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Farm Family Capital Accumulation and Investment Processes¹

THE ECONOMISTS OF EACH ERA have found themselves drawn or compelled by the events of their times to focus their economic knowledge on current problem situations. Tariffs in the 1920's, unemployment in the '30's, and problems of war in the '40's gave the economic literature of those decades a distinctive flavor. It is not so easy to typify the fifties. That may turn out to be the decade in which we rediscovered the problems of economic growth that occupied much of economic thinking from Adam Smith to the First World War. One of the most prominent manifestations of this interest is found in the extensive literature on problems of capital formation and investment.

The calculation of growth rates, capital-output ratios, and global estimates of net capital formation by sectors and countries are characteristics of our time. This chapter is concerned with problems of capital formation and investment, but on a reduced scale. The focus will be on regional and sectoral differences within the American agricultural economy, with particular reference to farm firms and households.

This choice of subject matter is dictated in part by a dissatisfaction with some of the agricultural policy recommendations for underdeveloped regions or countries that are being derived from analyses of mass data. In greater part, it is a reflection of the basic fragmented nature of capital formation in the agricultural sector, in which global outcomes are the aggregation of decisions by what is still the largest number of firms in any single segment of the American economy.

CAPITAL FORMATION PROCESSES LEADING TO AGRICULTURAL GROWTH

At the outset it is important that knowledge of the capital-forming processes which lead to agricultural growth is properly understood. This process is predominantly one of accretionary gains in capital stocks in the early stages of a nation's development. The investment decisions involved are typically made in small segments, spread over

¹The author has benefited from the helpful suggestions of Reynold Dahl, Darrell Fienup, and Harald Jensen.

many seasons or gestation periods. The aggregation of capital formed in this manner leads to impressive totals, but these totals are the result of a process which is characterized by many small, even plodding, steps. The emphasis on large-scale and dramatic investment programs in the current literature on economic development may obscure this relationship. The image of development projected by a hydroelectric dam or by a steel mill is likely to be misleading if applied to agriculture. Capital in farming is rarely concentrated, in a spatial sense, and its formation is heavily weighted by the time dimension. It accumulates by an incremental process.

The results can be seen most readily in the case of livestock. Increases in livestock numbers and quality, the slow improvements in feeding levels, better animal disease protection, and increases in rates of gain are all achievements in which time plays an important role. Progress takes the form of small steps spread over many production cycles. This gradual accretionary improvement in livestock herds was one of the primary capital forming processes in the early stages of U. S. agricultural development. It is still under way in areas undergoing major shifts away from reliance on cash crops to livestock agriculture. It has been particularly prominent in recent decades in some states in the East South Central and South Atlantic regions of the United States.

Although easily identified in the livestock sector, this accretionary process is also important in the stock of farm capital represented by buildings, fencing, water supplies, and related farm service structures and improvements. The stock of this form of agricultural capital is built up gradually over time and typically over several generations. The same situation applies to land-clearing, ditching, drainage, soil improvement, and conservation. The process of accretionary build-up is particularly prominent where tree or bush crops are an important part of the agricultural economy.

The significance of these types of agricultural capital is reflected in the common observation that the "costs of producing a farm" are in general far beyond the capital-forming capacity of any one farm family generation. It is also reflected in the often discouraging experiences with farm development and land settlement schemes. The attempt to provide farms as going concerns through tenant purchase programs in the South, the resettlement programs in the Lake States (notably the Beltrami Island project in northern Minnesota), and the Matanuska Valley settlement program in Alaska are all cases in point. In each of these instances it proved impossible to finance the establishment of successful farms through any schemes for repayment during the lifetime of a single farm operator family. These examples from recent history reinforce the evidence from our pioneering experiences in the nineteenth century: the saving and investment potential of several generations is required to form the base capital needed before farm firms can take advantage of the high levels of input and output made possible by modern technology.

This historical discussion should serve to remind us of the validity of two general propositions:

1. The accretionary forms of agricultural capital formation are important in early developmental phases, and in phases involving a shift from a cash-crop economy to a livestock-feed economy.
2. The time required for the effective operation of these accretionary processes is long in terms of human life spans, typically extending over several generations.

