

# Agriculture and Economic Growth in Western Ireland

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## I

In the development of the economy of the Western Counties of Ireland<sup>1</sup> industrial expansion, in order to diversify employment opportunities, has been given considerable prominence and insufficient attention given to the need for agricultural development. The need for new industries is obvious, but the total numbers employed currently in industry is less than 12 per cent of those in agriculture, an increase in agricultural productivity is of critical importance if the level of national income produced in these counties is to be brought much closer in line with that of the rest of the country. The basic economic problems of this area can only be solved over a long period of time, and the immediate requirement is for a much more detailed understanding of these economic problems. At present in An Foras Taluntais a considerable amount of work is being undertaken on both the physical and economic factors involved in an expansion of farm production. This paper discusses some of the issues which are involved in this research project.

"Underdeveloped" is a label which has been attached to very widely differing economic conditions, but in general has become a respectable synonym for "poor". There are essential features of the "underdeveloped" economy common to most of them which have this label; there is a poverty of natural resources, and overwhelming predominance of agriculture in which both labour and land productivities are low, an existence of widespread disguised unemployment, a relatively high density of population on the land, a relatively high birth rate, high potential population growth rates and an importance of traditional social modes within its society. Some element of all these features can be found in the counties of Western Ireland, and the problems of economic development in this region have marked similarities to those of poorer countries in other parts of the world.

At the same time, whilst the currently debated theories of economic development contain a great deal which is relevant to the growth of the economy of the Western Counties, the analogy with "orthodox" development problems must be considerably modified to take account of the unique circumstances of this region—the freedom and ease of movement of people to the highly developed economies of Britain and the United States, the high standards of the educational and social services, the rapid advancements in the rest of the national economy which are currently taking place, and of great importance, the very considerable heterogeneity of economic circumstances of the people living in the region.

These distinctions make it impossible for the development in these counties to follow the conventional pattern for underdeveloped

<sup>1</sup>The Western Counties considered in this paper are the five counties of Connacht, together with Kerry, Clare and Donegal.

societies This normal path of development has been most clearly set out in the two very well-known articles by Arthur Lewis,<sup>2</sup> in which a simple two sector model of an under-developed economy is examined to show the effects of moving relatively cheap supplies of labour from the agricultural sector into the industrialising sector of the economy. The rate of development in this analysis depends upon the movement of surplus agricultural workers whose net productivity is very low or even negative into industry, where their contribution to the national product is positive, at a wage level which remains approximately equal to the prevailing wage level in farming. In this and the theoretical discussion which stemmed from it, the primary concern was with the growth of the industrial sector, in the structural transformation of the economy which must take place the role of agriculture has been principally that of providing labour and capital at low costs with which the new industries can be built up. In general, growth in agriculture is regarded as dependent upon the growth of the manufacturing sector, during the early years of development the improvement in labour productivity in agriculture arises solely from the removal of underemployed resources, and the additional contribution of agriculture to the development programme is given very little consideration.<sup>3</sup>

The differences between this view of economic development and the current policy in Western Ireland lie in the impracticability of making the development of manufacturing industry dependent on keeping wage rates equal to those prevailing in agriculture, and the fact that much of the capital is provided by a national exchequer which draws most of its revenue from the more advanced sections of the country. Moreover the structural change in the system of agricultural production which is needed in order to make its net contribution substantially greater, is not generally regarded as being too difficult to justify the capital inputs which it would require.

If the very straightforward self-contained two sector model is replaced by one with relatively large external capital investments and in which the productivity of marginal capital investment in each of the two sectors is treated as a variable, the determinants of rates of growth become much less clear cut.<sup>4</sup> At the same time, the view that "rural welfare as well as over-all economic growth demand . . . a net flow of capital and other resources to the industrial sector of the economy",<sup>5</sup> and the widely propagated thesis that economic growth for individual regions necessarily involves the advancement of one sector of the economy at a much more rapid rate than the other becomes far less self-evident under these circumstances.

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<sup>2</sup>W. A. Lewis "Development with Unlimited Labour Supplies" The Manchester School, Unlimited Labour; May 1954 Further Notes—The Manchester School, January 1958

<sup>3</sup>At the same time, the pressure of population growth is forcing actual economic development programmes to give a much greater weight to expanding food production, and effective ways and means of doing this without radically altering the fabric of the rural society are now being sought

<sup>4</sup>The assumption of a much higher marginal efficiency of capital in industry implicit in Lewis's model is one which in practice requires much closer examination although it is likely to be extremely difficult to determine the rates of return on new capital inputs.

<sup>5</sup>Johnston and Mellor "The Role of Agriculture in Economic Development." *American Economic Review*, September 1961 Vol. LI, No. 4.

We have at present very little evidence of the marginal productivity of capital invested in either agriculture or industry. Even if there were a much greater body of knowledge about the average or marginal returns in the Western Counties, it would be difficult to interpret this in the light of the current structural changes which are taking place. The basic agrarian problem is that of the relative amounts of land and labour which are at present combined in the individual farming units. Capital investment which perpetuated the present structure (much of which would tend to be consumed as income) is likely to make the basic adjustment more difficult than if there were no interference with the underlying economic forces.

