervail the merchant’s monopoly over the supply of credit.¹²

The most obvious way for a landlord to divert any potential monopoly profits into his own pocket was to become a merchant himself. It is obvious that in any case where the roles of landlord and merchant were combined, no conflict of interest would exist to protect the tenant borrower. In some regions of the South, the planter class actually did take over the merchandising business, and in other parts the merchants took over the land, displacing the previous landowners (Wiener, 1975, 1976, 1978; One Kind of Freedom, pp. 146-148). We have not estimated what fraction of tenant farmers rented land from an individual who was both landlord and merchant, although we believe that such situations were common.¹³

¹¹ Incidentally, this point about elasticity appears to be relevant to the argument that Goldin attributes to Fred Dong that tenants would refuse to enter a business in which they would be victimized by merchants. According to our way of thinking, the tenant farmers had little choice.

¹² We do not believe that the political disagreements or the hostility between merchant and landowning classes were prompted by attempts on the part of landlords to improve the lot of their tenants. To cite these conflicts as evidence that landlords protected tenants ignores the many other sources of conflict between groups. Moreover, the fact that tenants would not, in any case, escape exploitation makes such counterfactual speculations irrelevant to our major point.

¹³ In One Kind of Freedom we reproduced a contract between Fenner Powell, a sharecropper, and A. T. Mial, his landlord (Fig. 5.1, p. 91). Interestingly, Mr. Mial was also a credit merchant (Fig. 6.2, p. 124). Our conjecture that such situations were common should perhaps be tested by a detailed study of merchant landholdings.
Entry and Growth

Our identification of the barriers to successful entry into rural merchandising is fundamental to our argument since entry is generally regarded to be the nemesis of monopoly power. Some critics, however, see a contradiction between our claim that barriers to competition protected the monopoly of the general store and our quantitative evidence that attempts to enter were nevertheless common. Thus, it is equally important to our argument to maintain that effective barriers to competition are not necessarily incompatible with frequent attempts to enter the industry, nor with growth in the number of firms. Many of the new ventures into merchandising would be doomed to an early failure, of course, if the barriers were truly in place. That, at least, is the interpretation we put forward in One Kind of Freedom to explain the high rates of entry and failure observed (pp. 140–146). Our critics apparently question this explanation on the grounds that prospective competitors would be foolish to even attempt entry if it were clear that barriers to success were insurmountable. In a static environment this argument would carry some force. However, during the period over which we measured entry into and exit out of Southern merchandising (1870–1885), the industry was experiencing rapid growth. In a 27-county sample, the number of general stores increased over fourfold (Table 7.6, p. 141). We believe this growth was in response to four factors which served to expand the demand for the merchants' services. First, there was the growth of agricultural output, which we estimated expanded 45.7% between the two dates (Table F.3, p. 259). Second, there was the spread of tenancy as the old plantation system broke down (pp. 68–71, 87–88). Third, there was the consolidation of the furnishing business into the hands of general merchants and away from the planter elite and the cotton factors (pp. 107–109, 117–125). And finally, there was the rapid growth of general stores located in towns and cities (pp. 141–142).

The increased demand for merchants' services in rural areas could not be met by an expansion in the scale of existing stores much beyond a capitalization in the neighborhood of $10,000. We conjectured that the information and supervision costs became excessive beyond that size (One Kind of Freedom, pp. 137–139). With a limit on the size of an individual store, expansion of the tenant system and the expansion of agricultural production meant that there was room for some new entrants to successfully establish themselves. Although the threat of failure was very real (approximately one-third of all new entrants between 1870 and 1885 failed within five years), the lure of monopoly power and the chance to establish a new business in a growing industry apparently attracted a continuous stream of potential store operators into the furnishing business (One Kind of Freedom, Table 7.8, p. 143).
The expansion of the market for merchants' services meant that the geographical size of the existing merchants' territory could shrink as entry took place without reducing the volume of business or weakening the effective control which established merchants held over the farmers still within their territories. An examination of the location of successful entrants demonstrated that for the most part they located on the boundary between two or more existing markets (One Kind of Freedom, p. 140). Thus, the successful new entrant was able to carve out a market of his own that was geographically distinct from those of nearby stores. However, from the perspective of the farmer, such new entry would rarely bring effective competition. 

**CONDUCT**

The most significant issue concerning the conduct of the rural merchant's business which our critics raise is whether or not the rate of interest charged for seasonal credit was exhorbitant. We believe that three aspects of this question must be kept distinct: (1) Was the credit price for supplies exhorbitant in the sense that it exceeded marginal cost? (2) Did we correctly calculate the implicit rate of interest which farmers who bought on credit had to pay? (3) What does the interest rate paid by the farmer imply for the rate of return on the merchant's capital?

**Credit Prices**

There is no question that the differential between cash and credit prices was substantial. Data reported by the Georgia Department of Agriculture between 1881 and 1889 showed that credit prices averaged 29.7% higher than cash prices. The high markup for credit does not, of course, represent a prima facie case for exploitation. Temin, Goldin, Reid, Engerman, DeCanio, Brown and Reynolds, and Higgs have all suggested that these high credit prices may have merely reflected the high risks of lending to tenant farmers during this less-than-prosperous era.

