

CECIL B. HAVER
University of Chicago

Institutional Rigidities and Other Imperfections in the Factor Markets

THE economic health of commercial agriculture is the focus of our discussion here. Adjustments in production and in resources used in agriculture have not been rapid enough to enable farmers to share equally with the rest of the economy the increased production resulting from our economic growth. From a national standpoint, resources are being used to produce a surplus of farm products. Consumer welfare can be improved by a transfer of resources out of agriculture. Two adjustments appear necessary: (1) an increase in the size of farms and enterprises, and (2) greater resource mobility — particularly for labor, within agriculture and between agriculture and nonagricultural sectors.¹ The first adjustment assumes that the optimal farm and enterprise size is larger than the present average or modal size. Both adjustments imply certain institutional rigidities, imperfections in the factor market, and resource immobilities. Our task is to develop and to discuss what rigidities, imperfections, and immobilities in factor markets, other than for labor, impede needed resource transfers and what can be done about them.

Certain institutional rigidities arose quite unfortuitously out of our program to aid and develop agriculture, i.e., through the Homestead Act, price support legislation, and farm credit legislation. Other rigidities arose from accepted customs, such as those inherent in tenure and leasing arrangements. Also, rigidities and imperfections may stem from conflicting objectives in legislation where short-run-income distribution objectives have subordinated optimal allocative objectives; the 160-acre limitation on Bureau of Reclamation projects, loan restrictions from federal credit agencies, and acreage allotments from certain other agricultural programs are cases that illustrate this point. Other factor market imperfections arose out of federal legislation that, in a certain sense, created monopolies, i.e., Bureau of Reclamation irrigation projects, federal grazing and timber lands under the Bureau of Land Management and the Forest Service.

If our economic goals are, first, that of optimal resource allocation and, hence, maximization of the social product over time and, second,

¹Also, we must accelerate and, along the path of acceleration, stabilize non-farm economic growth to aid in facilitating adjustments in commercial agriculture.

that of income distribution, then, with the focus on commercial agriculture, the former goal subordinates the latter.² To achieve our ultimate goal of optimal resource allocation, one of our intermediate goals, then, is to adjust commercial agriculture to economic growth. Various means have been suggested and used to aid agriculture.³ Some of the measures, such as the price support program with its high level parity prices and acreage allotments, have impeded, rather than facilitated, adjustments.

We shall be concerned with the rigidities and imperfections that some of these programs have built into agriculture, and we shall suggest possibilities for improvements to aid agriculture in adjusting to economic growth.

Fundamentally, factor market imperfections and institutional rigidities stem from successful attempts to gain protection for loss of sunken costs (protection from economic growth), which is one of the adjustments to risk and uncertainty. In one sense, uncertainty causes inefficient production, because in the absence of it, the same product could be produced with fewer resources and an optimal distribution of the product could be achieved. When the degree of information is less than perfect, farmers and others use resources inefficiently because they are unable to predict future outcomes with certainty. From a within-the-firm standpoint, the farmer is unable to determine *ex ante* the optimal output which would yield maximum returns *ex post*; furthermore, the farmer is confronted with the reactions of others to his situation. These reactions may affect the terms and amount of external capital available to the firm, a phenomenon that has been called external capital rationing, or risk aversion, describes the effect of uncertainty upon the farmer's decision regarding the amount of resources to employ in production.

CAPITAL MARKET IMPERFECTIONS THAT AFFECT AGRICULTURE

What is the agricultural credit and capital market situation? Farmers and certain agricultural experts, fundamentalists and otherwise, hold that the capital market is not functioning properly for agriculture.⁴ Specifically, the claim is that short-term loans are not adapted

²A rich country can afford deviations from optimal use, but let us recognize these deviations and let us make decisions with respect to probable benefits and costs.

³Examples are the price support program, the soil bank program, production control, federal crop insurance, federal credit agencies, extension education, experiment station research, changes in tenure arrangements, changes in tax laws, moving labor, homesteads in reverse, rural industrial development, etc.