Until much more is known about the productivity of new investment in the agricultural and industrial sectors of the West it will be impossible to say in which direction the major portion of new capital should be directed. The general assumption that capital invested in agriculture will be less productive than that employed in industry is certainly not proven in the current economic conditions of the Western Counties, the case for planned agricultural investment on lines comparable to the industrial expansion of the West under the Underdeveloped Areas Acts is worth careful examination.

## II

The purpose of this paper is to examine some of the factors which are currently affecting the course of development in the Western Counties, and to suggest possible methods of expanding the level of agricultural productivity in this region. The first need is to establish in detail the actual structure of the different sectors of the economy in the Western Counties. Of the 723,000 total persons of the eight counties in 1961, approximately 310,000 are gainfully occupied. Of these, 180,000 are in agricultural activities and 130,000 in other economic activities, including those unemployed in each of the respective categories. Of the remaining 410,000 who are not gainfully occupied, 220,000 are children either at school or below school age, and 190,000 retired, engaged in home duties, etc.<sup>6</sup> Agriculture is thus the occupation of almost 60 per cent of the economically active members of the population, this is almost double the average for the rest of the country. It will be possible to determine the proportion of persons in these four groups more precisely when the results of the recent Census are available, but these estimates can be taken as sufficiently accurate for the purposes of examining the current framework of the Western economy.

The central role of agriculture is the obvious starting point for any study of the Western economy. Fortunately, with the data available from the 1960 Census of Agriculture, it is possible to build up a reasonably comprehensive picture of farming. The eight counties had

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<sup>6</sup>The figures of non-agricultural gainfully occupied people is based on the figures published of the Census of Production and of Distribution, on returns from other bodies (Bord na Mona, E.S.B., etc.) and unemployment returns. The agricultural population is derived from data in the 1960 Census of Agriculture. The population not gainfully employed has been derived by assuming this to be approximately the same proportion of the population as in 1951, rounded up slightly to allow for the general trend towards a higher proportion of retired people. The figures are, of course, only intended to indicate the orders of magnitude of the size of the main sections of the population.

an estimated output of agricultural products in 1960 of £56½ million (excluding turf, timber, honey and horses)<sup>7</sup>. This represents just over 30 per cent of total national agricultural output from an area which is 43.3 per cent of the total acreage of the State. Output per acre of the Western region was £7.6 compared with £13.2 for the remaining 18 counties and £10.8 for the country as a whole. Output per acre of crops and pasture was £15.0 in the West, £17.1 for the 18 counties outside the Western region, and £16.4 for the country as a whole, these figures include the production of the category known as "other land".

This figure of output per acre covers a very wide range of average productivities in the various rural districts of the Western Counties (see Table 1). Within the Congested Districts themselves are to be found rural districts with average outputs per acre equal to or above the national average (in Listowel and Tralee the average output is £15.5 and £13.1 per acre respectively). In other districts output is considerably below the national average, in Clifden, Glenties and Belmullet the output per acre is £2.5, £2.7 and £3.2 respectively. This variation is at the centre of the debate on the future policy of the economic development of the West, for this heterogeneity qualifies many of the generalisations which are widely accepted. Agriculturally these eight counties have a much wider variation within them than that which exists between this region and the remainder of the country. Many of the ideas about the very poor agricultural resources of these counties stem from a consideration of the eleven rural districts with average outputs of less than £6 per acre, but at the same time there are 9 rural districts with an output of over £10. There remain 33 districts with average output of between £6 and £10 per acre and these account for the major part of the agricultural output of these eight counties.

Table 1, which gives the number of rural districts with average agricultural outputs at different levels, illustrates clearly the degree of variation to be found within the separate counties. Kerry, Galway and Mayo have a much wider range in the average productivity per acre of their rural districts than counties such as Leitrim, Roscommon and Sligo.

The level of agricultural production is a function not only of the quality of the land, but also of the proportion of holdings of various sizes. Whilst the number of holdings by size has not been published for each rural district, there have been very detailed figures of cropping and stocking by size of holding on a county basis. From these it is possible to estimate the production which comes from each acreage group and from this the average output per acre and per holding in the group.

The most outstanding feature of this analysis of output by size of holding is the relatively low level of output even on the holdings of under 50 acres. These account for nearly 60 per cent of the total output but they have average total outputs of under £500. Although the holdings of under 15 acres can be the main source of income in only a minority of cases, most of the holdings of 15-50 acres are full

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<sup>7</sup>The method of computation used is the "allocation method", and is basically that used in J. J. Byrne's paper on "Some Provincial Variations in Irish Agriculture", read before the Society on February 6th, 1959. Details are given in the Appendix.

time in the sense that farming represents the main economic activity of the occupiers. The economic significance of the low output on these smaller sized holdings is not easy to interpret, because of the incidence of other sources of income. Even among the holdings of 15–50 acres which were included as separate units in the 1960 June Census of Agriculture there is a considerable proportion which are not independent farms, but are either sold and joined to other holdings since June 1960, or are let to other farmers. From a recent canvass of 780 holdings of over 15 acres randomly selected from one rural district in each of the eight counties, there were 89 whose owners were in other employment either in Ireland or England, or who had sold since June 1960 or let their holding for some other reason<sup>8</sup>. As almost all these holdings are now being farmed in conjunction with another farm, the current number of farms in these districts—in the sense of independent economic units—is approximately 10 per cent below the number of holdings of over 15 acres enumerated in the 1960 Census of Agriculture.