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14 The inference drawn by Goldin that "there were large numbers of farmers who had virtually no access to a merchant prior to the appearance of one of [the] new entrants" is, we believe, unwarranted. Despite the rapid growth in the number of rural store locations, the average distance between a farmer and his geographically nearest merchant was only modestly reduced. The increase by 2.4 times in the number of store locations in 27 representative counties between 1870 and 1880 (Table 7.6, p. 141) implies that the average geographical area covered by a merchant contracted from 169.4 to 70.3 square miles, with an accompanying fall in the radius of the merchant's territory (the distance \( x \) in One Kind of Freedom, Fig. 7.1, p. 136) from 8 to 5.2 miles. We believe that 8 miles would not make the store location so remote as to be beyond the range of a typical farmer.

15 Claudia Goldin, who has made an extensive review of available data on credit prices, has accepted the reliability of the Georgia data which we employed.

16 Our calculations are given in One Kind of Freedom, Tables 7.1 and 7.2 pp. 129–130. See
this is a plausible argument, these writers do not provide evidence relating
to the actual levels of either the costs or risks in the 1880s.

In *One Kind of Freedom* we constructed an example to illustrate what a
"reasonable" markup for credit sales might be, making what we argued
were generous assumptions about the costs of lending and assuming a 5%
rate of default on loans outstanding. In order for the merchant to earn a
10% return on the capital invested, our example showed, the credit price
would have to have been about 10% above cash prices—or only one-third
the level of the observed credit/cash price differential in Georgia (*One
Kind of Freedom*, Appendix D). No one has criticized our method of
calculation or our cost estimates. The only point which appears to be at
issue is the true magnitude of the default rate. We chose a level of 5% for
our example on the basis of a 1929 study by Sherrod Morehead. We
argued that twentieth century default rates would surely exceed those of
the period before 1890, and we also built into our calculations a generous
allowance for supervisory costs. Calculations reported in *One Kind of
Freedom* indicated that the reported default rate would have to have
equalled 38% per year to justify the markups actually charged (pp. 242–
243).

The only additional evidence presented by our critics on this issue of
default rates is Goldin’s report that 25% of the tenants failed to fully meet
their end-of-the-year obligations. This statistic was taken from a survey of
landowners conducted by the North Carolina Bureau of Labor Statistics
in 1887 which reported that approximately 75% of tenants were able to
"pay out" that year (Jones, 1887, pp. 82–85). We believe that two points
need to be made. First, while the proportion of farmers left in debt may
have been as high as 25% such a figure can not be taken as evidence that
one-fourth the mercantile debt was defaulted each year. The relevant
statistic is not the proportion of farmers who failed to pay fully on time;
but rather the proportion of all money lent out that was carried forward or
lost. Since even those farmers who failed to "pay out" must have typi-
cally repaid a sizable fraction of their season’s debt, a 5% overall default
rate is a reasonable estimate in the context of our example. Second, the
North Carolina Report is not inconsistent with our model of merchant
behavior, which suggests that the storekeeper would attempt to exprop-
riate as much as possible of the farmer’s surplus income and leave the
farm family with little or nothing after paying their end-of-the-season
debts (Ransom and Sutch, 1975, pp. 413–415). In such a world, it would
hardly be surprising if as many as 25% of the farmers fell below the line.

There is no doubt that more research is needed to improve our knowl-

866–867), and Higgs (1977, pp. 56–57) for the views of these authors.
edge about the actual rate of default on nineteenth century merchant loans. Until such work is completed, however, we remain convinced that our earlier estimate of a 5% rate of default annually is likely to exaggerate the true figure, and it is virtually certain that the truth was nowhere near the 38% rate required to justify the credit charges actually observed.

The Rate of Interest

In One Kind of Freedom, we calculated that the rate of interest implicit in the cash-credit price differential was 59.4% per year (Table 7.2, p. 130, and Appendix D). Goldin and Temin both suggest that our method of computation exaggerates the rate of interest implied by the credit prices. For the purposes of our calculations, we assumed that all loans were repaid when due. They argue that the loans were frequently left unpaid in November and carried without charge into the subsequent calendar year. If that were the case, then the average length of the retail credit loan involved would exceed six months, and the effective interest rate paid would be correspondingly lower. We cannot accept this suggestion for several reasons. First, our model of the merchant's business suggests that he would have strong reasons to prevent the farmer from accumulating a debt which he could not pay off on time. As Robert Higgs has observed, "promoting a perpetual indebtedness would have meant giving away real resources." Second, we have found no evidence that merchants actually did carry sizable accounts from one year to the next. On the contrary, our evidence suggested that merchants were likely to curtail the credit of someone who was in jeopardy of overextending his means of repayment. Third, when bad weather or miscalculation left a farmer unable to discharge his obligations, the typical practice seems to have been for the merchant to carry the debt at some explicit rate of interest. Jaqueline Bull reports that such a rate varied between the legal ceiling of 8% up to 25%. (Bull, 1952, p. 48). Our critics present no evidence that debts were generally carried from year to year without additional charge. Finally, it is worth noting that if our critics were right and we were wrong on this point, it would only affect the rate of interest received by the merchant. Assuming that the debts were paid when due is the correct method of calculating the contractual rate of interest charged the farmer. If the farmer entered the agreement in good faith, then the contractual rate is the one which must have influenced his decisions at the beginning of the season. An adjustment of our interest rate figures would be justified only if it is shown that farmers expected at the outset that