⁴Schultz, T. W., *Production and Welfare of Agriculture*, Macmillan, 1949, Chap. 12; Schickele, R. W., *Agricultural Policy*, McGraw-Hill, 1954, Chap. 6; Johnson, D. Gale, *Forward Prices for Agriculture*, The University of Chicago Press, 1947, Chap. 5; Castle, Emery N., "Research problems relating to credit for areas of high risk and uncertainty," *Proceedings of a Research Conference on Risk and Uncertainty in Agriculture*; Kristjanson, B. H., and Brown, J. A., "Credit needs of beginning farmers in selected areas of North Dakota," *N. Dak. Agr. Exp. Sta. Bul. 386*, 1953; North Central Land Tenure Research Committee, "Improving land credit arrangements in the Midwest," *North Central Regional Publication 19*, Purdue Agr. Exp. Sta., 1950.

particularly to farmer needs, and that intermediate type loans for production purposes are scarce; indeed, non-government institutional lenders are not directly in the field at all.⁵ Further, long-term credit is available, but on fixed and rather inflexible terms.⁶ Equity requirements are often high and in some areas mortgage funds are not available from institutional lenders.⁷ In any case, restrictive arrangements, legal or self-imposed, are claimed to restrict the flow of funds to agriculture.⁸ On the other hand, many farmers evidently do not make full use of the sources of credit available to them.⁹ Farmers forego profitable opportunities rather than incur financial obligations. Some fear possible reverses; others attach moral connotations to debt.

Imperfections in the Long-Term Credit Market

The volume of farm mortgage loans in 1955 was at an all-time high of 8.2 billion dollars.¹⁰ This sounds high, but the total value of farm land and buildings was 91.3 billion dollars; thus, 91 percent of the equity was in the hands of farm owners. Approximately 40 percent of the real estate mortgage debt was held by private individuals, not institutional lenders. Also, 9.8 billion dollars in non-real estate debt was outstanding, while non-real estate assets were valued at 71.8 billion dollars.¹¹ Thus, this debt is approximately 13 percent of the value of these assets. Farmers have held this relatively low debt position over time. Agriculture's over-all equity position would seem to indicate ability to support a much larger debt load, but other factors affect the situation — small farm size and high income variability, to mention a few. High-income farm managers throughout agriculture tend to use a much greater proportion of borrowed capital. The agricultural sector has the equity to secure capital but apparently cannot get the capital or does not want it, i.e., capital is rationed externally or internally or both.

Productivity studies on commercial farms indicate that the marginal productivity of current expenditures and working capital investments is considerably above its cost.¹² Machinery, equipment, and motor vehicle investments have increased many fold in the past 15 years and no let up is indicated for the near future. Apparently, acquisition of these items is profitable for farmers.¹³ Farm real estate in recent productivity

⁵Schickele, *op. cit.*, pp. 78-82.

⁶"Improving land credit arrangements," pp. 5-13.

⁷*Ibid.*

⁸Schultz, *op. cit.*, pp. 129-33, and Johnson, *op. cit.*, pp. 62-66.

⁹Johnson, *ibid.*, pp. 62-66.

¹⁰Agricultural Statistics, U.S. Department of Agriculture, 1955.

¹¹For the first time, in 1949, and since that time, non-real estate debt has exceeded real estate debt in agriculture. Also, the relative value of farm real estate to non-real estate assets is declining.

¹²Schultz, *op. cit.*, pp. 52-62; Johnson, *op. cit.*, pp. 105-6; Heady, Earl O., "Production functions from a random sample of farms," *Jour. Farm Econ.*, Vol. 28: 4, Nov., 1946; Heady, Earl O., and Shaw, Russell, "Resource returns and productivity coefficients on selected farming areas of Iowa, Montana and Alabama," *Iowa Agr. Exp. Sta. Res. Bul.* 425, 1955; Strand, E. G., and Heady, Earl O. "Productivity of resources used on commercial farms," *USDA Tech. Bul.* 1128, 1955.

studies has been yielding lower marginal returns than working capital investments, but real estate returns appear to be equivalent to the cost of funds for acquiring real estate. The farm land market also has been bearing up well. Farm land prices have been increasing even while farm incomes have been falling.¹⁴ Rising land prices can be attributed in part to "land using" technological developments that have increased the relative price of land and to underpricing of land relative to its earnings.