It is possible to estimate the family farm incomes per holding by assuming that the proportion of average income per £100 output given in the final report of the National Farm Survey is still valid. These are given in Table 3 which shows the very low average incomes currently earned on even the larger holdings in the West. There is probably a larger error in recording census data on these farms than is general in the country, and this will undoubtedly tend to depress slightly the figures of output and income, particularly on the farms with extensive sheep grazing.

These figures of farm incomes per holding tend to understate the true position today because of the inclusion of holdings which now do not exist as separate economic units. At the very most this will not increase the incomes by more than 10 per cent, and in practice it is likely to be less than this because of the considerable number of holdings which are let on conacre and on which a rental charge has therefore to be paid. The upward movement of farm incomes since 1960 will also raise the level of current incomes in the West but again this does not alter the order of magnitude in the incomes under discussion.

These low average incomes do, however, conceal a very wide range of results. From the three year results of the National Farm Survey<sup>9</sup> it is possible to get a measure of the range of results of farming in the North and West<sup>10</sup>. In the small acreage groups the range is narrower in the North and West than in the other two regions of the country, although surprisingly the average results in the "East and Midlands" for 5–15 acre farms is almost the same as for those in the "North and West" and are not very much greater in the 15–30 acre group. It is

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<sup>8</sup>The sample of holdings of under 15 acres will not be studied until later this year. If the experience gained from a small pilot sample in West Cork is generally true, very few of the holdings under 15 acres can be considered as farms in the accepted sense.

<sup>9</sup>National Farm Survey 1955/56–1957/58. Financial Results for Farms included throughout the three years. Supplement to the *Irish Trade Journal and Statistical Bulletin*, December 1959.

<sup>10</sup>This region is reasonably comparable with the eight Congested District Counties but because it includes Cavan and Monaghan and excludes Roscommon and East Galway is likely if anything to slightly understate the range of results in farming over the eight Congested District Counties.

in the 30-50 and 50-100 acre groups that the difference between farm incomes in the "North and West" and those in the rest of the country becomes really marked, but here the range between the net results of the lower and upper third groups of farms (by family income) becomes greater than those in the rest of the country<sup>11</sup> From research work currently being undertaken we hope to be able to measure the incomes variation arising from different levels of management, and from this to assess the opportunities for profitable expansion on individual farms in the Western Counties compared with those in the rest of the country

### III

From Table 2 it can be seen that as farm size increases there is a much more rapid fall in output per acre of total land than per acre of crops and pasture. This is due to the much higher proportion of "other land" on the larger farms. Even so, the rate of fall is not sufficient to anticipate any appreciable fall in total farm output if the current trend towards more holdings in the middle size groups and fewer in the under 30 acres groups continues. The rate of change in the pattern of holdings has been high in recent years in the Western Counties, as can be seen in Table IV. This is particularly noticeable in Connacht. Over the five years from 1955-1960, the number of holdings within this acreage range has fallen by almost 13,500, a drop of over 16 per cent, during the same period the number of holdings of between 30-200 acres has risen by nearly 2,500, or over 4 per cent. This rate of change is bound to bring a very great alteration in the basic structure of agriculture in the West if, as seems likely, it continues for the next decade. There is every reason to suppose that it will be some years before a position of relative equilibrium is reached in the pattern of holdings.

At the same time the changes have been much smaller in Kerry than in the other Western Counties. This may appear to be due to the opportunities provided in creamery milk production for the smaller farmers, but in fact this is not reflected in either Sligo and Clare—both creamery counties—which have had a rapid fall in the number of holdings of under 30 acres.

### IV

The reduction of the number gainfully employed in agriculture which is currently occurring in the West is reducing the effects of under-employment of labour due to the adverse labour/land ratio. Given the present level of labour productivity, there is evidently considerable likelihood that there will be a further reduction in the numbers engaged in agriculture without the productivity of the industry being markedly affected.

From the figures of the June 1960 Census of Agriculture it is possible to estimate the output per man according to the size of holding; details are given in Table V. This analysis shows most clearly the influence of size of farm on the level of labour productivity. This rises

<sup>11</sup>Except in the case of the comparison of 50-100 acre groups in the "North and West" with that in the "East and Midland" where the range is slightly greater in the latter region

steadily from under £240 per male on holdings of under 30 acres and continues up to 150 acres where it is over £1,000 per male, but after that there is a marked fall in productivity. It is interesting to speculate on the cause of the diseconomies of scale which appear on the over 150 acre farms, but we have insufficient information at this stage on which to give even tentative explanations of this.