17 Higgs (1977, p. 58). Also see Ransom and Sutch (1975, pp. 413-414, and One Kind of Freedom, p. 163.

18 Bull does mention this possibility in her account and cites one instance in which the books of a merchant appear to have recorded no interest charged on a debt carried forward (Bull, 1952, p. 48).
their debts would be carried without additional charge beyond the November date. We have encountered no evidence that suggests tenants held such expectations.

Rate of Return

Temin suggests that we may have exaggerated the rate of return earned by the merchant because the typical loan period was six months rather than one year. He argues that the merchant's financial capital could not have been loaned out at the exhorbitant rates for the entire year. Rather, the merchant dispensed credit only as the farmer requested it throughout the year, leaving much of the mercantile capital idle for long periods of time. In Temin's model, that capital which was not loaned to farmers would be invested at the "normal" rate of return, thus earning income for the merchant. Over the period of a year, therefore, only about one-half the merchant's money would be invested in "exploitive" loans; the remainder would earn only a normal return. As a consequence, concludes Temin, the correct order of magnitude for the return to capital for a merchant whose credit prices were 30% above cash prices, was only 30%—not the 60% which we estimated.

This particular dispute is unnecessary. Since we made no attempt in One Kind of Freedom to calculate the rate of return on merchants' capital, we could not have miscalculated such a number. Our attention was directed to assessing the impact of the high credit prices on the farmers who had contracted to pay them; the profitability of the credit merchandising business was of only incidental relevance to our discussion. The rate of interest charged on the principal (the figure we calculated) is not the same concept as the rate of return on the total capital invested (the figure Temin discusses).

In any case, Temin's line of argument is invalid because it is based on an inaccurate description of a typical merchant's operation. The storekeeper did not, as Temin argues, set aside a fixed sum of his capital upon which to draw when his clients needed credit; the typical merchant was himself a borrower of capital. He obtained goods on consignment and paid the prevailing rate of interest for the credit extended. We found no evidence in our examination of Southern merchandising that commission rates were substantially above the rate prevailing in the North or West. Nor did we find evidence that store owners had substantial capital tied up in inventories.

20 We did estimate that 51 out of 94 successful merchants increased their net worth at the rate of at least 15% per annum (One Kind of Freedom, pp. 144–145). We noted that in some instances these gains were accomplished by attracting outside capital, but in any case, the point remains that the rate of growth of capital is not the same as a rate of return.
PERFORMANCE

Four issues were raised during the symposium about the evidence we provided on the performance of the merchandising industry. Our critics doubt that merchants were able to redistribute income in their favor by making monopolistic profits. They question our finding that merchants were able to force farmers to produce more cotton than they wished. Goldin suggests that we exaggerated the extent of the merchant's impact on southern agriculture by overstating the number of farmers who borrowed on credit and overestimating the magnitude of their credit purchases. And, largely by implication, our critics seem to discount our argument that the merchandising system helped to stifle economic growth.

Merchant Monopoly Profits

We chose the term "monopoly" to characterize the rural merchandising industry because we wished to emphasize the control which merchants exercised over their farmer-clients. Their power to influence the farmer's activities was a consequence of the absence of alternative sources of credit, and the extent of that power was reflected in the magnitude of the credit prices charged. Although we did not stress the point, there is another implication of the monopolistic structure of the business which has attracted attention. While our model does not invariably predict that merchants would accumulate large personal fortunes, their monopoly power and the high prices charged do raise the possibility that successful merchants significantly increased their net worth. Such evidence as we were able to gather substantiated our claim that this process did occur with some regularity (One Kind of Freedom, pp. 144-146), and contradicts Peter Temin's claim that a model of "spatial competition" in which only normal profits are earned fits the evidence equally as well as our concept of "territorial monopoly." 21

Overproduction

No aspect of the arguments presented in One Kind of Freedom provoked more controversy than our assertion that merchants compelled