While the over-all capital and credit market for agriculture seems to be functioning properly, closer examination indicates that institutional adjustments are needed. Attainment of these adjustments does not necessarily assure the movement of more capital into agriculture. However, these adjustments can be expected to change both the distribution of capital and credit within agriculture and the proportions of credit held by various lending groups.¹⁵

Let us look at farm mortgage arrangements more closely. Evidence indicates that farm real estate credit tends to be rationed by non-price criteria. The interest rate (price of loanable funds) tends to be fettered and regulated by governmental controls and by habits and customs. Contracts tend to be tailored to the lenders' need for regularity, safety, and liquidity. The use of relatively flat interest rates (the same rate for all lenders) encourages the use of other allocating devices such as high equity requirements, exclusion of loans to high risk firms or to high risk areas, and use of short loan periods with consequent high annual repayment requirements. Repayment arrangements also tend to be inflexible through time, i.e., many contracts lack satisfactory arrangements for postponing payments.¹⁶ This inflexibility appears to stem from risk and its costs. With flat interest rates (the maximum of which is usually legislatively fixed), the lender cannot pass on the risk costs of a loan.¹⁷ Therefore, either the loan is not made at all or is based on a relatively safe portion of the equity and includes arrangements to protect the equity of the lender. Loans tend to be based on the need to preserve the safety of the lenders' funds rather than on potential productivity. Hence, loans are governed by the collateral offered by the borrower. Arrangements are needed for allocation of funds on the basis of the expected value of the gain in production exceeding the expected value of the loss.

¹³Schultz, T. W., "An alternative diagnosis of the farm problem," *Jour. Farm Econ.*, Vol. 38: 5, 1956, pp. 1143-44.

¹⁴Agricultural Statistics, U. S. Department of Agriculture, 1955.

¹⁵Less would probably be held by private individuals who now hold 40 percent of the farm mortgage paper outstanding and an undetermined amount of other paper; much of this farm mortgage paper is held involuntarily.

¹⁶"Improving land credit arrangements," pp. 5-15.

¹⁷The actual mortgage rate is now below the maximum rate. The mortgage rate has steadily fallen, with the Federal Land Bank and its affiliated National Farm Loan Associations leading the way. The Land Bank has achieved one of its main objectives, namely, providing farmers with a low rate on mortgage funds if they have a large equity; otherwise the farmer does not obtain funds. Other mortgage firms have followed; thus the inevitable has happened: a low price has distorted the distribution and affected the relative supply of loanable funds to agriculture. The limited funds go to those who have the necessary equity and thus results in safety consistent with the low interest rate.

If farm mortgage funds are to be allocated to their best use, the price (interest rate) should be returned to its position as an allocative agent. This can be accomplished in at least these two ways: (1) free the interest rate and remove other institutional restraints, if not generally, at least in the agricultural sector and (2) introduce insured loans (a) at rates proportional to the risks involved or (b) at level rates.