The relatively low productivity of labour prevailing in farming in the Western counties can be seen from a comparison of the outputs per male engaged in farm work in the West with labour productivity in the rest of the country. In 1960, the number of males engaged in farm work in the eight Western counties was just over 160,000 and the output per male was very slightly over £350; for the rest of the country the output per male was £570, i.e., almost 66 per cent greater than in the West. If the productivity per male is to be raised in the West to that of the rest of the country, it would involve raising total output from the existing labour force by approximately £37 million, alternatively it could be achieved if the current output is maintained with a reduction in the number of males in agriculture by almost 26,000 and a total fall in agricultural employment of very nearly 70,000. There are undoubtedly very good opportunities for raising the level of agricultural production in the West, and unless this is done the loss in agricultural employment in the next decade is likely to be substantial.

## V

There are two other sectors of the economy which are particularly relevant to the general thesis of this paper. The first—afforestation—is closely allied to agricultural development, and will absorb some of the labour which is displaced in the adjustment of the farming sector. In recent years there has been a much greater emphasis on production from this area, although by 1960/61 the proportion of the total national planting of new forests in the West was no greater than the proportion of the total area of State which the eight counties represent. Unless the pattern of acquisition of new land for planting has changed markedly in the last two years it does not look as if this proportion will alter in any marked degree in the near future.

It is difficult to evaluate the economics of the forestry programme, for the long production period involved makes it necessary to make arbitrary assumptions about the rate of interest on capital, the trends in wages and the future price relationships between forestry and farm products which will prevail over the production period. In a very interesting study made on the relative profitability of using land for forestry instead of for farm production in the poorer areas of Britain it was concluded that even at current British prices there was a sound economic case for developing forestry.<sup>12</sup> There is obviously a need to repeat this study at Irish price and production conditions but on *a priori* grounds it would appear that, so long as the rates of production per acre are reasonably comparable, the extension of afforestation will be economically justified.

<sup>12</sup>K. R. Walker. "The Competition for land between the Forestry Commission and the Agricultural Industry in Britain; A study in Economic Policy." Unpublished thesis, Oxford 1958.

A rapid extension of afforestation does, however, involve considerable difficulties of land acquisition. Even if the rate of planting could be doubled, it seems unlikely that the numbers employed would exceed a total of 5,000 men in the Congested Districts (employment in 1961 was running at an average rate of 1,750 for a planting programme of just over 11,000 acres and a total production area of approximately 130,000 acres). This is a very valuable contribution to the economy of the Western counties, but it will by no means solve all the employment problems.

The second sector which I would like to discuss briefly is the development of manufacturing industry in the West which has been part of official policy since the first Undeveloped Areas Act was passed in 1952. It is only within the past few years that industrial expansion has really affected the total employment position to an appreciable extent. In an analysis of industrialisation and agricultural development recently undertaken in the West<sup>13</sup> it was found that the 55 firms which has been paid grants during the period January 1952 to March 1960 actually employed 2,632 people by mid-1961. This employment involved a total grant expenditure by the State of £1,723,000, or approximately £650 per job (this figure may be slightly smaller if the full employment potential of all the firms included is realised, but this is unlikely to reduce the cost to the State per job to below £600).

In the Report of An Foras Tionscal for 1960/61 the estimated employment content of all firms for which grants had been approved amounted to 8,268 (of which 640 were in factories outside the eight counties under discussion). This will involve the State in an estimated total expenditure of just over £4½ million. In practice this level of industrial employment from State aided undertakings is unlikely to be reached within the next two years, and at the present rate of expansion the total of new employment created in such undertakings appears unlikely to reach 10,000 before the beginning of 1965. During the years 1959/60 and 1960/61 the projected increase in industrial employment per annum in the West rose from 2,000 to just under 2,500. This seems likely to expand further, and the capital outlay by the State involved in creating new jobs is likely to decline in view of the recent statements on the increase in the applications for grants for new industries, which will enable the authorities to be much more selective.

The development of a much larger industrial sector will be of considerable advantage to the expansion of agricultural development in the West. At the same time any increase in agricultural production, for example due to the introduction of creameries, will create some additional employment in ancillary agricultural industries. Nevertheless the task of producing stable population by creating sufficient employment in the non-agricultural sector of the economy is a very considerable one; the decline in numbers in the agricultural sector during the last decade was approximately 45,000 and some decline is likely to continue for a considerable period.

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<sup>13</sup>Rosemary Fennell. *Industrialisation and Agricultural Development in the Congested Districts*. An Foras Talúntais. April 1962.



## VI

Before considering the alternative directions for State support, it is worth considering the experience in the poorer counties of Western Britain, in particular thecrofting areas of Scotland and the uplands of Wales, for the economic problems of these counties are in many respects similar to those of Western Ireland. The results of the policies which have been followed for the past two decades in Britain may have lessons which are of considerable relevance to the Irish problem. I would like to consider briefly the results in Wales, for I am more familiar with these, and the Scottishcrofting economy has certain unique characteristics from which it is virtually impossible to generalise.

