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SOME REFLECTIONS ON AGRICULTURAL INVESTMENT *

KEITH O. CAMPBELL
University of Sydney

The study of the formation and use of capital is to my mind one of the most fascinating fields of economic research. Yet, apart from a long-standing practical concern about rural credit which has been mainly inspired by farmer agitation, the subject of capital formation has, in the past, been one of the most neglected aspects of agricultural economics.

Recently, there have been indications of increased interest in this question by overseas workers. Tostlebe's very comprehensive study of capital formation and financing in American agriculture, which appeared late last year under the sponsorship of the National Bureau of Economic Research, is perhaps the most outstanding contribution in this area to date.¹ The two latest issues of the *International Journal of Agrarian Affairs* have been devoted to a series of comparative studies of problems connected with agricultural capital formation and use in countries at various stages of economic development. Nearer home, an F.A.O. official, Dr. J. P. O'Hagan, has prepared a valuable review of agricultural investment in Australia, a summary of which has recently been published.² My colleagues and I at the University of Sydney have also been engaged on research into various aspects of this problem in recent years.

Paralleling this latter-day interest in capital formation in agriculture, there is evidence of renewed activity in the direction of empirical studies of the determinants of capital formation in industry.³ The thing that impresses me most about these studies of industry is that, with the increasing significance of self-financing in industrial firms, the differences between agriculture and industry so far as investment decisions are concerned do not appear to be as great as we were perhaps earlier led to believe.

In this paper I propose to review briefly some of the more significant points which seem to be emerging from recent studies of capital formation in agriculture.

The Importance of Capital Investment in Australian Agriculture

The important role of capital investment in the recent development of the Australian rural industries should not need any emphasis.

* This paper is based on an address delivered to the N.S.W. Branch of the Economic Society of Australia and New Zealand on 18th April, 1958.

¹ A. S. Tostlebe, *Capital in Agriculture: Its Formation and Financing since 1870* (Princeton: Princeton University Press, 1957).

² J. P. O'Hagan, "Agricultural Investment in Australia," *Monthly Bulletin of Agricultural Economics and Statistics*, Vol. VII, No. 6 (June, 1958), pp. 1-16.

³ E.g., J. R. Meyer and E. Kuh, *The Investment Decision* (Cambridge: Harvard University Press, 1957).

During the first half of this decade we witnessed a flow of capital into agriculture at a rate which, at least so far as non-real estate investment is concerned, has not been equalled at any time in our history. In the seven years ending June, 1957, Australian farmers invested some £1,100 million in depreciable assets. Not until the 1956-57 financial year did the investment boom show any signs of tapering off, though rural investment had been relatively steady for the three preceding financial years. With the recent fall in farm incomes the prospects are for a substantially reduced rate of investment in the immediate future.

Associated with the rural investment boom in Australia, though somewhat lagged, there has been a very substantial rise in rural production, of the order thus far of 25 per cent. There has been a parallel rise in productivity per rural worker since the rural work force has remained virtually unchanged over the period.

To what extent this rise in production is directly attributable to investment and to what extent it has been due to technological advances which were not capital-demanding is open to argument. Both Schultz and Tostlebe have recently drawn attention to the fact that, to an increasing extent, expansion in rural output in both advanced and less developed countries is occurring without substantial increases in conventional inputs.⁴ Nevertheless, it seems clear that, given the predominantly pastoral nature of the Australian rural economy and the techniques of raising productivity at present available, a continued flow of investment funds into agriculture is a necessary prerequisite to continued production expansion in this country.

In a national context, the case for maintaining a high rate of rural investment rests primarily upon balance-of-payments considerations. At the same time indications are that, on marginal productivity criteria, further investment in most sections of the rural industries would be economically justified both from a national and an individual standpoint. Given the instability of prices of export commodities and the nature of the overseas markets which confront us, the chief hope for avoiding a chronic balance of payments crisis in our developing economy lies in our ensuring that there is a rising volume of pastoral products available for export. This, in turn, would appear to hinge upon our maintaining a sufficiently high rate of investment in those industries. The great difficulty about this from a policy point of view is that so much of the more promising forms of rural investment, such as pasture improvement, typically give a delayed production response. Consequently, any public measures which are set in motion to offset any threatened decline in the rate of increase of rural production must, if they are to be really effective, be related, in an anticipatory fashion, to investment trends. It would be absurd to implement them when the later, but more obvious, production effects became apparent. An added difficulty in this regard is the fact that the Commonwealth Statistician does not publish any current statistics of rural investment.

