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Adequacy of Capital and Credit for Chronically Low-Income Farms

CAPITAL IS ALWAYS SCARCE. From an economic viewpoint, therefore, the term "adequacy of capital" can mean only the quantity consistent with income maximization. Many believe that not only the quantity of capital used, but also the quantity available to low-income farmers falls short of such an optimum. This chapter is concerned with examining this belief to indicate to what extent and under what conditions it is true. More specifically, the following questions are examined: (1) How much capital do the nation's low-income farm operators now use? (2) How much capital do they need in order to maximize their incomes? (3) If they need more capital than they are now using, how much of this additional capital can they obtain and from what sources? (4) If these "needs" cannot be obtained wholly from existing credit sources, why not? (5) When the answer to question 4 is known, can it still be demonstrated that low-income farmers are using less capital than is consistent with optimal interfarm and interindustry allocation of capital resources? Specifically, are there real economically justifiable needs for more capital in low-income agriculture?

In examining these questions, consideration will be given only to those farm-operator families with net money incomes of less than \$2,000 from all sources. Such arbitrary delineation of low-income farm families is subject to important weaknesses on both economic and welfare grounds. However, it permits use of some statistical information not available for low-income farm families delineated on a more meaningful economic or welfare basis.

Based on the 1950 census, this definition would have embraced, in 1949, 68.3 percent of all farm-operator families in the South and 52.9 percent of all those in the United States (cf. Chapter 1). In many areas of the South it would have included more than four-fifths of all farm operators. The percentage of farm families with net cash incomes under \$2,000 declined between 1949 and 1958 to about 36 percent in the United States although, relative to the earnings of nonfarm people, the farm income situation worsened during this period.

LOW-INCOME FARMERS USE VERY LITTLE CAPITAL

Available information indicates that most of the nation's low-income farmers use relatively small quantities of land and related capital resources. This has long been indicated by statistics on the average size of farms and amounts of other farm resources in the nation's major low-income areas. According to the 1954 Census of Agriculture, total land per farm in the South was 167 acres compared with 213 acres per farm in the North and 242 acres per farm in the nation. The South had only 45 acres of cropland harvested per farm compared with 113 acres in the North and 116 acres in the West. The value of land and buildings per farm in 1954 was \$12,755 in the South, \$23,506 in the North, and \$47,334 in the West. Almost a third of all farms in the South had fewer than 30 acres of total land per farm, and 47 percent had fewer than 50 acres. About half of the South's farms had fewer than 20 acres of cropland harvested.

Within major low-income areas, the amounts of resources commanded by low-income farm families are substantially below the average for all farm families. For example, in the 24-county area comprising State Economic Area 12 in northeast Texas, all farm families had total farm resources worth \$14,762 per family. Those with incomes under \$2,000, however, had farm resources valued at \$9,334 per farm. All full-time farmers in this area had total farm resources valued at \$21,451 per farm. However, those with family incomes of less than \$2,000 had slightly less than \$13,000 worth of farm resources.¹

In low-income rural areas, these types of situations and problems are not unique characteristics of farm families alone. They are equally as important for nonfarm rural families. For example, in Rural Development "pilot" counties of Alabama in 1957, 50 percent of the farm families had family incomes of less than \$2,000, whereas 47 percent of the nonfarm rural families in these same counties also had family incomes of less than \$2,000. In all characteristics measured, these two groups of rural families were quite similar.²

In general, the nation's average low-income farm family is probably using less than half as much farm resources as do farm families who normally have incomes of \$2,000 to \$3,000 per year.

LOW-INCOME FARMERS ARE LIMITED IN THEIR OPPORTUNITIES TO USE MUCH ADDITIONAL CAPITAL

It does not follow from this disparity between the value of resources used by low-income families and those commanded by farm families in

¹ J. H. Southern and W. E. Hendrix, *Incomes of Rural Families in Northeast Texas*, Tex. Agr. Exp. Sta. Bul. 940, College Station, 1959.

² Ben T. Lanham, Jr., *Opportunities for Rural Development in Fayette County, Alabama*, and Edward E. Kern, *Opportunities for Rural Development in Chilton County, Alabama*, (Mimeo.), Ala. Agr. Exp. Sta., Auburn, 1958.

a more favorable income situation that the nation's low-income farm families need—that is, can profitably use—additional capital resources. Rather, the extent to which they can profitably use additional resources can vary greatly depending upon their labor and management resources (cf. Chapters 21 and 23). Because of their limited labor and management capacities, many low-income families may already command as large a quantity of farm resources as they can employ productively. Indeed, some whose labor capacities have declined because of advancing age or illness may be holding more farm resources than are consistent with the maximization of their incomes. Even among low-income families with no serious labor or management limitations, many may be operating near their optimal level because of the kind of general economic environment within which they are farming.