From this point of view it is instructive to examine briefly some of the current theories which have been developed to account for lags and spurts in economic growth processes. One of the most challenging of these is offered by W. W. Rostow in attempting to explain the processes through which some economies have broken away from a predominantly agricultural base into a "take-off" stage that has subsequently led to self-sustaining industrial and agricultural development.² The initial stirrings of economic growth have typically been followed by relatively long periods of seeming stagnation in the growth process before the take-off stage. New agricultural processes are adopted, the shift to a money economy becomes apparent in rural areas, small but significant capital inputs appear to take place, yet nothing appreciable happens.

Our brief look at the historical process of capital growth in American agriculture suggests that one reason for this delayed response may be the time required for accretionary formation of capital in agriculture. Where these capital stocks are biological in nature, the limits within which the capital-forming process may be accelerated are rather definitely fixed. Agricultural policy for maximum growth in this phase of development would seem to call for the creation of patterns of production, consumption, and investment that will maximize accretionary processes.

Some of the basic conditions for agricultural development will be presented below. We may assume, as a point of departure, that we are dealing with an agrarian economy of a predominantly subsistent nature that can be characterized as a "subsistence-equilibrium" structure. In order for growth to occur under these circumstances, the most obvious and necessary condition is that an economic surplus potential be available for capital-forming uses. Douglas North has put this same proposition in a more advanced form by including the need for an "export" sector in which the agricultural products can be exchanged for domestic manufactures from outside the region, or for capital goods obtained through foreign trade. North demonstrated in his study of southern agriculture in the nineteenth century that the existence of this export sector is insufficient by itself to guarantee growth.³ A return flow of the proceeds from the export sector is also necessary, with the

² W. W. Rostow, *The Process of Economic Growth*, New York, W. W. Norton and Company, Inc., 1952, pp. 12-21. The argument is substantially expanded in his *The Stages of Economic Growth*, Cambridge University Press, New York, 1960, pp. 21-26.

³ Douglas C. North, "Agriculture in regional economic growth," *Jour. Farm Econ.*, Vol. 41, No. 5, Dec., 1959, pp. 943-57.

maximum possible fraction of this return flow accounted for by complementary raw materials or producer goods.

LAND TENURE AS A METHOD FOR CAPITAL FORMATION

Based upon the above discussion, it is proposed that the land tenure system constitutes a major force in creating an environment for motivation that will maximize the accretionary formation of capital in agriculture, and insure that available surpluses above subsistence levels are reinvested in the productive plant. In exploring the significance of the above hypothesis, and in attempting to derive from it some implications for agricultural policy, it is important to examine the manner in which tenure security can contribute to capital formation. By giving an individual or a group the preclusive use of a productive asset, a situation is created in which the investor can realize a satisfactory return on his investment. This security of expectation is crucial for biological forms of capital, slow maturing enterprises, and undertakings in which the ultimate stock of productive assets is composed of numerous incremental additions made at successive intervals over many production cycles.

Anthony Scott has pointed out the importance of making rights of asset use specific to the user, whether owner or tenant, in any process requiring long-term investment. "Unless the individual can appropriate and distribute the benefits created by his efforts and his property, he has no incentive to achieve efficiency in their provision."⁴

A system of tenure that will make these rights of use and reward specific to the user is a necessary, although not a sufficient, condition for capital formation. The tenure under which assets are held must also be adequate, in terms of time and scale, to motivate the user to reinvest his surplus.

The statements and propositions to this point are encompassed in the traditional observation that the prospect of ownership has served to "turn sand into gold." The beneficial results of the prospect of ownership are well understood, but the specific manner in which motivation is conditioned and directed by this prospect is less commonly recognized.

It is now hypothesized that the tenure arrangements under which productive resources are held and used will affect farm firm and farm family patterns of expenditures, savings, and investment by their influence upon:⁵ (1) the operator's time preference for money income; (2) the allocation of expenditures between the farm firm and the farm household, over time; (3) the allocation of expenditures within the farm household as between goods and services for direct consumption and

⁴Anthony Scott, *Natural Resources: The Economics of Conservation*, University of Toronto Press, 1955, p. 117.