Under (1), the freed interest rate, after sufficient time for adjustments, would vary with the risks involved in a given loan. Lender and borrower could make their decisions relative to the expected gains and losses. Risk costs would become imbedded more explicitly in the cost and asset structure of the firm and loanable funds would tend to be channeled into their highest productivity uses consistent with the risks involved. If existing lending institutions failed to adjust to this new situation, the present farm credit system or new private institutions could be encouraged to enter the high risk loan field (high risk from all standpoints, i.e., low equity, high weather variability, high income variability, etc.). The Federal Land Bank led the way in agriculture to low interest rates with the consequence that capital was rationed to farmers on a non-price basis; high risk operators did not obtain funds and other operators received loans proportional to a safe amount of their equity. A low interest rate is consistent with the costs and risks for high equity, low income variability, near optimal sized firms. But, funds should be available at gradually increasing rates as equity decreases and as other risks increase; in this manner funds are made available to those entrepreneurs who feel the value of expected gains from farm investments are greater than the value of expected losses. Society loses when high productivity, high risk investments are not made, and present farm credit arrangements are not conducive to such investments.¹⁸

In alternative (2)(a) (insured loans at rates varying with the risks), the resource effects should be the same as in (1), for in (2)(a) the rate structure would be proportional to the expected loss. Thus the risk cost becomes a part of the cost of obtaining loanable funds. Graduated insurance schedules, with the rate as an increasing function of the expected loss, is an accepted institutional arrangement in other fields. For example, at a price, fire insurance can be purchased on almost any structure. On most commercial farms where competent farm managers feel that the expected gains exceed the expected losses, is it inconceivable that capital funds could be loaned at a price, which increases as the risk increases? A successful insurance scheme needs a reliable actuarial basis, or in lieu of that, impregnable financial reserves. Only the government could provide the latter. Perhaps the government could underwrite a portion of the expected loss of a program such as (2)(a).¹⁹

¹⁸I am not suggesting that farm mortgage rates be raised under present arrangements, but I am suggesting that institutional arrangements could be changed to provide additional funds at rates proportional to the risks involved. If this is done, loanable funds may be channelled into those uses where their marginal value productivity is highest.

¹⁹The federal government underwrites excess losses in the Federal Crop Insurance program and, similarly, is proposing to underwrite a proportion of the loss in the Federal Flood Indemnity program.

In the case of (2)(b) where the insurance cost is a level across-the-board rate, the rate is not proportional to the risk.²⁰ Under this plan, borrowers who could escape the rate would do so and, thus, the scheme would result in an adverse selection. Also, for those who do take out the loan and insurance, the poorer risks would be subsidized at the expense of the better risks. Under this proposal, non-price allocating devices would be introduced because rates are not proportional to the risks.

If the insurance scheme not only guaranteed the loan but provided for payments to the lender when conditions prevented the borrower from making regular payments, the flexibility needs of the farmer and the liquidity and other risk problems of the lender could be met. The cost would be transferred explicitly to the borrower.

These services, conveniences, and risks are costs that must be borne. It is unrealistic to suggest that they be borne by the lender without adjustments in the costs of credit (interest and insurance). If the lender is asked to bear them, he will shift or circumvent them and the result will be a decrease in the supply of loanable funds and an increase in non-price allocative arrangements.²¹

Imperfections in Short and Intermediate Term Credit

As has been indicated earlier, a close look reveals that short and intermediate term (credit and market) arrangements are unsatisfactory and tend to promote less than optimal resource allocations within agriculture.²²

Farmers must adjust their operations to the credit institution pattern rather than the latter adjusting its pattern to agriculture. Thirty, sixty, and ninety day notes are not particularly satisfactory for most farmers. Again safety and liquidity are of prime importance to the lender. The lender may not wish to have any part in "risky" loans or, if he does, he may not be able (because of rate restrictions) to cover and spread the costs of handling them; thus, these loans are rejected either in whole or in part. An increasing amount of the short and intermediate term credit in agriculture is supplied by companies that can cover the cost of handling "risky" credit by hidden charges and/or reduce the risks by providing some managerial services.²³ If small loan companies are used as a source of financing, as is often the case with machinery and motor

²⁰This type of insured loan is becoming more widely used, e.g., Federal Housing Administration home loans, Farmers Home Administration farm ownership loans. The rate in both cases is one-half of one percent.

²¹Much of the literature on improving farm real estate credit arrangements ignores this point. See "Improving land credit arrangements."