Many Low-Income Farmers are Limited in Their Labor Capacities

Information provided in the 1950 census indicates that many of the nation's low-income farmers are handicapped in their employment alternatives because of their age, education, and other characteristics bearing upon their employability. In the United States the median age of farm operators with family incomes of less than \$1,000 in 1949 was 51.9 years compared with a median of 47.6 years for all farm operators. Almost two-thirds of the operators with family incomes under \$1,000 had not completed elementary school compared with 42 percent for all farm operators.

More complete information on the personal characteristics of farm families by income levels is being developed in studies by the Farm Economics Research Division, ARS, USDA, in cooperation with state agricultural experiment stations in selected low-income areas of Texas, Louisiana, Mississippi, Tennessee, Florida, Georgia, Kentucky, Missouri, Michigan, and other states. In these study areas, large percentages of the low-income farm operators have occupational handicaps of kinds that severely restrict their adjustment opportunities within either farm or nonfarm work. Mackie directs his attention to public investments in human resources in Chapter 22.

For example, in the 24 counties comprising State Economic Area 12 in northeast Texas, only about one in 10 farm operator families with net money incomes in 1955 of less than \$2,000 had an able-bodied male family head under 45 years of age who had completed five or more grades in school. Martin presents related data on education and educational expenditures in Chapter 4. More than a third of the farm families with incomes under \$2,000 had male family heads who were 65 years of age or older. Another third of these farm-operator families had male family heads under 65 years of age, each of whom reported a major physical disability that limited the kind or amount of work he was able to do. Only 5 and 18 percent had able-bodied male family heads aged 55 to 64 years and 45 to 54 years of age, respectively.³

³ Southern and Hendrix, *op. cit.*

In Alabama's rural development "pilot" counties, the average age of male family heads for farm families was 53 and for nonfarm families 48 in 1957. Only 3 percent of farm family heads were under 35 years of age compared with 23 percent of nonfarm family heads in this age group. The average educational level attained by male family heads was 7.2 years for farm families and 7.8 years for nonfarm families. Only 2 percent of farm family heads had more than 12 years of education compared with 8 percent for nonfarm families. Nearly 60 percent of the male family heads of farm families reported fair or poor health compared with about 46 percent for nonfarm families.⁴

These findings, which are fairly typical of those in most of the low-income areas that have been studied, reveal that most low-income farm families are headed by persons who, regardless of their capital position, are very limited in their adjustment potentials in either farm or nonfarm sectors of the economy. It is the lack of labor and management abilities rather than the lack of available capital which is the crucial limitation to increasing the productivity and income of most of these farm families.

Nonetheless, after accounting for the aged, the disabled, and other seriously handicapped classes, there remain many low-income farm families in most of the nation's major low-income farm areas who are free of these more obvious defects. Available information indicates that for most of these families more land and capital are essential to improving their incomes through intrafarm adjustments.

Major Low-Income Areas Will Require Large Structural Changes for Productive Use of Much Additional Capital

The provision of such additional capital, however, while constituting a requirement for correcting the low-income problem through intrafarm adjustments, would not in itself be a sufficient condition to insure such results, except for possibly a small number of carefully selected farmers. This is true because even where the low-income farm problem exists among able-bodied farmers, it is much more than a result of capital limitations. To the extent that it is an economic problem, the low-income problem is rooted in large measure in the general structural and growth characteristics of the general economy in which it occurs. It is a manifestation in most severe form of the excess of labor resources that characterizes American agriculture generally (cf. Chapters 3 and 4). As such, it is also a manifestation of agriculture's large excess capacity (cf. Chapters 6 and 7). This part of agriculture's excess capacity is largely latent, hence, it does not currently result in a large agricultural output of the kinds requiring special storage and other surplus disposal programs. But that a large capacity for such output exists in many of the nation's low-income farm areas is well

⁴ Lanham and Kern, *op. cit.*

documented in numerous studies of production adjustment opportunities made of low-income farms. For example, the results of a study of individual farm adjustment opportunities in the Limestone Valley areas of Alabama show a net management return for a flock of 4,000 cage layers of almost \$9,000 after paying for 2,412 hours of labor at 60 cents per hour.⁵ Similar results were found in North Carolina.⁶ Given adequate markets to stand up under pressure of substantial increases in the supply of the farm products that farmers can produce and favorable agricultural policy programs, many of the South's farmers could easily double their output of cotton, tobacco, peanuts, and other products by increasing their acreages and by using technically superior and economically feasible production methods.