⁴ T. W. Schultz, "Reflections on Agricultural Production, Output and Supply," *Journal of Farm Economics*, Vol. XXXVIII, No. 3 (August, 1956), pp. 753-6; Tostlebe, *op. cit.*, pp. 104-5.

Sources of Capital in Agriculture

Figures covering merely the outlay on depreciable assets, such as were quoted earlier, understate by a considerable margin the full extent of capital formation in this country. An appreciable amount of the capital used in farming is produced through the direct efforts of farmers and does not require any financing except to the extent that materials have to be purchased in some cases. Land improvements of various kinds, fencing and farm buildings often fall in this category. This type of capital formation was obviously more significant under pioneering conditions, but is still quite important in this country today. With much of our rural lands in a relatively undeveloped state, greater opportunities still remain for this kind of capital formation than in parts of the world where agriculture has long been conducted on a fairly intensive scale.

If undertaken by the farmer at slack periods in the working year (i.e. when the opportunity cost of the labour employed is low or even zero), capital-creating activities of the type just described may result in the farmers acquiring assets very cheaply as compared with what they might cost using contract services, and also as compared with their ultimate market value. The seasonal nature of farm operations creates unique opportunities for capital formation of this kind. At the same time, these considerations can set a very effective limit to the rate of land development, especially where the internal or external finance available for investment is circumscribed.⁵

In cases where the necessary liquid funds are readily available and/or there is some overwhelming desire to develop the property rapidly, this barrier is of more limited importance. The farmer either buys additional plant and employs more labour or else he uses contract services. However, the extent to which farmers on small or even medium-sized properties stall at the prospect of having to employ an additional permanent hand should not be under-estimated. One feature of technical advance, in the post-war period, has been the development of large-scale mechanical equipment, which has so reduced the costs of such activities as land-clearing and dam-sinking as to make them the almost exclusive domain of contractors. Aerial sowing and top-dressing is in a similar category. Hence, despite the considerable scope under Australian conditions for direct capital formation internal to the farm, there are tendencies for its practical importance to decline. This, in turn, probably means that, in future, investment in land improvement will fluctuate more in accordance with income movements than it has done in the past.

Where crops are withheld from sale to increase fodder reserves or, more important, where livestock are raised and used to augment the number of stock permanently carried on the property, such capital additions also require no special financing. This latter form of capital addition has been quite significant in recent years so far as the sheep population of Australia is concerned. In cases where a marketable product is withheld and added to capital stock, sacrifice of realised income is clearly involved. Such action could in some circumstances

⁵ See H. Fallding, *Social Factors in Serrated Tussock Control* (University of Sydney, Department of Agricultural Economics, Research Bulletin No. 1, 1957), pp. 70-72.

lead indirectly to a reduction of accumulated liquid assets or to an increase in debt.

The greater part of the physical capital acquired by farmers is, of course, purchased. Such assets may include land acquired from the government, various materials necessary for land or structural improvements, motor vehicles, machinery, buildings, and stock purchased from other properties. Such accretions to farm capital either are paid for out of current income or accumulated savings, or else are financed by borrowing, usually from off-farm sources. A significant feature of rural finance is the high proportion of capital transactions which are financed internally in the farm business.

I have mentioned that some £1,100 million were invested in depreciable assets on farms between June, 1950, and June, 1957. An overwhelmingly large proportion of this investment was financed out of farm income, though there was some carrying forward of income surpluses over short periods. Farmers' indebtedness to the trading banks increased during the same seven-year period by only £82 million. Since in the years for which estimates have been made bank advances have comprised slightly less than half of all rural indebtedness, we might guess that the aggregate farm debt rose by something of the order of £170 million over this period. A proportion of this increase would reflect rising real estate values and represent added investment in livestock and land improvements rather than additional investment in depreciable assets. My own guess is that probably no more than 10 per cent. of new capital formation in this period was financed externally.

Quoting an aggregate figure for the rise in rural debt in even a single year is apt to give a wrong impression of the importance of external funds in rural financing. Within the agricultural sector, some farmers may be financing the acquisition of new assets out of external funds, whilst other farmers are simultaneously reducing their debts. These reductions in, and additions to, debts will offset each other in the aggregate figures. But even taking account of these facts, the extent of internal financing in agriculture would seem to be very significant.