The Welsh upland farming regions have physical, economic and social factors comparable to those of the Congested Districts. The geographical features of this farming region are dominated by the poor soils which, because of the degrees of slope, are difficult to improve by modern farming techniques. As in the West of Ireland the area is physically far from homogeneous, and the economic problems are by no means uniform over the whole region. Historically the farming system has been one which was expensive in labour, and was made possible only by the close family ties and the lack of alternative employment which kept an adequate labour force in agriculture in spite of the very low financial return which was realised there. The current economic difficulties revolve around the need to reorganise the existing combinations of land, labour and capital to suit modern requirements, as the remnants of a largely subsistence economy, with its essentially introspective standards, are being replaced by a universal exchange economy. Finally this is the heart of the cultural tradition of Wales and of the Welsh language, although to many parents the educational system has been regarded primarily as creating the opportunities for their children to earn a better reward in the towns of South Wales. There are close parallels with Connacht.

Government policy in Britain has basically taken two forms; direct income assistance in the form of special sheep and cattle subsidies in addition to those paid on the end products, and 50 per cent grants on comprehensive schemes of capital improvement. The level of the income subsidies has been approximately one third of total output on Welsh upland farms and as these are included in the farm "output" they have raised the outputs by approximately 50 per cent over their unsubsidised level<sup>14</sup>. By 1957 over £6m had been authorised towards improvement schemes in Wales on just over half the total acreage eligible for assistance (although under half the total number of holdings, because many of the small farms do not pass the test of potential inability, or cannot raise their 50 per cent. of the costs involved). In spite of this heavy rate of assistance, in an officially sponsored investigation of over 1,400 farms in mid-Wales published in 1955 (about 10 years after the introduction of this policy), 57 per cent of the farms were definitely uneconomic, 31 per cent were regarded as marginal and only 12 per cent. were classified as economic units. Moreover, this report suggested that government assistance had on some occasions delayed the reorganisation of

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<sup>14</sup>E. A. Attwood "Agricultural Subsidies and the Hill Farmer." *Journal of Agricultural Economics* Vol. XIII. No 3, 1959.

uneconomic holdings into viable units. In practice the size of the problem has been reduced because of the large measure of depopulation which has taken place in spite of the help given.

This policy has involved very considerable financial assistance; the average grants per improvement scheme was £1,600 in 1957, and is now probably above this. The basic difficulty of this policy is that it is rooted in the belief that the provision of the new capital necessary to the reequipping of these farms will of itself be sufficient to induce the basic changes in the organisation of farming which are needed for the establishment of a prosperous farming community. A very high proportion of the money spent on these improvement schemes has been directed towards improving the immediate environment of these farm families, only a quarter has been spent on direct land improvement schemes. The need to raise the productivity of many of these farms still remains, primarily because the grants have not been tied directly to specific farm plans aimed at and increasing substantially the level of net farm incomes.

## VII

The achievements and the costs of support given by the State to the development of the industrial sector of the Western economy can be seen from the reports of An Foras Tionscal and the Census of Industrial Production. The achievements and costs on the agricultural sector are much more difficult to determine; it is not possible to do more than try to get an overall estimate of the current level of State support going to the Western counties and the assessment of the achievements is extremely complex. There are basically four categories of State aid to farming, these are —(1) price subsidies on final products, (2) cost reducing subsidies on fertilisers, buildings, water supplies and Land Project, (3) schemes for the elimination of disease and livestock improvement; (4) general payments on education, research, advisory and technical services, the Agricultural Grant, the land annuity payments and the expenditure on Government owned land and buildings (including Land Commission Estates). There are also the special schemes of assistance for the Gaeltacht and Congested Districts.

As it is impossible to allocate by region the expenditure in the fourth of these general categories, it is the first three groups with which we are concerned. In the official estimates for 1960–61 the net total of these for the State as a whole is just under £10m, in addition special schemes for the West cost just under £200,000. It is not possible to allocate precisely this £10m as exact figures of State aid going to the West are not available, but it is possible to get an estimate of support which is sufficiently accurate for the purposes of this paper. In the group of final product subsidies (£0.8m) it is reasonable to assume that the proportion going to the West is directly proportional to the output of the products concerned. The final product subsidies now being paid by the State are very much greater than they were two years ago, and part of this support goes to wheat production which is of little value to the Western farmer.

In the case of subsidies to reduce production costs (£5.4m) the information available about the major schemes indicates that less than a quarter went to the eight counties of the West. The smaller and

poorer farmers are generally not in as good a position to make full use of these schemes as the larger and more prosperous farmers. In the payments towards eradication of disease (primarily the B.T.E. Scheme), slightly over a quarter of the total net estimated expenditure (£3.5m) went to the eight counties of the West. This scheme will, when completed, prove to be relatively much more expensive in the counties outside the West, due to the much lower incidence of bovine tuberculosis in the Western region.