It does not follow, however, that the placing of large quantities of additional capital in the hands of many of the nation's low-income farmers would appreciably improve their income situation. Rather, in view of the nature of the demand for farm products, the question arises: Would the allocation of much more capital to low-income agriculture increase efficiency of the economy as a whole? Or, would the provision of much more capital to this sector of agriculture need to be defended mainly on equity grounds?

Were it not for the large supply and low value of labor in most low-income farm areas, the capital now employed would yield very low returns. For example, even with very low wage rates in 1949, most productivity regions lying wholly within the South had capital returns on commercial farms of less than 3 percent—using the residual method of calculation.⁷ Some researchers have shown a high marginal productivity of capital in low-income areas, e.g., in the Piedmont areas of Alabama and Georgia. But, besides being subject to question as to how well the observations used in such studies have met the requirements of the assumptions underlying the estimating techniques used and how well they have accounted for risk and uncertainty elements, the market assumptions on which these results have been predicated make generalizing from these findings to aggregations of more than a few farms a questionable procedure. In terms of their underlying market assumptions, measurements of the marginal productivity of capital based on Cobb-Douglas equations or other such estimating equations are subject to the same aggregative limitations as Wheeler and others have noted for "optimal" farm organizations developed with a linear programming technique.⁸

⁵ T. H. Ellis, E. J. Partenheimer, and J. G. Goodman, *Costs and Returns from Poultry Production in the Limestone Valley Areas of Alabama* (Mimeo.), Ala. Agr. Exp. Sta., Auburn, 1960.

⁶ C. E. Bishop and J. G. Sutherland, *Possibilities for Increasing Production and Incomes on Small Commercial Farms, Southern Piedmont Area, North Carolina*, N. C. Agr. Exp. Sta. Bul. 117, Raleigh, 1955.

⁷ E. G. Strand and E. O. Heady, *Productivity of Resources Used on Commercial Farms*, USDA Tech. Bul. No. 1128, Washington, D. C., 1955.

⁸ R. G. Wheeler, review of "Possibilities for increasing production and incomes on small commercial farms, Southern Piedmont area, North Carolina," by J. G. Sutherland and C. E. Bishop, *Jour. Farm Econ.*, Vol. 39, 1957, pp. 196-97.

The low-income farm problem could and probably would have been solved long ago were it merely a result of capital limitations. But the capital limitations observed in the nation's low-income farm areas, instead of being main causes of low incomes, are actually the result of other more fundamental conditions that limit both the size of income and the building up of large amounts of capital per farm in these areas. A high ratio of farm people to land (small farms) and severe limitations in effective demand for the kinds of products that they now have the resources to produce—these are among the main factors that limit both (1) adjustment opportunities and (2) current incomes and amounts of capital in major low-income farm areas.

These conditions have probably been important reasons for both the relatively small credit advances made by the Farmers Home Administration to its borrowers in many parts of the South and the relatively small income gains made by its southern borrowers. In a recent study of FHA operating loan borrowers, it was found that borrowers in the South increased their average income while on the program by only 32 percent compared with increases of 69 percent and 63 percent, respectively, for borrowers in the North and West. Yet, when living within equally poor localities as measured by the median income of all farm families, families in the North made no greater progress than did those in the South.⁹ These differences among areas support the hypothesis that the low-income farm problem is one that can be solved only in a small part through individual farm adjustments. This would be true even though the amount of capital needed to maximize income was always readily available to every low-income farmer.

THE PROVISION OF MORE CAPITAL TO LOW-INCOME FARMERS AS EQUITY MEASURES

These general observations about the adequacy of capital for chronic low-income farms hold not only for "low-income" agriculture but for all of American agriculture. Our mounting farm surpluses in the face of production controls and large-scale surplus disposal operations under Public Law 480 hardly indicate the use of too few capital resources in American agriculture.