²²See the previously cited production function studies and the following specific studies: Diesslin, Howard, "Financing modern Midwest agriculture," Purdue Agr. Ext. Serv. Bul. 415, 1956; Kristjanson, B. H., *op. cit.*

²³Much of the broiler industry's financing is provided by feed companies which assume part of the risk, receive part of the profit, and provide field men.

vehicles, credit is costly; the net cost to the farmer ranges from 10 to 36 percent per annum.²⁴ I do not wish to imply that small loan people are gouging their clients, but it is a fact that such loans are costly to administer per dollar loaned. These costs must be borne, and if resources are to be allocated optimally these risks and other loan costs must become part of the cost structure.

Resource allocation will be improved when farmers finance more of their current expense needs by budgeted loans, i.e., loan agreements in which the farmer specifies in advance the magnitude and distribution of his credit needs. Repayment should be synchronized with the income flow.²⁵ Budgeted loans could also carry insured loan provisions. This type of arrangement would remove some of the uncertainties a farmer faces and would facilitate more orderly planning of his business.

To finance working capital items, like machinery and breeding stock, farmers need loans that are repayable over the productive life of the investment. This type of arrangement permits repayment from the earnings of the assets. Under existing formal arrangements, the financing of large capital items requires (a) a high rate of saving over a short period and/or (b) disinvestment of other capital items. A high rate of savings may be accomplished at a sacrifice in living standards with no long-run malallocation of resources. Capital disinvestment to acquire other capital items may or may not result in malallocation of resources depending on replaceability of the asset, social and private costs, etc.

In summary, the capital and credit market has obstacles and imperfections that tend to exert a form of price (interest) control over loanable funds and to encourage the use of non-price allocating devices. We need to unfetter this market and encourage adoption of the changes in institutional arrangements discussed above. The possibilities are: insured loans on a wide scale and/or a freed interest rate (at least within agriculture); removal of other restrictions; budgeted loans; flexible payments; lower equity requirements; and longer repayment periods. The latter recommendations would likely follow readily if either of the first two were instituted.²⁶

²⁴A \$1,000 note payable in 12 monthly installments at an implied 6 percent interest rate usually means that \$60 interest is paid for the privilege of having on the average only half of the amount loaned. Thus, the actual annual rate of interest paid in this example is 12 percent ($2/1000 \times 60$). Likewise, where the interest is stated as 2 percent a month on the unpaid balance, the actual per annum rate is 24 percent.

²⁵Some banks, credit unions, and PCA's are offering loans of this type.

²⁶In the above discussion I have dealt mainly with the imperfections in the capital market facing agriculture; I wish to add that it is my opinion that the capital market facing the whole economy is hamstrung with rigidities, thumb rules, and customs that inhibit optimal adjustments. But the non-farm economy has developed risk capital financing as an important source of capital, whereas this alternative has not been utilized much in agriculture. The corporate device and common stock financing is a possible institutional arrangement that may aid in correcting some of the resource adjustment problems in farming. Since capital accumulation can be a slow process, the corporate farm with common stock financing is an important alternative for financing our larger farms.

THE EFFECT OF MONOPOLISTIC ELEMENTS
ON AGRICULTURAL ADJUSTMENTS

Monopolistic elements tend to misallocate resources, reduce aggregate welfare, and redistribute income in favor of the monopolists. Monopoly elements in non-agricultural sectors have been blamed for contributing to many problems in agriculture, but I believe this contention has been much over-emphasized.²⁷ With respect to the factor side of agriculture, elements of monopoly are present in the purchase of electricity, telephone, transportation services, farm machinery, supplies (e.g., fertilizer and sprays), water in the case of irrigation, and grazing land in the case of western ranchers. If regulations are effective, with respect to electricity and telephone services, resources in these industries will be paid what they would earn in alternative uses. Their pricing policy, though, may still be detrimental to optimal resource use.