For the three categories combined, the proportion of State support going to the Western counties was £2.4m or just under 25 per cent. This can be compared with the figure of just over 30 per cent of the national agricultural output (excluding turf and horses) which comes from this area. When the net expenditure on special schemes for the West is added (£187,000) the cost of State support rises to £2.65m, or 26.5 per cent. As the eradication scheme proceeds, the proportion of State support to the West will fall, as the expenditure under this heading is likely to be very small in the Western counties during the next few years (with the exception of Kerry). At the same time the farmer in the West has been given the opportunity of participating in a considerable number of different schemes of assistance, there are about 12 general schemes affecting all farmers in which he can participate, some six more which apply to the Congested Districts generally, and nearly 20 schemes which affect farmers in one part or other of this region. There has been a great deal of effort put into giving assistance to the Western farmer, the time now seems opportune for a reappraisal of the purpose and methods of these schemes of assistance in the light of the current underlying economic trends.

### VIII

The progress in improving the level of prosperity of those engaged in agriculture in the West of Ireland will depend upon pursuing a deliberate policy of structural adjustment within agriculture simultaneously with a policy of higher productivity per farm of the individual holdings which are regarded as a potential viability. The structural adjustments must obviously continue to be the responsibility of the Land Commission which has unparalleled experience of the changes in land ownership. The nature of the task facing the Land Commission is changing very rapidly, as the consequences of rapidly increasing living standards bring entirely different relationships within the rural economy (and in particular new standards of "economic security" on which the land policy laid down in the Constitution is dependent).

In this policy of adjustment in the structure of the agricultural industry one fundamental necessity is the separation of social needs of particular families from the economic requirements of a viable agriculture. The economic objective must be to create farms of a productive capacity sufficient to offer a standard of living equivalent to that achieved by the rest of the community. The rate at which migration from the land is currently proceeding under the normal forces of economic development, and the rate at which land is being let or sold for others to farm is likely in a very few years to make the relief of congestion, as it has been understood in the past, an economic

problem of little importance. There will remain many elderly families and individuals living on uneconomic holdings, but these present a complex social problem quite distinct from the need for structural adjustments.

Given the continuance of the current rate of growth of national prosperity this structural change is inevitable. Its course can be very greatly smoothed, and the widespread national desire for a strong rural life much more adequately realised, if the land policy of the country is deliberately orientated towards the creation of farming units viable in relation to a continuing rise in the acceptable standards of living.

This is where the other half of the policy for a prosperous farming community—a steady increase in the productivity of the available resources—must be considered. The actual acreage of the individual farms will depend on the total output which is needed to give a viable income—at whatever level this is defined—and this in turn is dependent on the capital, labour and knowledge, as well as the land, which is available. The labour available will undoubtedly continue to be, family labour, if allowance is made for succession on the family farm then a minimum of  $1\frac{1}{2}$  to 2 labour units will generally be available per farm. Whilst there is a minimum ratio of land to labour for efficient use of the latter, the actual area of the farms will be very greatly influenced by the level of farming techniques and the amount of capital invested in the holdings.

The need for higher capital investment in order to make fuller use of the labour and land available is of paramount importance. Much of this should be directed towards greater working capital investment for in the past stocking rates of livestock have been too low, annual dressings of fertiliser on grassland have been inadequate and insufficient provision made for a high level of nutrition in Winter for the livestock; all of these are essential for a higher level of total production.

The problems of improving farming techniques is a perennial one, but there is widespread recognition that in this region the improvement of grassland is likely to yield very high returns for relatively small amounts of additional capital inputs. In particular, techniques such as surface seeding of poor grazings in conjunction with regular fertiliser dressings in some places have transformed the landscape; they have also revolutionised the economic opportunities, for the techniques themselves are not expensive ones although considerable working capital is required to exploit their potentialities. These techniques are most dramatic in their impact, as anyone who has visited the research station at Glenamoy has seen, but the conventional patterns of farm development seem likely to be of greater importance in the major part of the eight Western counties which are environmentally neither very good nor very bad.

There are very important technical questions requiring answers from our research workers, and a much more detailed knowledge of the physical resources as well as of the economic relationships is required. Within the limits of the available resources, both physical and economic research in the Western counties is being undertaken by An Foras Talúntais in its current programme. A great deal is already known about the physical and economic relationships, and on the basis of this a big expansion of production would be economically desirable for the low level of productivity of the fixed farm resources at present.

makes the farm income level inevitably low. Only when the expansion programme has raised production levels considerably above the present level will the limits set by technical knowledge be reached ; but at the same time the research programme itself is progressing and this limit will be advanced further again.

The form which expansion takes will depend on the circumstances of the individual farm. The current expansion of creamery facilities in the non-creamery counties will provide valuable opportunities for the farmers to produce milk and pigs, although this will add to the national problem of profitable disposal of these products. An improvement of grassland and of fodder conservation would make it possible to expand cattle and sheep production both through higher stocking rates and through an acceleration of the rate of growth of the individual animals, some increase in crop production will also be possible as new techniques and varieties become more widely used.