In shifting attention from the consideration of agriculture as a whole to that of individual farmers, however, it is found that farmers are faced with exceedingly critical capital and credit problems. This is true because of (1) the rapid farm technological advances of kinds that help to increase scale possibilities and (2) the highly competitive character of farming which makes necessary the rapid adoption of such scale-increasing technologies as a condition of survival. Heady

⁹W. E. Hendrix, Approaches to Income Improvement in Agriculture: Experiences of Families Receiving Production Loans Under the Farmers Home Administration, USDA Prod. Res. Rpt. No. 33, Washington, D. C., 1959.

stresses this point in Chapter 7. Material increases in production and income for chronic low-income farmers depend upon providing (1) more productive resources per worker and (2) more opportunities for non-farm work for the young people who grow up in these areas but who are not needed in farm occupations. The solution to these problems is not necessarily in moving marginal farm people into industry, but more likely in providing opportunities for greater flexibility and mobility between farm and nonfarm employment.¹⁰ Farm technological progress, coupled with inelastic demand for farm products and existing impediments to the farm-nonfarm transfer of labor, rapidly increases the capital requirements per farm without increasing farm income. Scofield and Barton develop this point in Chapter 6.

Briefly, this is the kind of capital problem that faces much of American agriculture. Such also are the facts behind the rising ratio of debt to income that has characterized American agriculture. Large increases in the market value of land to which farmers hold title have helped farmers maintain a debt-asset ratio favorable to obtaining in general capital markets a large part of the funds they have needed to keep up in the farm technological race (Chapter 6). Without marked changes in farm credit practices, however, this question arises: How long can farmers continue to obtain in the general capital markets much of the increasing amounts of capital they will need to maintain their present rates of technological progress under the condition of increasing ratio of debt to income?

Chronic low-income farm areas differ from more productive farm areas in that the former have always been subject to conditions that cause low incomes, whereas farmers in the latter areas have at times experienced conditions highly favorable to the expansion of their farming operations. Having never experienced conditions highly favorable to large expansion of their farming operations, the nation's chronic low-income farmers have seldom if ever found themselves in a critical financial situation. Instead, many of them have developed deeply rooted aversions to indebtedness for any purpose—aversions which, in light of past economic expansion opportunities, may have been sound from an economic viewpoint (cf. Chapters 20 and 21).

The fact that the nation's chronic low-income farmers have seldom been in a financial situation so critical as to require new special extra-market credit institutions (such as our federally-sponsored cooperative farm credit program was at the time of its inception and at the time of its reorganization and strengthening to meet the financial crisis of commercial agriculture in the early thirties) is their only economic advantage over farmers in the more productive parts of agriculture. However, this advantage does not justify from an efficiency standpoint any large expansion in special credit facilities for those farmers now in the nation's chronic low-income areas.

¹⁰Ben T. Lanham, Jr., "Characteristics of Alabama's future agriculture," *Flight From the Soil: Alabama Agriculture in a Changing Economy*, Ala. Bus. Res. Council, Univ. of Alabama, 1958.

Rather, in view of the large excess capacity of agriculture as a whole, and with the large capacity lying wholly latent in much of the low-income agriculture, the case for the more adequate provision of special credit facilities in low-income farm areas may need to rest largely upon general equity considerations (that is, upon more nearly equalizing incomes within agriculture) rather than upon the grounds of increasing the economic efficiency of agriculture as a whole.¹¹ Within limits, the more adequate provision of credit to low-income farmers as a means of more nearly equalizing opportunity and incomes within agriculture is possible within the framework of economically sound business credit practices. This position is taken because (1) production innovations, instead of being adopted by all farmers simultaneously, are first adopted by a relatively small number of farmers, and (2) the main economic benefits of farm technological advances accrue to farmers who are earliest in their adoption. Hence, by coupling special financial assistance with special technical assistance to facilitate the early adoption of new and better farm technologies, it is possible for a limited number of carefully selected low-income farmers to make phenomenal improvements in their incomes and net worth. Woodworth and Fanning stress this point in Chapter 23. Examples of such improvements can be found throughout the South among those farmers who have been assisted through the FHA program.¹²

How many of the nation's chronic low-income farmers could be thus assisted cannot be answered precisely. The number, however, would probably represent only a small percentage of all chronic low-income farmers. It is doubtful whether much of this increase could be achieved without increasing the pressure of supply on demand and lowering the income of agriculture as a whole. This is why it is suggested here that, viewed from the standpoint of agriculture as a whole, most of what can be done through intrafarm adjustments to raise the incomes of low-income farmers may need to be defended, if at all, mainly on equity rather than on efficiency grounds.