⁵Proceedings of the Interregional Land Tenure Research Workshop, Work Group A, University of Missouri, July 16-27, 1956.

expenditures upon the family residence; and (4) the disposition made of the total available labor time of the farm family.

The implications of these hypotheses will become clearer if two of the principal characteristics of a peasant-type or family farm agriculture are examined. As it has developed in Europe and North America, this structure of agricultural firms combines a mixture of owner-operated units with units operated by farm tenants under widely varying conditions of tenure duration and security.

From the standpoint of capital formation, the first important characteristic of the small proprietary or family firm is that consumption in the household must take place in the face of an alternative — investment in the firm. Every act of consumption thus requires a decision not to invest in the productive enterprise. The structural or organizational characteristic of the firm does not permit a separation of these decisions. They are joined within the family and usually within a single individual.

A decision-making complex of this nature is not unique to owner-operated farm firms. It is also found in small enterprises in retail trade, and in former years it was commonplace in manufacturing and industrial operations. Although this characteristic is not unique to agriculture, it is still a particularly prominent feature of farm production units. It has prevailed long after the proprietary firm has disappeared in all but small segments of the retail and service trades among nonagricultural occupations.

Operation within this consumption-investment matrix is calculated in two different units of measurement, viz., (1) the allocation of money income and (2) the allocation of family labor time. In terms of money income, and where tenure security is at a maximum, the operator can afford to balance the alternatives of maximum return over time from slow maturing enterprises against possibly lower yielding but quick-turnover forms of investment. Within the framework of his time horizon, which is typically confined to one generational change, he can rationally afford to undertake investments, the yield of which may not reach a maximum in his lifetime. He can also afford to contemplate the alternatives of appreciation in the value of his capital assets as against the enjoyment of realized periodic income. In short, a maximum incentive situation is created in which the growth aspects of investment can be weighed heavily when balancing them against annual yield.

A second important characteristic of the proprietary firm concerns the disposition of family labor. The prospects of long and secure tenure may also provide maximum incentive for the investment of total available labor time in productive undertakings. As with money income, each decision to allocate family time to leisure, or to work activities outside the farm firm, must be taken in the face of the clear alternative possibility of using this labor in the firm. Much of agricultural capital formation can be explained in this fashion. Livestock care, repair and maintenance of structures, drainage and soil improving practices, and

a variety of similar tasks are often accomplished in agriculture at the expense of what might validly be regarded as leisure time.

The fact that these incentive conditions are created by a tenure system is no guarantee that they will be used. The scale of farm operations is often too small, enterprises are not properly balanced, or the cultural and motivational patterns that might lead to these forms of investment may be lacking.

The biological nature of agricultural production bears heavily on these patterns of investment of family labor. Much of the "cost" of agricultural production is a time cost. Crops must ripen, animals must mature, and a principal part of the labor cost of these processes is the cost of waiting.⁶ Even well-organized farm firms with a good balance among the labor requirements of different enterprises have substantial time periods in which the labor force must be on hand but is for the moment technically underemployed. A key to the processes of agricultural capital formation lies in the analysis of the use made of this periodically available labor.

Many farmers have time periods when this form of labor input is available at an opportunity cost that approaches zero, or is measured only in the reservation price of leisure time. An incentive system that will maximize the investment of this labor in the firm is one of the basic requirements for agricultural growth. In terms of capital creation, that structure is best which creates the maximum likelihood that the farm family will elect to "exploit" its own labor. Basic to this argument is the expectation of a long-term rise in real incomes. When incomes are falling or are uncertain, existing levels of living tend to be maintained at the expense of unrewarded depreciation or ultimate exhaustion of land and capital. The capital-creating combination of secure tenure and expectations of rising real income has its antithesis in the form of unrealistically high consumption goals coupled with the prospect of falling real income.

Some informative observations supporting this view of the nature of labor and capital investments in agriculture have recently been made by Simon Kuznets.⁷ Working with data for American agriculture from various studies, Kuznets points out the contradictory results obtained in attempting to allocate agricultural income between labor and capital (cf. Chapter 3). In general, two variants of a residual method have been used by most research workers to estimate returns to labor and land in agriculture. In one, the return on property is estimated directly, and labor income is the residual. In the other, labor returns are estimated directly, and property income is residual. The resulting estimates are untenable since "... a direct estimate of the return on the property component leaves a return on labor that is below the going

⁶ John M. Brewster, "The machine process in agriculture and industry," *Jour. Farm Econ.*, Feb., 1950, pp. 69-81.