That these aggregate figures are not unduly influenced by what has happened in the pastoral industry, is evidenced by some data applying specifically to the dairy industry which have recently been reported by Bollman.⁶ He has shown that for a sample of 168 dairy farmers drawn from all states of the Commonwealth, about 75 per cent. of expenditure on farm assets during the three years ending June, 1956, was financed by the farmer and 15 to 20 per cent. came from bank loans and overdrafts. Smaller amounts were financed by non-bank loans and hire-purchase.

This same survey incidentally also revealed clearly the well-known tendency of banks to finance real estate transactions in preference to other kinds of rural investment. On the farms in this sample about 50 per cent. of the funds for the purchase of additional land was supplied by bank advances, whereas banks provided only 16 per cent. of the

⁶ F. H. Bollman, "Capital Expenditure on Australian Dairy Farms," *Quarterly Review of Agricultural Economics*, Vol. XI, No. 1 (January, 1958), p. 39.

finance for basic land improvements and approximately 15 per cent. of that required for tractors, farm machinery and motor vehicles.⁷

Tostlebe's study of the financing of American agriculture, which is based on infinitely more adequate statistics than are available here, reports similar experience for that country. In the decade, 1940-49, which corresponds in many ways with the period of the 'fifties in Australian agriculture, gross farm income financed over 90 per cent. of the total gross additions to physical assets plus working cash.⁸ This is no new phenomenon. In only one decade in the period 1900 to 1949 was the share of external financing of U.S. agricultural investment less than 70 per cent. The American data moreover show a well-defined upward trend in the share of internal financing over the first half of this century.

Another feature of agricultural financing which is documented by Tostlebe's long-term study is the tendency for the composition of farm capital to change gradually over time. The quantity of capital per farm is rising continuously for technological as well as economic reasons, but there are well-defined shifts in relative importance of different classes of assets. The proportion of farm capital sunk in real estate is falling, while the quantity of liquid funds required for ordinary farm operations has risen substantially.⁹ Machinery assets have also increased in importance relative to real estate capital. Some evidence of similar trends can be seen in Gutman's more limited study of Australian agricultural investment from 1921 to 1948.¹⁰ These trends have clear implications so far as the external financing of rural operations by banks and other agencies is concerned.

The recent pronounced increase in the amount of aggregate capital invested in the average farm raises special difficulties as regards the transfer of rural properties. These difficulties stem mainly from the prevalence of family as against corporate forms of business organisation in farming. Inheritances, of course, play a more important role in property transfers as distinct from net additions to the stock of agricultural capital. However, the entry of non-farmers into agriculture and even the transference of properties from the farmer to his children are being rendered increasingly difficult. The recent increase in the formation of private companies in the Australian countryside represents one attempt to meet this problem. At the same time, the considerable number of research studies on farm property transfers and the problems of capital accumulation of beginning farmers, which are emanating from overseas countries, shows that this is a matter of world-wide concern.

The Nature of the Investment Process

To return to the central problem of capital formation, we might look a little more closely at the factors which influence investment decisions in agriculture. While we are still far from possessing a clear and elegant

⁷ *Ibid.*

⁸ Tostlebe, *op. cit.*, p. 19.

⁹ *Ibid.*, p. 18.

¹⁰ G. O. Gutman, "Investment and Production in Australian Agriculture," *Review of Marketing and Agricultural Economics*, Vol. 23, No. 4 (December, 1955), pp. 237-310.

model of the process of rural capital formation, our knowledge of this phenomenon has increased considerably in recent years.

In the first place, it is clear that the traditional investment models of economic theory have very little relevance to agriculture. On the evidence of recent investigations, it would seem that, even though these models were formulated in the context of the manufacturing firm, they provide little real insight into the process by which decisions to purchase capital assets are made in industry. This applies both to models arising from static marginal theory and those representing applications of the acceleration principle.

The profit maximisation or marginal theories of investment, even in their more sophisticated form involving risk, uncertainty and expectations, seem to have their chief value in providing a basis for setting up ideal goals for agricultural investment rather than as an explanation of, or guide to, entrepreneurial action. There is repeated evidence that rural investment projects, where the prospective returns even amount to five or six times the prospective costs, are flatly turned down by farmer entrepreneurs. Choices made between alternative investment avenues on the one farm frequently bear no relation to the indicated marginal productivities of the capital employed. When capital funds are restricted for any reason, the more profitable lines of investment are often curtailed before less lucrative ones. Where external sources of capital are employed it would appear that the magnitude of the interest rate paid is of little real concern. There is no evidence that, in making plans for longer term investments of a developmental nature, farmers discount future returns or compound investments, though it is clear that farmers do discount the future subjectively in some rough and ready way.