If the view is accepted that credit policies and programs to raise incomes of chronic low-income farmers through intrafarm adjustments must rest more upon equity than upon efficiency considerations, the question as to how much additional capital chronic low-income farmers need in the aggregate must depend largely upon how far it is desirable to go in correcting the income disparities that exist merely within agriculture. Expressed more accurately, it depends upon how equally divided among farmers should be the extent to which agriculture as an industry bears the cost of inefficient resource use. This raises the problem of interpersonal welfare comparisons, an insoluble problem in economic theory.

¹¹ For similar treatment of this general kind of problem, see Tibor Scitovsky, *Welfare and Competition*, George Allen and Unwin, Ltd., London, 1952, Chap. 1.

¹² W. E. Hendrix, *Capital Accumulation by Families on Small Farms in the Piedmont, Ga.* Agr. Exp. Sta. Bul. N.S. 8, 1955; W. E. Hendrix, *Approaches to Income Improvement in Agriculture*, USDA Prod. Res. Rpt. 33, Washington, D. C., 1959.

The provision of capital merely to achieve a more equal personal income distribution obviously poses large difficulties. The very nature of such a problem virtually rules out the general capital market as a source of supply except for the small number of chronic low-income farmers who, by being in the vanguard of technological progress, might compete successfully with other capital users in general capital markets. Hence, chronic low incomes in agriculture cannot be attacked on a large scale as mainly capital and credit problems without heavy reliance upon public grants and subsidies. Capital funds to chronic low-income farmers from grants and subsidies have always been scarce, also. There is little reason to suppose that they will be any more plentiful in the near future. Furthermore, such capital transfers, even if they were socially acceptable, would probably be one of the most costly ways, in terms of effects on general efficiency and welfare, of achieving a more equal distribution of income. Alternative approaches to this problem are presented in Chapters 22 and 23.

NEED FOR BALANCING LABOR WITH OTHER RESOURCES

The low-income problem results primarily from imperfection in the functioning of labor markets rather than imperfections in the functioning of capital markets. The labor market imperfections most relevant to the low-income problem consist mainly of wage policies in nonfarm labor markets which, except in periods of very rapid economic growth, permit the supply of labor to greatly exceed the demand. The effects of these imperfections in reducing employment are aggravated by price policies in other factor and product markets.

Agriculture as a whole, and especially that in chronic low-income areas, is highly vulnerable to the incidence of the underemployment resulting from such wage and price policies because (1) of its competitive characteristics with respect to the freedom and ease of entry of workers and its flexibility of labor earnings; (2) underemployment permits selectivity in the hiring of workers and correlatively in the distribution of underemployment that militates more against underemployed farmworkers because of their age, education, and other characteristics than against their chief competitors for nonfarm jobs; and (3) high farm birthrates, declining needs for labor as a result of farm technological progress, and the relatively inelastic demand for farm products make it necessary for agriculture to export a large number of workers annually to even maintain its relative income position; hence, agriculture's vulnerability to the incidence of the economy's underemployment is increased.

Given market structures that permit the backing up and accumulation of large excesses of labor in agriculture, solution of the chronic low-income problem as a resource allocation problem must be found mainly in increasing the rate of general economic growth, and thereby, the nonfarm demand for labor. Growth of the nonfarm economy's

demand for labor at a rate sufficient to absorb the economy's existing underemployment in both farm and nonfarm sectors, in the face of a continuing rapid population growth and rapid technological progress, is a most basic requirement for correcting chronic low incomes in agriculture as an economic problem (cf. Chapters 1 and 7).

The drawing off of excess labor from chronic low-income farms can be expected in many instances to open up farm expansion opportunities for the remaining low-income farmers, for which additional capital will be needed. There may be a need at the outset for special credit facilities, such as those provided by the FHA, to spark the adjustments required as such expansion opportunities are opened. As the emerging adjustment opportunities are more widely recognized, however, provision of the additional capital needed will not likely constitute a major obstacle to their realization. In recent years, credit agencies have demonstrated a large capacity and willingness to serve the credit needs of agriculture, even in low-income areas, where doing so has been consistent with general economic efficiency in the allocation of resources.¹³

¹³W. E. Hendrix, "Meeting the capital and credit needs of southern agricultural development," paper presented at annual meeting of Southern Econ. Assn., Atlanta, Ga., Nov., 1958.