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21 We would emphasize that our model does not imply that territorial monopolists would invariably reap substantial profits. In the first place, no model of monopoly—ours included—implies that price will inevitably exceed average cost by a substantial margin. Prices which exceed marginal cost are the hallmark of monopoly power. We do not wish to press this point, since our examination of the successful merchants in the Mercantile Agency records and our cost estimates both suggest that price did exceed average cost in the usual case. Our monopoly model does suggest, in contrast to classical models of monopoly, that the scale of the firm will be constrained by the limits to the territory which can be served. Failure of mercantile houses to grow much beyond the size represented by a "pecuniary strength" of $10,000 cannot, therefore, be used as evidence against the applicability of our model.
their customers to plant more cotton each season than the farmers de-
sired.²² So many different points have been raised in this discussion that
perhaps the best starting point is from the common analytical ground
which we share with our critics. All of the commentators seem to accept
our underlying assumption that Southern farmers were market-oriented
producers who responded to changes in relative prices.²³ An implication
of that assumption which seems to be universally accepted is that, in the
absence of distortions, Southern farmers would have chosen to devote
some fraction of their acreage to cotton as a cash crop and would devote
the remainder of their acreage to feed and food stuffs such as corn.²⁴ The
proportions of cotton and corn would be adjusted each year at planting
time in accord with the farmer's expectations about market prices which
the two crops would command at harvest. A geometric portrayal of this
market response is displayed in Fig. 1, where the curve CC reflects the
production alternatives of a given farm. In the diagram, the expected
market price ratio for the two crops is measured by the slope of the
straight line PP. As in the traditional analysis, the Southern farmer would
prefer to produce at point S, where PP is tangent to CC.

The main point at issue is how this simple analysis should be modified
to reflect the presence of a dual price for corn: one price for corn pur-
chased with cash; the other for corn purchased on credit. It was our
argument that the two-price structure would give those farmers who
anticipated ending the current season with an insufficient surplus (of
either corn or cash) to meet the farm's corn requirements in the sub-
sequent year a different perspective than that of other observers. The
cash price of corn would be irrelevant to such a farmer. He would not
anticipate having surplus corn to sell at the cash price. Moreover, he
would be unable to purchase all of the corn needed at the postharvest cash
prices and therefore would be forced to fill his corn deficit at the higher
credit price. At the margin, corn grown this season will be worth more
than its cash price to such a farmer. Anticipating that he will have to pay
the credit price for purchased corn in the future, the farmer would wish to
plant more corn this year (if he were allowed to) than would be the case

²² Goldin (1979), Reid (1979), and Temin (1979) each raised questions or expressed doubts
on this point at the symposium.
²³ DeCanio (1973) has taken some care to establish this point econometrically. Gavin
Wright makes the point that an assumption of market orientation should not be accepted
uncritically. Many small farms may have shunned the market in order to protect themselves
from the uncertainty and from a dependency inherent in market activity. However, even
Wright accepts the assumption that farms were influenced by market forces in the post Civil
War environment (Wright, 1978, pp. 45–47; 164–176). Most of the other commentators
accept the assumption of market orientation without question.
²⁴ As Temin makes clear, it is convenient to allow "corn" to represent a composite good
which aggregates all of the feed and food crops on the farm, just as cotton could stand in the
analysis for any of the other southern cash crops.
were there no difference between cash and credit prices. The higher the anticipated credit price, the more corn and less cotton would be desired at the outset of any year. Put in terms of Fig. 1, the introduction of a credit price for corn reduces the slope of the price ratio as viewed by such a farmer from $PP$ to $P'P'$, and shifts the desired crop mix from $S$ to $F$.  

Would Southern farmers have perceived their self-interest as our analysis presumes? If not, there was certainly no shortage of advice from those who urged farmers to consider the credit price for corn supplied and not the cash price when making their decisions at the outset of the season. The January 1880, report of the Georgia Department of Agriculture was explicit:

Think of this farmers of Georgia who buy bacon at credit prices: Can you not raise bacon at less than twelve cents per pound?

If farmers had the cash to purchase the year's supply early in the season when the price is low as it has been for several years past, from 4½ to 5½ cents, it might possibly be cheaper to them than raising a full supply; but how few avail themselves of these low prices. Do they not deceive themselves with the idea, however, that they cannot raise it at 4½ cents per pound, and yet buy at twelve cents?

The fact that it sells during the winter at 4½ cents does not benefit him who

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25 See our earlier presentation of this argument in Ransom and Sutch (1975, pp. 407-411), and in One Kind of Freedom, pp. 161-162.
must purchase during the summer at twelve. The question for him to consider is not whether he can raise it at 4½ cents, but whether it is not cheaper for him to raise his bacon than to buy at 12 cents.28

Temin argues that our analysis of the dual price (and by implication the argument by the Georgia Department of Agriculture just quoted) contains a logical flaw. He explains his case as follows:

"The cost of borrowing... was a sunk cost at the time of planting. Irrespective of what [the farmer] planted, he would have to pay interest to the merchant to get through the year. But this interest should not have been a factor in his decision of what to plant. When deciding what to plant, the farmer should have chosen a crop mix that would maximize his income in terms of corn. He did not consume cotton; he grew it only to acquire the income used to buy corn... And the corn bought after the harvest with the proceeds from his cotton crop could be bought for cash.

The relevant price ratio for deciding what crops to plant therefore was the ratio of the cotton price to the cash price of corn.