There have been some heroic attempts by farm economists, particularly in the past ten years, to explain much of this seemingly non-rational behaviour in terms of risk and uncertainty. It is true that uncertainties, both as regards production coefficients and prices, are of far greater significance in agriculture than in most other forms of economic activity. But I believe that this is, in many ways, a blind alley so far as the development of an adequate theory of investment behaviour in agriculture is concerned.

The most promising clues to the nature of the investment process in agriculture have come from empirical studies. These seem to point unequivocally to the prime importance of internal liquidity in capital formation. The most plausible formulation would treat investment outlay as a residual, defined as the net income realised from current operations *less* tax commitments and some conventional allowance for farm family living expenses.

Farmers' consumption expenditure appears to be comparatively unresponsive in the short run to farm income fluctuations even though such fluctuations have considerable amplitude. Milton Friedman's recently published *Theory of the Consumption Function*, which seeks to relate consumption expenditure not to measured absolute income, but to what he calls "permanent income", seems to provide the most satisfactory explanation of this phenomenon.¹¹ This new theory,

¹¹ M. Friedman, *A Theory of the Consumption Function* (Princeton: Princeton University Press, 1957), Ch. III.

distinguishing, as it does, between the "transitory" and the "permanent" components of income, seems particularly relevant to farming situations, where "transitory" income changes are frequently likely to arise from unusually good or bad weather or from sudden shifts in the demand for particular products.

In practice, the situation is complicated by varying tax commitments (and confusion about concessional deductions), Australian farmers being usually very unclear as to the likely size of their tax bill in any one year. For this and other reasons, investment in a single year sometimes exceeds and sometimes falls short of the residual funds as previously defined. However, the data which have been secured from the survey of graziers' spending behaviour conducted by the Department of Agricultural Economics at the University of Sydney in recent years tend to support the residual funds hypothesis just outlined.¹²

As yet there is no generally satisfactory explanation of the way investment funds are dispersed by farmers between different classes of assets. The strength of the motivation to repay debts at the expense of further investment seems to depend on the personality, past experience and expectations of the farm operator as well as on the attitude of his bank manager, all of which may vary in time and place. Even where debt repayment is not a relevant consideration, there does not seem to be any clear-cut explanation as to the priorities which farmers appear to give to certain classes of investment expenditure.

There is, of course, still a tremendous urge, on the part of many farmers, to acquire additional land. In some cases, there is a clear economic justification for this arising out of the consequences of technological progress. At the other extreme, it is sometimes motivated by a non-economic drive to own more land as an end in itself. However, opportunities to acquire additional land now are limited, so that typically expenditure on purchase of real estate by existing farmers does not loom large in overall investment outlay.

Data collected in the course of our farm expenditure survey, as well as information collected in other Australian surveys, suggest that farmers in the post-war investment boom gave first priority to motor vehicle and machinery replacement, gave second priority to longer-term assets such as buildings and fences, and finally got round to developmental expenditure such as outlays on pasture development or irrigation equipment. It is hardly to be expected that this pattern would be repeated if a second income boom came, say, within a decade of the first. Neither does it necessarily follow that developmental expenditure is the form of investment most subject to change as a result of income fluctuation.

Farmers do, however, appear to have a well-defined propensity to replace machinery and equipment whenever liquidity conditions are favourable. This stems in part from the fact that, except for income tax purposes, farmers do not usually regard depreciation as a regularly recurring expense of production. They consider outlays to replace

¹² For a preliminary report on this investigation, see K. O. Campbell and R. W. Archer, *A Survey of the Expenditure Patterns of Graziers, 1949-54* (Paper presented to Section G, ANZAAS, 1955) (mimeo.). A complete report on this project will be published later this year.

worn-out machinery and buildings to be in the same class as those made for additions. Moreover, they are likely to finance replacements and additions in identical ways. In the case of more durable assets, such as buildings and other improvements, whose replacement is postponable, this is the only sensible approach. For this and other reasons, distinctions between replacements and additions to capital stock in agriculture frequently tend to be blurred.