The market for transportation services, farm machinery, and supplies appears in the main to be functioning satisfactorily.²⁸ However, there are exceptions; for example, certain machinery companies suffer from some of the same problems as agriculture, namely too many resources with consequent low returns to the residual claimants and with some unemployment of other factors. Small town business and property owners are bearing the brunt of the population adjustments in some agricultural areas. The chemical industry, namely manufacturers and suppliers of agricultural chemicals, appear to be enjoying relatively high but possibly short-run returns.

Pockets of resource malallocation do continue to exist with respect to irrigation water and grazing land; resources here are not allocated in a manner to equalize marginal value productivities between firms and between uses.

The federal government holds monopoly control over much of our western water resources. Water contracts to irrigators tend to be made so that water is allocated on the basis of non-price criteria. Optimal resource use suggests that resources should be priced in a manner that is conducive to equalizing the marginal value product in all uses. Equal water allocation per acre to all farm headgates in a project ignores differences in productivity on different farms as well as differences in costs in distributing the water to various farms. A flat water charge regardless of the amount used also is conducive to waste and non-optimal use. Neither riparian nor appropriative water rights promotes the optimal use of water. In most western states water rights are often fixed to the land and cannot be bought, sold, or transferred; again, this arrangement does not facilitate optimal use between firms and uses. Since allocations between farm and nonfarm uses are not determined in

²⁷Harberger, A., "Monopoly and resource allocation," *Amer. Econ. Rev.*, Vol. 44, No. 2, pp. 77-87.

²⁸Schultz, *op. cit.*, pp. 1137-43.

practice on a productivity basis, water may become fixed in relatively low productivity uses.

To facilitate adjustment in water use within agriculture and between agriculture and non-agricultural sectors, either (1) free market pricing of water or (2) devices that simulate free market pricing is needed. If (1) is used, the only information required is the cost of delivering water to farmers. The main argument against free market pricing lies in the area of external economies and diseconomies. If prices are to do their job of allocating resources, impediments to their operation should be removed. Thus, pricing irrigation water on the basis of cost would be a step in the right direction. The free transferability and sale of water rights would also encourage more optimal use. As opposed to letting free pricing do the job, (2) is suggested. As a guide in making optimal use of our water resources over time and space, water monopolists need to know for each project, river, or basin the demand for the final products, the technology of converting resources into products, and the supply functions of all factors.

FIXED ASSET PROBLEMS

Static economic analysis indicates that fixed costs do not affect the nature of the marginal cost curve. Also, to the extent that the marginal cost of output provides the basis for the firm's supply response, fixed or sunken costs need not determine the nature of adjustments in output or resource use. Wide swings in output and resource use can occur if marginal costs are known and prices can be predicted accurately. High fixed costs, an important characteristic in most agricultural firms, imply only that production should be maintained when the expected price exceeds the average variable costs. Thus, high fixed costs in agriculture mean essentially that farmers tend to maintain high production levels even if prices decline by relatively large amounts. The farm firm tends to continue production during depression or during declining economic conditions as do non-agricultural firms. This fact does not mean, however, that agriculture has a completely inelastic supply curve (zero elasticity). Production will continue as long as the price is greater than the minimum average variable costs, and greater adjustments would be made if the price did not cover variable costs.

Two observations should be made regarding the relationship between sunken investments in agriculture and problems of adjusting commercial agriculture. One is that large fixed investments in buildings and machinery and the experience and education of the operator tend to hold resources in agriculture long after the time when their opportunity return would be greater in alternative enterprises on the same farm, on other farms, or outside agriculture. Uncertainty, in part, explains this tendency to hold resources in present uses, for many farmers are reluctant to give up low for higher returns in alternative opportunities where the "risks" to them are unknown and presumably higher.