We do not accept this argument. It is true that the cost of the current year's borrowing is sunk, it is the anticipated high cost of corn in the subsequent year which is relevant to our model; not the magnitude of the current year's debt or the current credit price of corn. (The line $P'P'$ is based on the selling price of cotton and the purchase price of corn which the farmer expects to face at the end of the season.) If the farmer changed the crop mix this season to favor corn, he would obviate the need to purchase so much exhorbitantly priced corn next year.

Temin objects, arguing that a farmer who did as we suggest would not be maximizing his income. This objection would only be correct if we assess the contribution of the current year's corn crop to income in terms of the cash price of corn. Our argument is that it should be assessed, not at that price, but at the expected credit price for corn in the subsequent season, since that is what it is worth to an indebted farmer. Temin counters that this part of our argument overlooks the possibility that the farmer could buy corn at cash prices after the harvest with the proceeds of the cotton crop. But there was a feature of the credit merchandising business which rules out this possibility. It must be remembered that the merchant was able to manipulate both the credit price and the amount of cotton to be grown in a way that the current year's corn requirements (at credit prices) would be such a large fraction of the farmer's total output that there would be no cotton left for the farmer to sell on his own account (Ransom and Sutch, 1975, p. 415).

Our basic argument comes down to a simple proposition: The cost of credit should not be irrelevant to a farmer's crop mix choice since he would reduce his future need for credit by adopting a more corn-intensive

28 Georgia Department of Agriculture (1880, p. 6). The credit price of 12 cents a pound used by the GDA in this example exaggerates the typical situation. The average credit price for bacon in 1879 was 9.5 cents a pound; the average cash price was 7 cents per pound (One Kind of Freedom, Table D.1, p. 239).
crop mix this year and year-in year-out.\textsuperscript{27} In the Appendix to this paper we reiterate this argument in a more rigorous fashion.

Temin observes that if farmers were actually producing at point $F$ in Fig. 1, they would be operating inefficiently since, from any perspective other than the farmer's, $PP$ represents the relevant price ratio, and $S$ the efficient crop mix. The farmer is oblivious to this inefficiency, since from his perspective, corn is more valuable than its cash price would suggest.\textsuperscript{28} Most other Southerners would have had no powerful interest in avoiding this inefficiency by intervening to prevent the farmer from choosing the more corn-intensive crop mix at $F$. However, the merchant would do less business with a customer producing at $F$ than with a customer who produced at $S$. For this reason, the merchant would exercise whatever power he could bring to bear on the farmer in an attempt to compel a greater production of cotton than the farmer would prefer. In other words, the merchant would act to push the farmer away from $F$ and back towards $S$.

The merchant offered the only credit that could be secured with a crop-lien, and the farmer who had no other collateral would have been unable to resist the merchant's insistence that sufficient cotton be planted before a credit line would be approved. Because the farmer was prevented from growing more corn in response to the merchant's credit prices, the efficiency loss commonly associated with the distortion of monopoly prices was largely avoided. The farmer was compelled to grow more cotton, and this reduced the "deadweight social loss" from allocative inefficiency. However, the social increment generated by the forced specialization was taken by the merchant in the form of exhorbitant credit charges.\textsuperscript{29}

\textsuperscript{27} In the course of his remarks, Temin suggests an alternative way to analyze the presence of a dual price for corn. Rather than think of two different prices for corn, think of two distinct goods —"cash-corn" and "credit-corn"— each with its own unique price. In principle, we have no objection to this approach. With three goods in the analysis there would be two relative price ratios, the cotton/cash-corn price ratio as before and now the credit-corn/cash-corn price ratio. Of course, this last relative price is a simple function of the rate of interest, and we discussed its magnitude at length in One Kind of Freedom (pp. 128–131 and Appendix D). Farmers faced with a high credit-corn/cash-corn ratio would choose, if free to do so, to produce more credit-corn than they would if the price ratio were lower. To increase the production of credit-corn (corn grown this year and stored until next year) would require that less cotton be grown. This is, as one would expect, the same result obtained in our analysis. Facing high prices for credit, the farmer would prefer to grow less cotton and more corn than he would otherwise.

\textsuperscript{28} We have no quarrel with Temin's formal definition of economic efficiency in terms of market price ratios. We merely wish to point out that when there are more than one set of market prices, efficiency is not uniquely defined. In this case the indebted farmer's notion of efficiency is different from that of other observers.

\textsuperscript{29} Claudia Goldin misrepresents our position when she sees both allocative inefficiency and redistributive harm as a consequence of our model. Redistribution of income in favor of the merchant is an implication of our model, but large static inefficiencies are not.
How great was this redistribution? In One Kind of Freedom we presented two measures of the effect. We calculated that a farmer who paid credit prices in 1880 could have increased his income at the margin by about 29% by shifting resources from cotton to corn had he been free to do so (pp. 166–167). A second measure considered the effect of credit prices on a black tenant family in 1879. We estimated that when the family purchased on credit rather than cash it lowered their real income by 13.5% (p. 169).