The order of priority of investment expenditure seems also to be related to intrinsic managerial qualities, discounting problems aside. The managerial ability of farmer-entrepreneurs probably varies more than in most other forms of business. Fallding's study, cited earlier, seems to indicate pretty clearly that, in the area he studied, mechanical innovations were more readily adopted than new methods of property development.¹³ The disadvantages of being inadequately equipped with machinery are obvious to the most incompetent manager, and the machinery once acquired makes no great demands either on the farmer's skill or judgment. On the other hand, property development, such as pasture improvement, calls for much more detailed planning and decision-making, and, once the asset is acquired, fairly advanced managerial skills are frequently needed to make maximum use of it. Consequently, farm managers who will readily acquire new mechanical equipment are often shy of forms of investment which make greater demands on their managerial capacity. In the light of these facts, it is not surprising that investigators frequently reach the seemingly unsophisticated conclusion that managerial ability is the key to farmers' investment propensities.

I have said nothing thus far about new capital formation financed by borrowing, but it seems doubtful whether this is, in fact, an independent problem. We have seen that gross income, as well as being an incentive for investment in new capital, is the major source of new capital. The amount of new capital that can be financed by borrowing is also closely related to income movements. The willingness and indeed the ability of bankers and other lenders to provide capital is substantially influenced by the amount and trend of farm income. There is the added fact that bankers, and to a considerable extent farmers themselves, regard bank credit as being mainly reserved to finance real estate transfers rather than new capital formation.

Some Implications for Agricultural Policy

In concluding this review, which has necessarily been selective rather than comprehensive, I should like to mention a few policy issues which seem to arise from the points already discussed.

In the first place, I would suggest that perhaps economists in the recent past have approached questions of agricultural price policy in too circumscribed a frame of reference. The great emphasis in discussions on agricultural price policy in the past fifteen years has been on the desirability of reducing farm price uncertainty as a means to more efficient production and as a means to a reduction in capital rationing, both internal and external to the firm.¹⁴ In this way, it was argued,

¹³ Fallding, *op. cit.*, pp. 29-31.

¹⁴ See especially D. Gale Johnson, *Forward Prices for Agriculture* (Chicago: University of Chicago Press, 1947).

additional farm investment would be encouraged. Keynesians, on the other hand, have argued for agricultural price stabilisation on the grounds of fostering general economic stability, particularly in dependent economies. Both points of view have influenced Australian thinking and Australian public policy. The most surprising thing about the Australian agricultural policy is that this concern about price instability has not been matched by any comparable public concern about production instability even though this is an equally great problem in the national economy.¹⁵

But there is another angle to the characteristic instability of Australian agriculture. There is plenty of evidence from both farm and non-farm sources that people who have fluctuating incomes have higher marginal propensities to save than do others and, in any case, farmers have long had a reputation for being parsimonious. Farm savings are not held to any great extent as contingency reserves, but are characteristically invested in the farm business, as I have already indicated. It seems probable therefore that farmers, with widely fluctuating incomes, would have a higher rate of capital formation over time than would farmers with more stable incomes.¹⁶ This would appear to be particularly true if the capital formation which would result from a fluctuating income series could be compared with that which would result if the same aggregate income were more evenly distributed over time through some type of stabilisation scheme.

It is possible to argue, as some have done, that an unstable physical environment itself tends to encourage investment in the sense that farmers are induced to invest in certain classes of assets such as dams or conserved fodder as a form of insurance.¹⁷ But this seems to me to imply a wrong line of causation.

If what I have said about capital formation under conditions of income instability is correct, it means that, to the extent that we press on towards the objective of greater income stability for agriculture, we may put an effective brake on the rate of capital formation in this industry. Since, in the recent past, probably 90 per cent. of new capital formation in Australian agriculture has been financed by farmers out of income, this has serious implications for the rate of improvement of agricultural efficiency and the longer term balance-of-payments problems I mentioned earlier. To put this in other terms, what I am suggesting is that, in the Australian context at least, agricultural price policy needs to be examined not only from the standpoint of the criteria of efficiency and stability (as Schultz among others has suggested), but also from the standpoint of growth.¹⁸ More stable farm incomes and a more stable rate of investment may have very definite advantages for the economy, but if more stable incomes also mean less investment in the aggregate, they are not an unmixed blessing. To achieve a proper balance between these policy objectives,

¹⁵ For discussion of this point see K. O. Campbell, "The Challenge of Production Instability in Australian Agriculture," *Australian Journal of Agricultural Economics*, Vol. II, No. 1 (1958), pp. 3-23.