The responsibility of the State for the improvement of productive opportunities is already clearly accepted in the multiplicity of schemes from which the farmer in the West can benefit. There would, however, seem to be two basic disadvantages in the system of State support as it affects the Western farmer. In the first place the effort is too diffused, and the economic problem of the individual farm tends to be regarded not as a single entity but as a variety of distinct problems. In the second place, and partly arising from this, the farmer is not sufficiently encouraged to regard the responsibility for economic expansion as one which primarily he must carry, and that the role of the State is to offer expert technical advice and some of the capital needed, but not to absolve the farmer from his essential economic function of risk and decision taking.

These disadvantages might be overcome if the main concentration of support, as it directly concerns the individual farmer, were channeled into development plans for the economy of each individual farm. Both the requirements necessary to achieve the farm plan, and the detailed production and cost programmes associated with it should be determined at the same time. There would then be a clear target to aim at over the development period itself, and government assistance for each stage of the farm plan could perhaps be made conditional upon the satisfactory completion of the previous stage. This type of assistance would call for a very competent body to operate it, but there is already a body of professional people with very great experience of working with farmers in the West who would be in a position to operate such a scheme. This is necessarily a long term programme, and the cost to the State in each year, after allowing for the costs of running the different schemes at present, is not likely to be excessive, if the current rate of support to farming in the rest of the State is taken as a guide.

In many ways this type of programme is analogous to that operated for the Industrial sector under the Undeveloped Areas Act. As this industrialisation policy gathers momentum, the opportunities for adjustments in the agricultural sector should become easier. A bigger urban population will provide a better market for locally produced agricultural products ; some of the smaller farmers or the members of their families will be able to undertake part-time industrial employment in order to find their share of the capital required for developing their farm, and the social structure of the economy will be greatly improved.

by the provision of a wide variety of employment opportunities for the different members of the farm families

The rapid transition currently taking place in the economy of the Western counties will inevitably give rise to social difficulties but the solution of these should be treated as an entirely separate one to that of the creation of a prosperous economy. At present the low product per head of the economically active population in the West is a drag on the development of the national economy. Given the ease with which people can move from the West into more highly paid jobs, the initiation of a comprehensive programme of economic development for all sectors of this economy should have a high priority in the national economic programme, if the current decline in the population of the West is to be halted.

#### ACKNOWLEDGMENTS

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TABLE I.—AVERAGE OUTPUT PER ACRE IN RURAL DISTRICTS IN THE WESTERN COUNTIES, 1960

County	Av. Output per Ac. (£)	No of Rural Districts with Output of					
		£2-£4	£4-£6	£6-£8	£8-£10	£10-£12	£12 and over
Clare	8.7	—	1	3	4	1	—
Donegal	5.6	1	3	2	2	—	—
Kerry	9.2	—	2	—	2	—	2
Galway	7.8	2	—	1	4	3	—
Mayo	6.4	2	—	2	2	1	—
Leitrim	8.0	—	—	3	1	1	—
Roscommon	8.9	—	—	1	2	1	—
Sligo	8.4	—	—	1	3	—	—
Total	7.6	5	6	13	20	7	2

TABLE 2.—OUTPUT PER ACRE AND PER HOLDING BY SIZE OF HOLDING IN EIGHT WESTERN COUNTIES, 1960

Size of Holding	No of Holdings	Output per Holding	% of Total Output	Output/acre Crops and Pasture	Output Total Acre
<i>Acres</i>		£		£	£
¼-5	21,378	60.5	2.3	36.3	30.6
5- 10	12,510	146.6	3.3	22.6	18.1
10- 15	13,530	195.3	4.7	18.5	14.8
15- 30	42,824	302.8	23.0	16.2	13.1
30- 50	31,700	458.4	25.8	15.0	11.7
50-100	20,604	609.3	25.3	14.1	10.0
100-150	4,379	992.0	7.7	13.2	8.2
150-200	1,453	1163.2	3.0	11.9	6.6
200-300	1,020	1314.8	2.4	11.7	5.3
300 and over	907	1475.2	2.4	10.7	2.3
Not on farms	—	—	0.1	6.2	0.03
All Holdings	150,305		100	15.0	7.63

TABLE 3.—FAMILY FARM INCOMES PER HOLDING CONGESTED DISTRICT COUNTIES, 1960

Size of Holding	No of Holdings	Average Output per Holding	Family Farm Income per £100 Total Output*	Family Farm Income per Holding
		£	£	£
5- 15 acres .	26,040	171.9	66.9	115.0
15- 30 „	42,824	302.9	69.2	209.6
30- 50 „	31,700	458.4	62.6	287.0
50-100 „	20,604	690.3	61.6	425.2
100-200 „	5,832	1,034.6	45.4	469.7
200 and over ..	1,927	1,390.3	39.6	550.6

\*These figures refer to the "North and West" regions of the National Farm Survey for 1955-7 with the exception of the largest size group, in which the national figure is used