Extent of the Monopoly

How many farms were affected by the merchant’s monopoly? We estimated that 44.2% of all farms in 1879–1880 might have avoided dealing with the credit merchant (Goldin, by the way, estimates that only 30% escaped purchasing supplies on time). However, many (83.5%) of the farms that avoided dealing with the merchant did so by achieving self-sufficiency in the production of corn and foodstuffs. We believe that roughly 60% of these self-sufficient farms escaped the merchant by ignoring relative prices and adopting a “safety first” strategy of producing their own supplies in sufficient quantity to insure continued self-sufficiency. Cotton is then grown only as a “surplus” crop. These farms have escaped dealing with the merchant, but they have not remained unaffected by his power. In order to avoid the threat of falling into debt, they have accepted a lower income (at self-sufficient production) than they would have if they were able to maximize the value of output measured by cash prices (at S in Fig. 1). (See Ransom and Sutch, 1975, pp. 412–413.) Our final estimate of the proportion of farms that were affected by the merchant’s monopoly is 78%. This estimate includes the 55.8% of farms which were locked in, plus the 22.0% indirectly affected. Of course, the locked-in farms did not purchase everything they required on credit. Most farms began the year with some cash reserves, which would typically be exhausted within a few months (Sisk, 1955, p. 707). We suggested that a

The historian would wish to stop short of lauding the merchants as benefactors of the South for two reasons: If it were not for the merchants’ exhorbitant credit prices, farmers would not wish to farm “inefficiently” at F in the first place, and in the second place, it was the merchants and not the farmers who were the beneficiaries of the coercion.

30 One Kind of Freedom, p. 164 and note 52, p. 351. This estimate is based upon the calculation that 28.7% of the small farmers were self-sufficient, and the assumption that all of the 21.8% of southern farms that were larger somehow avoided purchasing on credit (p. 164). Elsewhere we reported the results of a survey taken in Georgia in 1875 and 1876 that approximately 25% of the farmers avoided purchasing on credit (p. 123).

31 The 60% figure is the fraction of the self-sufficient farms that were characterized as small family units One Kind of Freedom, Fig. 8.5 and Table 4.3; pp. 160, 169). This is admittedly a rough guess. The safety first model has been discussed extensively by Wright and Kunreuther (1975) and Wright (1978, pp. 62–74).
typical end-of-the-year debt for a farm family would have been in the neighborhood of $80.00 (One Kind of Freedom, p. 123); about 42% of the farmer's annual income (p. 216).

Claudia Goldin appears to take issue with this picture of Southern farming. "The Georgia reports do not indicate the general lack of supplies and widespread use of credit that Ransom and Sutch have claimed." In her article, Goldin (1979) calculates that "farmers purchased only supplies that were not home produced, that is, only about 30% of the total supplies they used each year." Furthermore, "farmers who purchased supplies, bought, perhaps at a maximum, 60% of these on time. A farmer in Georgia could have expected, therefore, to purchase only 18% of his total supplies on time." Goldin's estimate that 30% of all supplies were not home-produced is based on figures reported in line 1 of her Table 3. These estimates, however, refer to the extent to which local production met the needs of the entire county; they do not refer to the extent to which farmers who were locked-in and paying credit prices were forced to purchase supplies (Georgia Department of Agriculture, 1890, p. 4). Our self-sufficiency estimates suggest that much of the supplies that small farms had to buy on credit was actually produced within the county on the larger farms. Goldin's second proportion—that 60% of the supplies purchased were bought on time—actually refers to the "per cent. of [all] farm supplies purchased on time," not to the percentage of purchased supplies. It is also probable that this estimate refers to the entire county and not solely to those farms that were not self-sufficient (Georgia Department of Agriculture, 1879, p. 8). If our interpretation of the Georgia reports is correct, then the proportion of all supplies bought on time was approximately 60% not 18%.

Goldin's further insistence that the credit problem diminished over time also fails to convince us. Her analysis rests on an interpretation of figures from the Georgia Department of Agriculture Reports. In Table 3 of her paper, she presents summary statistics from the responses of agricultural correspondents in Georgia between 1878 and 1890 to the questions:

(1) "[Give the] indebtedness of farmers, compared to last year, per cent."

(2) "Give amount of farm supplies purchased in comparison with last year, per cent" (Georgia Department of Agriculture, 1890, p. 4).

Goldin calculated the statewide averages from the county data, and cumulated the figures from year to year to discover the total change over a number of years. Her conclusion is that there was a continuous decline in indebtedness, and a marked lessening in farmers' dependence upon pur-

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32 One Kind of Freedom, Table 8.3, p. 159. Incidentally, we believe Goldin also mistakenly projects our calculation of the impact of credit on small locked-in family farms operated by blacks in 1879 to all farms (cf. One Kind of Freedom, p. 169).
chased supplies over the years 1882 to 1890. The aggregate fall in these variables, if we accept Goldin's analysis, is dramatic. She claims that "farmers in 1890 actually purchased only 25% of what they had in 1882." The corresponding reduction implied by the indebtedness figures in Goldin's table suggests that farmers in 1890 owed only 32% of the debt they owed in 1882. However, these statistics are very misleading.