The second observation is that farmers and other groups in society, through political or other group action, have made many successful attempts to gain protection from the loss of "sunken" costs. These successful attempts create new rigidities in our economy that impede adjustments. Thus, laws that prohibit marketing or allow confiscatory taxes on a particular item, as in the case of oleomargarine, prevent optimal resource adjustments and preserve, or did preserve, butter-fat producers' investments for a few generations. External trade barriers, such as tariffs and quotas, and internal trade barriers, such as unreasonable inspection and grading laws, protect and preserve investments, even encourage more investments, which in many instances represent misallocations of society's resources. Of course, once a group has been successful in its attempt to gain protection for loss of its investments, via some form of legislation or monopoly power, the obstacle will become more difficult to remove later; the farm price-support program is a good example. The hope in the future lies in keeping channels open and in removing existing impediments and establishing no new ones. Compensating resource owners who are suffering loss or destruction of assets due to changes may be less costly to society than providing protection.

FARM CONSOLIDATION AND ASSET OWNERSHIP PATTERNS

Farm consolidation is another adjustment problem in agriculture. Out of our historic past a patchwork pattern of farms has developed on our landscape. Farm size adjustments are impeded by the random way in which farm tracts become available for addition to the acreage of a given farm. Acreage adjustments are by no means smooth, regular, and orderly. The pressure to expand acreage due to the development of "land using" technology, decreased risks and other factors may have forced many operators to dissipate much of the gain from an upward size adjustment through transportation, supervision, and other costs associated with farming two separated tracts. Presumably, the individual operator will expand — even to inconvenient and costly locations — if the expected value of the gains exceeds the costs, other things being equal. In most cases, tenants or owners can afford to pay more for the use or ownership of contiguous than for non-contiguous land. Farming non-contiguous tracts increases the costs of farming and reduces the individual and social product.

A system of taxes and subsidies might be used to discourage more costly operation of non-contiguous tracts and to encourage less costly operation of contiguous tracts. In this way the economies of farm size could be preserved rather than be dissipated and lost to society in the adjustment process. The tax power could thus be used to facilitate a more optimal use of society's limited resources. The social costs of operating tracts in remote areas may make the forming of such units uneconomic if all costs and returns are considered. Zoning laws are a possibility in such situations.

LEASING AND TENURE ARRANGEMENTS

Leasing and tenure arrangements represent a major area of inefficiency in agriculture. Over time, numerous arrangements and customs for share or cash leasing have evolved which cause the farm operator to use capital, labor, and land resources in an inefficient manner.²⁹ The economic effects of the cash lease are similar to those for unencumbered farm ownership, if the cash lease provides arrangements for adequate compensation for unexhausted improvements, security of tenure, and effective arbitration. Optimal resource use under share leases requires that the optimum programs for each leasing party must be the same as the optimum program for the farm as a whole.³⁰

To reduce or remove obstacles to adjustment in tenant farming, landlords and tenants need to know their mutual interest. In addition, state legislation is needed which provides for compensation, arbitration of landlord-tenant conflicts, increased security of tenure, and otherwise specifies the rules of the game in the farm rental market.

SUMMARY

Institutional rigidities and imperfect factor markets tend to misallocate resources, impeding adjustments in agriculture. Economists, in the main, agree on the adjustments needed to promote optimal resource use, but disagree on the means. Many of the rigidities and market imperfections that have developed stem from uncertainty and actions to counteract economic change and growth. The main possibility for removing rigidities, obstacles, and imperfections lies in aiding resource markets to operate freely. If free market pricing is impossible, then devices that simulate the results of free market pricing are needed. Let prices allocate resources; that is their function. Use the government to regulate and adjudicate. Information and continuing education are needed to aid in reducing the effects of custom, habit, and tradition in impeding optimum adjustments.

²⁹Johnson, D. Gale, "Efficiency of share-leasing contracts," *Jour. Polit. Econ.*, Vol. 27; Heady, Earl O., "Economics of farm leasing systems," *Jour. Farm Econ.*, Vol. 29.