⁷ Simon Kuznets, "Quantitative aspects of the economic growth of nations, Part IV, distribution of national incomes by factor shares," *Economic Development and Cultural Change*, Vol. 7, No. 3, Part II, April, 1959.

wage of hired labor; and a direct estimate of the return on labor leaves a return on property distinctly below any comparable market return rate."⁸

Kuznets concludes that if the data can be trusted, the existence of dual markets for capital goods and labor must be recognized. In one market, capital flows and labor moves in response to highest returns. In the other market, in which agriculture is the dominant but not the only sector, the flows of capital and labor are "tied to the way of making a living by combination with some specific type of labor service."⁹

These inferences suggest strongly that labor and capital inputs in agriculture are triggered by motive forces that are partially independent of off-farm opportunity costs and prices. This inference is consistent with an argument that tenure incentives exercise a strong motive force in agricultural capital formation, leading to continued investments of both capital and labor in the face of off-farm rates of return that are demonstrably higher.

In the currently peculiar position of American agriculture, plagued by surpluses, this reasoning would suggest that tenure incentives to capital formation may have worked too well. If a longer term view is considered, it can also be argued that these nonprice motives have been one of the sources of the strength and vigor of American agriculture.

These optimum conditions for capital formation in agriculture have been presented in terms of the owner-operated farm firm. It does not follow that the only form of tenure that can create these conditions is ownership. Leasing arrangements can create security of expectations specific to the operator, and for a period of time long enough to encourage long-term investment (cf. Chapter 2). Leasing arrangements that approximate this situation can be found in northern Europe, the United Kingdom, Australia, and in several other agricultural areas. Leases providing this degree of security are comparatively rare, and they were not characteristic of the periods of greatest agricultural development in North America in the nineteenth century. They were most conspicuously absent in the South after 1860.

Recognizing that the representative lease in American agriculture from our beginning as a nation has been some form of a short-term share lease, it will be helpful to examine more closely the implication of this tenure form for capital-forming processes. Where the land and buildings are provided by the landlord, with tenant contributions limited to livestock and equipment, the tenant has an incentive to invest in livestock and equipment but not in land improvements or structures. Under the lease forms that have been economically significant in American agriculture, the tenant has found it legally difficult and, in practice, virtually impossible to obtain reimbursement for the unexhausted value of any permanent improvements remaining at the expiration of his

⁸ *Ibid.*, p. 26.

⁹ Kuznets, *op. cit.*, p. 27.

lease. Under these conditions, he had little or no incentive to devote income or leisure time to the gradual improvement or maintenance of the real property assets. Because of the importance of capital investments in farm buildings for some forms of animal agriculture, this may also discourage the shifting from a cash-crop to a livestock-feed form of agriculture.

Although this is the generalized motivational setting within which tenant farm operators must make choices between consumption and investment alternatives, there are many exceptions. The most prominent of these exceptions is the tenant who is in fact an owner-in-prospect, renting from a parent, or who has some equally adequate assurance that he may aspire to the status of owner-operator. There is ample research evidence in the Midwest to indicate that this motivational setting does in fact exist on a number of rented farms. Where these ownership expectations are limited, and where this weak incentive situation is associated with a heavily skewed pattern of income distribution and a prominent "demonstration effect" of conspicuous forms of consumption by a social elite, there exists what might be characterized as a minimizing condition for capital creation, i.e., economic arrangements limit the incentive for investment and the cultural setting maximizes the incentive for consumption.

The argument to this point may be summarized as follows: The optimum conditions for capital formation in agriculture are established when tenure systems create the security of expectations that will permit a reduction in current withdrawals of income for consumption purposes in favor of investment in the expectation of greater long-term total gains. This reduction in current consumption and increase in investment is strongly dependent upon the disposition made of leisure time. The necessary conditions are that the scale and organization of the firm be adequate to provide opportunities for these investments, and that the cultural setting sanction a suppressed level of current consumption in the interest of a reinvestment of income and family labor.