We have closely examined the reported figures from each of Georgia's 137 counties for the question on indebtedness for 1884, 1885, 1886, and 1887. Our review suggests at least three major problems with the interpretation which Goldin has presented:

1. Each year, only a fraction (approximately 70%) of the counties reported answers to the question. Only 48 of the 137 counties reported for each of the four years noted. The state average used by Goldin refers to a continually changing geographical area. Since counties experienced very different patterns of changing indebtedness, Goldin's failure to adjust for the nonreporting of counties calls into question the meaningfulness of her numbers.

2. Table 1 presents the distribution of the 389 separate observations reported on the question of indebtedness, along with several summary statistics describing this distribution. It is immediately apparent that a simple average is a misleading index of the general trends. Although the average for all observations was 93.3—suggesting that a 7% annual improvement was typical—there were considerably more observations above the mean (217) than below (176). Sixteen percent of the reports indicated "100," or no change, and 46.5% of all reports indicated either no change or an increasing indebtedness of farms. These figures hardly describe a situation of steady improvement which saw the indebtedness of farms decline by seven percent per year.

The simple mean across the counties which Goldin relies upon is a biased estimate of the figure she wants to report. When calculating the average across counties of these "percentage changes in the percentage reported," the appropriate procedure must take into account the percentage of farmers who were indebted in the base year. The following example, comparing two counties in which each experienced a decrease of indebtedness amounting to 10% of all farmers, illustrates the point. Suppose in one county 80% of the farmers were indebted in the previous year. The

GOLDIN (1979) does not present the second estimate, in part because of the ambiguity in the meaning of this question.

This data is available from the Southern Economic History Project, Department of Economics, University of California, Berkeley, Calif. 94720, upon request. Only four years were examined because county-by-county figures are not available in published form for most other years.
correct response to the Georgia questionnaire would be 87.5%. Suppose in another county only 20% of the farmers had been indebted the previous year, which means the decline would have been reported as 50%. A simple average of the two reports would be 68.75; leaving the impression that, in the counties taken together, indebtedness had decreased by 31% when in fact, if the counties were of equal size, it had actually declined by only 20%.

(3) Taken at face value, Goldin’s statistics on debt and the dependence of farmers on purchased supplies suggest a view of the trends totally at odds with that presented by contemporaries. Moreover, the implied trends in Goldin’s table are inconsistent with other evidence in the GDA reports. For example, Goldin reports that the annual percentage of a full supply of provisions of pork and corn produced on farms remained stable at about 60 to 68% for pork and 75% for corn. These figures seem plausible, and agree with our own estimates of self-sufficiency presented in One Kind of Freedom (p.160). Yet the statistics Goldin reports on the amount of supplies purchased in one year compared to the previous year are uniformly below 100% and when cumulated over the entire period imply that by 1890 farmers had reduced their dependence on purchased

<table>
<thead>
<tr>
<th>Reported response (relative %)</th>
<th>Number of observations</th>
<th>Percentage of total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 75</td>
<td>40</td>
<td>10.3</td>
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<td>75-79</td>
<td>45</td>
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<td>54</td>
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<td>32</td>
<td>8.2</td>
</tr>
<tr>
<td>100</td>
<td>62</td>
<td>15.9</td>
</tr>
<tr>
<td>100-109</td>
<td>33</td>
<td>8.5</td>
</tr>
<tr>
<td>110-119</td>
<td>39</td>
<td>10.0</td>
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<tr>
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<td>159</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>548</td>
<td></td>
</tr>
</tbody>
</table>

Mean = 93.3
Standard deviation about the mean = 22
Median = 95
Mode = 100

Source: Georgia Department of Agriculture (1884, 1885, 1886, and 1887).
supplies to only one-fourth the level at the outset. Such an implication is not only inconsistent with the GDA evidence that the deficit in pork and corn remained unchanged; it also conflicts with the data reported in the 1890 Census of Agriculture, which gives evidence of a decline in the per capita production of food crops and swine between 1880 and 1890 (One Kind of Freedom, Table 8.1, Fig. 8.1, pp. 152-153).35

The Dynamics of Monopoly and Growth

Our critics have focused their attention on the logical consistency of our theoretical model of credit merchandising. This is perhaps to be expected, since ours was not an orthodox theory, and it yielded conclusions which might, at first glance, appear counterintuitive to an economist. We hope that the discussion in this article has served to clarify our position and justify our methodology.

We are concerned, however, that all of our attention to the details and logical ramifications of our theory may have obscured our broader issues. In One Kind of Freedom we constructed a model of the merchant's business which incorporated what we viewed as the unique features of the industry: the dual price system and the crop-lien. We did this because we believed that only such a complete model would shed light on the dynamic aspects of southern economic history.36 If our analysis is correct, the rural merchandising industry contributed to the lack of growth and development in the South in ways which are quite apart from the theoretical disputes over the structure and conduct of the industry. Succinctly put, the merchandising industry stifled economic growth in at least three ways:

(1) The high price of loanable funds supplied by the merchant discouraged investment while at the same time barriers to entry acted to discourage capital flows from outside the region.