³⁰Specifically, this calls for: (1) the arrangements for sharing costs and production for each particular crop must be the same, (2) the shares of all competitive crops must be the same, (3) the prospects for returns over time, considering normal uncertainties of weather and the market, must be the same under the lease as they would be in its absence, (4) the share of income going to each party of the lease must represent the product of the resources furnished by this person. See Heady, Earl O., "Marginal productivity of resources and imputation of shares for cash and share rental farms," *Iowa Agri. Exp. Sta. Bul.* 433, 1955.

DR. HAVER in his paper defines his task as one of discussing institutional rigidities, factor market imperfections, and resource immobility as they relate to the resource (other than labor) adjustment problem in agriculture. In such a broad range of topics we should not expect an exhaustive treatment of the many problems in this area.

In outlining his framework for analysis, Dr. Haver explicitly tells us that the goal of optimal resource use should take precedence over the goal of optimum income distribution. I would like to know somewhat more about the goal that is to take "second place" to that of efficiency. I would only mention that our tendency, as economists, to place the efficiency goal higher than might be tolerated by less partial observers, is a reflection of the fact that our analytical tools for handling efficiency problems are more elaborate than those used for analysis of personal income distribution problems.

Dr. Haver indicates that professional agricultural economists rather generally are of the opinion that short-term and intermediate loans are not particularly adapted to farmers' needs, and that restrictive arrangements (legal or self-imposed) impede the flow of funds to agriculture. Clearly, we need to develop criteria of adequacy in the credit market that would enable us to distinguish more clearly between the cases which have come to be known as internal capital rationing, on the one hand, and external capital rationing, on the other.

Given the risk preferences of the lending and borrowing firms, I presume that if equilibrium is reached by the borrowing firm with no restrictions from the lender (perfectly elastic supply of funds at the going interest rate), we have internal capital rationing. If the lender reaches an equilibrium consistent with his supply funds and risk preferences, but the borrower "needs" more funds (i.e., he would borrow funds if he could get them at the going rate), then, I presume, we have external capital rationing. I would like to have seen in this paper a more complete development of the framework in which we are to decide which kind of a restriction on credit use is more important. This distinction makes a considerable difference in the delineation of problem areas. A framework which can make this distinction may show that some of the "non-price" criteria will perform satisfactory "price" functions. The

need for such a framework becomes evident when Dr. Haver examines current aggregate equity positions:

1. Real estate — 91 percent of the total value of the property in the hands of farm owners.
2. Non-real estate — 87 percent of the total value of the property in the hands of owners.

It is suggested, albeit tentatively, that the high aggregate equity position would support a much larger debt load. Even these high aggregate equities could mean that the current debt loads of some farmers may prove to be excessive. Since at least some of the farm owners are not operators, the real estate equity position, as an indication of ability to absorb debt load by farm operators, may be somewhat misleading.

Concerning productivity estimates for various classes of inputs, Dr. Haver observes that marginal returns on land are approximately equal to the cost of funds. This observation must assume an expectation of a constant marginal value productivity of land into the future for a relevant period. I am confused by the statement that land prices are "bearing up well." The prevailing belief in some communities is that land is selling too high in relation to its long-term income. On the basis of informal observations, I would think that this condition is a more serious problem than credit availability. If land indeed is currently overvalued, some of the suggestions in Dr. Haver's paper might aggravate the situation.

The crux of Dr. Haver's argument regarding credit turns on the restoration of the interest rate to its allocative role by permitting it to vary more widely (at least in the agricultural sector). I would like to see Dr. Haver, at a later time, perhaps, develop in somewhat more detail the analytical procedure for deciding whether we need more variation. We, of course, have some variation now among areas, types of loans, etc.

In the discussion of imperfections in short and intermediate term credit, we find that "farmers adjust their operations to the credit institutions rather than the latter adjusting to agriculture." An historical analysis to determine why the particular current institutional configuration evolved would be of interest. The reasons for its development then could be checked against the current situation to see if Dr. Haver's changes would achieve the desired results.

Finally, we should keep in mind that given the demand elasticity assumption in Professor Johnson's paper, the effect of Dr. Haver's recommendations, if successful, would require an even higher migration rate.