REGIONAL DIFFERENCES IN TENURE AS RELATED TO CAPITAL FORMATION

The conditions stated above were met in the pioneer phases of the settlement of the Middle West and the Great Plains in a combination that was rare if not unique in history. Tenure expectations were secure and specific to individuals. The choice of scale of firm and balance of enterprise was subject to few restrictions. The supply of consumer goods and the pattern of income distribution did not permit the "demonstration effect" of superior consumption levels to interfere seriously with investment.

South of the Ohio and east of the Mississippi these conditions were present to a significantly smaller degree. In some cases they were

almost totally absent. Tenure conditions were frequently insecure on the better soils, the scale of individual operations was typically small, and monoculture was common. The disparity in incomes was great and, from the beginning of settlement, agriculture developed in the presence of comparatively high levels of consumption enjoyed by a small but socially dominant group. Among the members of this social elite, levels of consumption were high both in terms of income and in the disposition made of leisure time.

Regional differences in tenure systems, in short, created a situation in which the South operated at a disadvantage in the accretionary formation of agricultural capital. These differences were greatest and the consequences most severe during the period from 1860 to the depression of the 1930's. This was the period in which the capital base was laid for the phenomenal increase in agricultural production during the 1940-59 period.

The westward settlement across North America was accompanied by a massive creation of operating capital out of land. Forests were wastefully exploited and soil fertility was mined to create an artificially high level of consumption and capital formation. The North American pioneer, in effect, practiced a form of "shifting cultivation" on a continental scale, from the first days of settlement until well into the twentieth century. He cut over, plowed up, depleted the land, and moved on. The regional disparity in this regard is also striking. The southern farmer played a prominent role in this exploitative phase of American agriculture, but differently. He, too, created capital and a synthetic level of living by exploiting labor and disinvesting the land, but after 1860 he rarely moved on.

One consequence of this voluntary immobility was the emergence of a class of owner-operators in the South whose tenure in land was as complete and as secure as in any region of the nation. Yet this security did not contribute to capital formation. These owner-operators were often on the hilly flanks of good soil regions, or on the exhausted soils left by prior cultural practices centered around continuous cash-cropping, little or no livestock and fertilization. The inadequacy of incentive conditions for investment when there is little or no surplus to be invested was demonstrated in this region.

The discussion thus far has been confined to the tangible forms of farm capital formation. In both farm and nonfarm sectors of any economy an exceedingly important part of the total stock of capital is to be found in the education, training, and skills of the labor force (cf. Chapters 3, 4, 5, 22, and 23). Although this stock of human capital is difficult to measure, its presence or absence can be readily detected. In the developmental stages of American agriculture, this form of capital investment was most commonly made in rural public schools through the medium of the property tax. Here again the land tenure system played an important role. Where the individuals who benefited were the children of the persons taxed, the identification of benefits with costs was immediate and within the range of comprehension of virtually

every taxpayer. This resulted in the early appearance of comparatively heavy rates of rural property taxation that were largely self-imposed.

Where the benefits of capital investment in education were not specific to the individuals expected to bear the costs, and this was the typical situation in the South, the incentives for this form of capital investment in human beings were weak. As a result, in some areas this led to a passive or even negative attitude toward the value of public education. The basic reasons for this situation were essentially the same as those connected with investments in land, improvements, and structures, i.e., it was by no means clear to the property owners who were required to pay the cost of educational facilities that they would be among the principal beneficiaries.

In addition to wide regional differentials in the degree to which capital has been invested in human beings, there have also been sharp differences in the degree to which internal migration has resulted in capital "imports" or "exports." As settlement expanded westward, there was a continual inflow of capital in the form of adult human beings. For well over a century, this westward flow of people served to populate the frontier with a labor force whose rearing and training had required no local investment of capital. This capital inflow in the form of labor represented one of the most significant forms of early capital investment in American agriculture.