(2) The net income of many farm families was reduced to such low levels that their ability to save was severely impaired, and as a consequence, direct investment by families in their farms was made more difficult.

(3) One of the effects of a perpetual cycle of seasonal indebtedness was to constrain the mobility of labor.

35 In the Georgia reports answers to the request "[Estimate the] condition of farmers, compared with last year, per cent." averaged 94% for 1884, 96% for 1885, 92% in 1886, and 98% for 1887. These four averages cumulative to 81.4%. This report of worsening conditions contrasts sharply with Goldin's conclusions that indebtedness and dependence upon purchased supplies were declining. What this contradiction suggests to us is that the answers obtained to questions of this nature are not very reliable. It was for this reason that we did not report such information in One Kind of Freedom.

36 In the context of the historical narrative offered in One Kind of Freedom, our economic model of the dual price and crop-lien system has the further advantage that it offers a ready explanation of the frequently repeated and very explicit complaints of farmers that they were compelled to grow more cotton than they wished (One Kind of Freedom, pp. 159–162). Our critics have provided no alternative explanation for this agrarian discontent.
Economic development was also hindered because:

(1) The merchandising system tied Southern agriculture more tightly to the declining fortunes of the international cotton market.

(2) The expansion of the manufacturing sector was impeded by the absence of a more effective financial system which could have served as an intermediary between agriculture and industry.

(3) There may also have been a negative effect on the demand for manufactured products produced by the redistribution of income inherent in the merchant’s exploitation.

These, of course, are difficult issues to deal with, and we only began to explore them in *One Kind of Freedom*. With the analysis there, however, we hope to have established a firm foundation for further investigation. The Duke Symposium has been helpful not only in sharpening the theoretical models which comprise this foundation, but in revealing broad areas of agreement among scholars on the importance of the issues and the direction of subsequent research.

APPENDIX

Diagramatic Presentation of the Impact of Credit Prices for Corn on the Crop Mix Decision

A farmer who anticipates the perpetual need for seasonal credit will prefer (if the merchant would allow) to produce at \( F \) rather than at \( S \) in the diagram presented in Fig. 1. This point can be demonstrated by adding to Fig. 1 the level of corn requirements needed for the coming year. Suppose that the required level of corn is equal to \( M \). Fig. 2 reproduces the production alternatives frontier and the two price ratios from Fig. 1 and adds the horizontal line \( MM \) at the level of the assumed annual corn requirements. (By assumption, \( M \) is greater than the amount of corn grown at \( F \).) Whether the farmer produces at \( F \) or \( S \), he will have to finance a corn “deficit” for the following year. If he produces at \( F \), the corn deficit is \( M - C_{F} \). If he produces at \( S \), the deficit is the larger amount \( M - C_{S} \). In either case, these corn deficits will have to be financed at credit prices, since the farm can not produce sufficient cotton to both meet this year’s debts and finance next year’s corn deficit at cash prices.

At credit prices, the price ratio of corn to cotton is indicated by the slope of the line \( P'P' \). The line \( P"P" \) in Fig. 2 is drawn with that same slope. Thus, \( D_{F} \) is the cotton equivalent of the corn deficit for a farmer at \( F \). And \( D_{S} \) is the cotton equivalent of the corn deficit for a farmer at \( S \).

It is true that the farmer at \( S \) will produce more cotton (\( Y_{S} \)) than the farmer located at \( F \) (\( Y_{F} \)). Note, however (and this is our point), that the anticipated net cotton income in the subsequent year after financing the corn deficit at credit prices will be higher for a farmer who chooses to produce at \( F \) this year than for the farmer who stays at \( S \). That is, the distance \( Y_{F} - D_{F} \) is greater than the distance \( Y_{S} - D_{S} \). This result does not
depend upon the shape of the production alternatives curve (as long as it remains bowed out), nor upon the magnitude of the credit-cash price differential. Recognizing the superiority of a sequence of years at $F$ over a sequence of years at $S$, the farmer will be willing to make the move to $F$ this year even though the current year's indebtedness is a sunk cost which can not be affected by the crop choice.

In terms of its cash value, total output at $F$ is less than total output at $S$. ($S$ is the production mix which maximizes the value of output evaluated at cash prices.) The farmer is willing to make this current sacrifice in order to reduce the necessary level of indebtedness (and increase net income) in future years. Indeed, the farmer does not even perceive that he would be making a current sacrifice, since he values corn not at cash prices, but at credit prices. (From that perspective, $F$ is the production mix which maximizes the value of output.)

It would be the merchant who would perceive the loss of output entailed in a decision to move to $F$ rather than to stay at $S$. For this reason, the merchant forces the farmer to produce at $S$ by refusing to finance the current year's requirements unless the farmer agrees to plant $Y_s$ cotton. In our terminology, the farmer is "locked-in" by the merchant to a continual sequence of years at $S$. While the merchant's action forces the farmer to be "efficient," the farmer would prefer to be at $F$ (where he is better off),
and he therefore continually complains not only about the high price of credit, but also of not being free to grow as much corn as he would like.

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