¹⁶ Cf. S. Caine, "Instability of Primary Product Prices: A Protest and a Proposal," *Economic Journal*, Vol. LXIV, No. 255 (September, 1954), p. 612.

¹⁷ E.g., O'Hagan, *op. cit.*

¹⁸ T. W. Schultz, *Production and Welfare in Agriculture* (New York: Macmillan, 1949), Ch. IV.

particularly in the face of the prospect of a long-term, may not be an easy matter.

Perhaps this is unlikely to be a burning question for a long time to come, judging by the limited progress made towards farm income stabilisation in this country in the past decade and a half. But it is important that these broader ramifications of stabilisation policy should be recognised. Perhaps our graziers chose more wisely than they knew in 1950 when they rejected the proposals for a price stabilisation scheme for wool.

Closely allied to these considerations is the question of taxation in relation to capital formation in agriculture. It can be readily shown that a high level of tax and/or a sharply progressive tax can seriously affect income surpluses, which would otherwise be destined for investment. In the past decade, farmers, in increasing numbers, have sought a partial solution to this problem by forming partnerships and private companies.

The adverse effect of taxation on capital accumulation is clearly not restricted to the rural industries. But Australian governments have long recognised that these industries, like the mining industry, need special attention as regards the application of taxation laws. Three main types of concessions have been granted in the past. First, the costs of certain classes of land development have been totally deductible for income assessment purposes. Second, special accelerated rates of depreciation on new equipment were introduced in 1952 as a major feature in the Government's policy of agricultural expansion. Just how effective this measure has been in stimulating investment is open to argument, government officials and independent observers having diametrically opposed opinions. Our investigations at the University of Sydney suggest this measure has been of limited direct significance.

In the third place, the averaging principle has been applied to primary producers' incomes. The application of this principle was restricted in 1950 to incomes of less than £4,000, because of the threatened loss to revenue at that time. The wider concessions of earlier years have not been restored. Though averaging does impose an added burden on taxpayers during the downswing, it could be argued that, overall, it encourages capital formation not only because less tax is paid over time, but because it gives a larger residual income in the upswing.

In my opinion, it would be preferable to have another look at rural taxation concessions rather than embark on a policy of subsidising specific agricultural practices. Subsidisation of farm practices has been used in the United Kingdom and elsewhere in an effort to stimulate certain forms of rural investment and has again recently been advocated for this country. I believe that in ordinary economic circumstances such a policy would be much more burdensome administratively and much less efficient economically than a scheme with similar objectives operating through taxation concessions.

While, as a general principle, I do not favour differential tax rates for different sections of the community, I feel that the determination of specific tax rates for only two categories of taxpayers, individuals and companies, does mean that the claims of agricultural producers

are in a sense prejudiced. Political factors aside, rates of taxation for individuals tend to be based on theories of consumption behaviour. Recent experience has taught us how false were views about farmers' spending behaviour in the wool boom based on ordinary consumer behaviour. It also seems to me that general taxation policies directed towards the objective of economic stability may also adversely affect rural investment over time. The determination of taxation rates for agricultural producers, I submit, needs to be looked at independently of the question of taxation rates for consumers at large, bearing in mind the special characteristics of capital formation in the rural industries. It may be that expenditure tax proposals offer very real advantages to rural producers.

Finally, one might ask, what is the future role of external finance in rural capital formation? Here, the evidence is to some extent conflicting. A continuation of the historical trends mentioned earlier would suggest a diminishing role, primarily because of the increasing significance of internal financing and the reduced economic importance of land, the traditional basis of the rural lender's assistance. On the other hand, even granting that by far the larger part of new capital formation will probably continue to be financed by farmers without assistance from creditors, there are grounds for believing that the proportion of agricultural capital financed by creditors may increase appreciably, quite apart from the short-term influences which are operating at the present time.

In the first place, inflationary influences will probably continue to increase the capital needs of those who wish to begin farming as well as of those who wish to expand their present facilities. Second, the average size of farms and the total capital employed will inevitably continue to rise, and necessitate additional external financing. Some of this credit will, of course, contribute nothing to capital formation, as it will be utilised in transferring ownership of existing resources. Thirdly, there is growing realisation among bankers and other rural lenders of the benefits to be derived from heavier capital investments per farm and per worker. If continued, this may well cause a change in lending policy as well as a change of farmers' attitudes towards external financing. As a result, non-real estate loans will probably be relatively more important in future decades than they have been in the past.