A similar though smaller inflow of capital had taken place in the states of the Atlantic seaboard in earlier decades, augmented throughout the eighteenth century by the slave trade. Until the middle of the nineteenth century, the differentials between the North and South in these forms of human capital inflow were not great. They became great after the discovery of gold in California, the opening of the Oregon territory, and the construction of the transcontinental railways. Until the outbreak of World War I, the agriculture of the Middle West and the Great Plains was the direct beneficiary of a massive inflow of capital in human form, a composite of migration from home and abroad. This contribution to capital formation had largely run its course in southern agriculture by 1860.

This capital flow through migration has been reversed. American agriculture is playing the unfamiliar role that had so long been played by the more urban and industrial regions of the eastern United States and Europe. Here, too, there are significant regional differentials. The outmigration of adult labor began earlier in southern agriculture and had reached proportions in the 1930's that were not experienced in the Middle West until the 1950's. In an evaluation of regional differentials in the capital position of American agriculture, the importance of these human capital flows has been underestimated.

The discussion to this point has been devoted to ways in which the land tenure structure can create optimum incentives for capital formation in agriculture. It would be helpful if these hypotheses could be tested by resorting to recorded data on state and regional capital

stocks in agriculture and their rates of change. However, these data (i.e., state and regional breakdowns of the type now presented annually in the Balance Sheet of Agriculture) are not available. In the absence of such data, some insight into current patterns of capital formation can be gained by a brief examination of regional differences in farm firm and household expenditures. Estimates of expenditures for major items of farm production capital and major household expenditures for the United States and for the South east of the Mississippi are presented in Table 9.1.

With 34 percent of the farms and 34 percent of the farm operator families in 1955, southern agriculture accounted for only 11 percent of the total production expenditures on livestock and poultry, 19 percent on farm improvements, and 19 percent on motor vehicles, machinery, and equipment. In contrast, expenditures on food and clothing were 29 and 31 percent, respectively, of the nation's farm total. This was only slightly below the proportion that would be expected if the expenditures in southern agriculture per farm firm and household were

Table 9.1. Comparison of Selected Farm Production and Family Living Expenditures, United States and South, 1955

Item	Total United States	South Atlantic plus East South Central	South as percent of U. S.
Number of farms	4,675,700	1,576,400	33.7
Number of farm operator families	4,760,050	1,615,782	33.9
<u>Class of Expenditure</u>			
<u>Farm Production</u>			
		(thousand dollars)	
Livestock and poultry	2,593,781	294,362	11.3
Repairs, maintenance and construction of farm service buildings and other farm improvements	1,727,739	331,478	19.2
Motor vehicles, farm machinery, and equipment	2,763,264	510,124	18.5
Total Production Expenditures	24,699,661	4,363,666	17.7
<u>Family Living</u>			
Food	3,963,519	1,160,738	29.3
Housing	4,133,006	1,036,278	25.1
Clothing	2,034,681	639,290	31.4
Transportation	1,798,149	504,770	28.1
Total Family Living Expenditures	15,722,505	4,363,162	27.7

Source: Farmers' Expenditures in 1955 by Regions, USDA Stat. Bul. No. 224, Washington, D. C., April, 1958, Tables 13 and 17.

in line with national averages.¹⁰ Expenditures on housing in the South were appreciably lower, accounting for only 25 percent of the national total. Some adjustment would be needed in this figure to make it comparable with national estimates, due to climatic differences. While admitting the need for this adjustment, it would seem that housing expenditures in southern agriculture are well below the relative level of family expenditures on other consumption items.

Southern agriculture in 1955 accounted for 18 percent of total U. S. farm production expenditures and 28 percent of farm family living outlays. Recognizing the crude nature of these comparisons, the over-all implication is clear, viz., in comparison with national totals, the relative proportion of the income flow from southern agriculture devoted to consumption expenditures is significantly greater than the proportion allocated to farm production. These data suggest that current rates of investment in accretionary forms of capital in southern agriculture in 1955 were substantially below the average levels prevailing in the nation.

Many aspects of this particular discussion need more thorough analysis (cf. Chapter 27). The land tenure institutions of a region do not exist in a vacuum, and many other forces have shaped the progress of agricultural development in the South and throughout the nation. Moreover, the patterns of land tenure in some regions are changing rapidly. Between 1935 and 1955 the percentage of southern farms operated by full-time tenants was cut in half, dropping from approximately 60 percent of all farms to 30 percent. The acreage of land in farms operated by full-time tenants in the South in 1954 was not significantly different from the national average of 16.4 percent of all land in farms. However, this figure is misleading since 48 percent of the cotton acreage and 50 percent of the tobacco acreage harvested were in the hands of full-time tenants in 1954.

In view of these rapid changes over the quarter-century of 1935-60, it would be instructive to examine differential rates of current capital investment on owner-operated and tenant farms in southern agriculture and in the Middle West. It is hoped that the hypotheses advanced here, and the arguments supporting them, can serve as a stimulus and guide for investigations of this type.

¹⁰ The absolute dollar levels of expenditures on clothing provide a particularly sharp contrast with regional differentials in production expenditures. Average expenditures per farm on clothing for selected regions in 1955 were as follows:

South Atlantic (Florida, Georgia, North Carolina, South Carolina, Virginia, West Virginia)	\$383
East South Central (Alabama, Kentucky, Mississippi, Tennessee)	\$388
West North Central (Iowa, Kansas, Minnesota, North Dakota, South Dakota)	\$375

See Supplement to Farmers Expenditures in 1955, USDA, AMS-354, Washington, D. C., Dec., 1959, Table 7, p. 42.

IMPACT OF URBANIZATION

We have witnessed a massive "urbanization" of the entire nation. Rural standards of living have advanced near the urban level, and the levels of achievement within these standards have moved very close to urban levels. The full weight of "Madison Avenue" has been felt in rural as well as in urban areas. Many developments have contributed to this trend. The closing of rural churches and incorporation of rural congregations into urban church bodies has been one prominent force working in this direction. A similar force has been the consolidation of rural schools. The Selective Service System has exercised a powerful influence in "uprooting" young men from isolated communities in backward rural areas. The impact of the "demonstration effect" of urban consumption on rural people has been dramatically increased by the virtually universal extension of good roads and of electric power to farms through the REA. By 1959 three-fourths of all farm families had television and a larger percentage of farm families owned two cars than did their urban neighbors in many farm states.

One of the most remarkable manifestations of this trend has been the rapid change in the quality of rural housing. Although severely handicapped by the absence of credit and financing arrangements now generally available in urban areas through mortgage insurance, rediscount, and loan guarantee programs of the federal government, farm housing has been markedly improved since 1945. We may be witnessing, for the first time in our history, the emergence of the farm home as a consumption good, breaking sharply with its previous role as an adjunct to the farm firm.

This upgrading in rural family consumption patterns occurs in an economic setting in which the key decisions for industrial nonfarm capital formation have been institutionalized. We can afford an appeal to the consumption aspirations of a mass industrial population with little danger that consumption expenditures at the family level will seriously restrict the nation's capacity for investment and new capital formation. This is not true in agriculture. The capital-forming process in agriculture is still predominantly personalized, (cf. Chapter 21). The rural decision to consume is a decision not to invest. Agriculture in this setting finds itself at a disadvantage. Unable to provide expansion capital through the control of supply and prices, and the plow-back of earnings, the farm family is left with the traditional alternative of capital creation through the exploitation of family labor and levels of living. The potential inherent in this source of capital formation is impaired as rural levels of living and time allocation approach urban standards. We are left with the prospect that some method of institutionalizing the capital-creating decisions seems indicated for agriculture if current rates of agricultural advancement and improvement in rural levels of living are to be maintained.

In view of the rapid industrialization under way in the South, it is possible that the urbanization of the countryside may in broad terms lead to an uninterrupted line of development in southern agriculture. It has been suggested in this chapter that agriculture in the South has been household-oriented and consumption-expenditure-conscious throughout the nineteenth century to the present. This region did not participate fully in the era of low consumption and heavy farm firm investment that was spurred by the prospect of free land and farm ownership. In the sweep of historical development in American agriculture, it may well be that the phase of heavy investment in the farm firm, spurred by ownership expectations, has bypassed the South. Improvements in the tenure structure that tend to improve incentives for farm firm investment are coinciding with increasing farm family expenditures on a scale that may still leave the capital-forming position of southern agriculture at a disadvantage.