TABLE 4.—CHANGE IN NUMBER OF AGRICULTURAL HOLDINGS EIGHT WESTERN COUNTIES, 1955-60

County	5-30 acres		30-200 acres		Rate of Change 1955-1960	
	1955	1960	1955	1960	5-30 acres	30-200 acres
		Number			%	%
Rosecommon	10,020	7,873	5,927	6,350	-21.4	+ 7.1
Mayo	20,255	17,368	6,852	7,644	-14.1	+11.6
Leitrim	7,004	5,736	3,398	3,655	-18.1	+ 7.6
Sligo	7,570	5,903	3,510	3,984	-22.0	+13.5
Galway	13,471	11,352	11,529	12,210	-15.7	+ 5.9
CONNAUGHT	58,320	48,232	31,216	33,843		
Donegal	12,115	10,299	7,308	7,128	-15.0	- 2.5
Kerry	6,639	6,192	9,363	9,308	- 6.7	- 0.6
Clare	5,207	4,140	7,781	7,857	-20.5	+ 1.0
TOTAL	82,281	68,863	55,668	58,136	-16.3	+ 4.4

TABLE 5.—OUTPUT PER MAN BY SIZE OF HOLDING IN WESTERN COUNTIES, 1960

Size of Holding	No. of Males <sup>1</sup>	% of Total	Total Output	Output per man
			(£000)	£
Under 15 acres	26,970	16.8	5,769.6	213.9
15- 30	54,430	33.9	12,968.7	238.3
30- 50	43,520	27.1	14,531.4	333.9
50-100	25,530	15.9	14,223.8	557.1
100-150	5,300	3.3	4,343.8	819.6
150-200	1,600	1.0	1,690.1	1,056.3
200-300	1,450	0.9	1,341.1	924.9
300 and over	1,770	1.1	1,338.0	756.0
TOTAL	160,570	100.0	56,206.5	350.0

<sup>1</sup>The distribution of males by size of holding for the eight counties has been estimated by assuming that the proportionate distribution in Connaught is true for the whole region, and these percentages have been applied to the published figures of total males engaged in agriculture in the eight counties.



## Appendix

The basic assumption on which the allocation of agricultural output between different geographical areas and between different size groups of farms is that figures of livestock numbers and crop acreages on June 1st are directly related to the total output of the individual enterprises. Whilst this assumption must involve some degree of oversimplification, it seems most unlikely that the errors involved are sufficient to be of any significance in the conclusions which have been drawn from the data presented in this paper. Moreover the figures of outputs estimated by this method are generally in close agreement with those from other sources, e.g., the National Farm Survey

As some modifications have been made in the allocation procedure in order to take account of particular factors, the actual procedure is given below in respect of each product.

Item	Basis of Allocation
Cattle and Hides ..	The agricultural prices of cattle at different ages were used to determine the "output" of a beast at the different age levels. The total of these "outputs" over the average life span of an animal adds up to its average final value.
Milk .. ..	Milk output was calculated by two different methods. The first was based on the estimated average value of production per cow multiplied by total number of cows in each group. The second method was based on the estimated consumption by agricultural population and by non-agricultural population, plus estimated deliveries to creameries and milk used for the production of farmer's butter. As these two methods were in close agreement, the former was used for the sake of simplicity.
Sheep + Lambs + Wool	Allocated in proportion to average output per ewe deflated after consideration of results of output of sheep enterprise in Western counties compared with rest of the country in the National Farm Management Survey.

Item	Basis of Allocation
Pigs .. ..	In proportion to average output of total pigs in the 1960 Census of Agriculture.
Poultry and Eggs ..	For each type separately, allocation in proportion to total number of Geese, Ducks, Turkeys, and ordinary Fowl over 6 months
Wheat . ..	In proportion to average output per acre X acres in each group.
Barley .. ..	Malting and Feeding barley considered separately ; all malting barley acreage considered as sold, and feeding barley allocated in proportion to estimated quantities sold off farm.
Oats .. ..	Allocation in proportion to estimated quantities sold , but in Donegal separate estimate made after consideration of relative proportion of output sold in sample of farms in Farm Management Survey
Sugar Beet . ..	Allocation in proportion to average output per acre X acres in each group
Potatoes .. ..	Allocation in proportion to estimated quantities sold ; in Donegal separate estimate made after consideration of relative proportion sold in sample of farms in Farm Management Survey.
Horticulture, Grass Seed, etc.	Allocation in proportion to acreage.
Turf, Horses, Timber and Honey.	These were excluded from the estimates of total output

## DISCUSSION

*Dr L Ó Nualláin*, in proposing the vote of thanks, said : It does appear that Mr. Attwood has brought his study on agriculture and economic growth in the Western counties before this Society at a most opportune time, a time when one could hope for some prompt action on the part of our authorities to put into operation some of the recommendations set before us in this paper. The paper follows on the heels of the Inter-Departmental report, published a few days ago, on the conditions of the small farmers in the West, and in the midst of our current discussions on programmes for economic expansion, on the desirability or otherwise of economic planning and above all, perhaps, on the urgent need for readaptation both in our agriculture and industry, to meet the changed and more competitive conditions we would or will have to face, should we enter the European Economic Community, either as full members or as an associate member.

As Mr Attwood rightly points out the Western counties show most of the generally acknowledged basic characteristics of an under-developed region, that is, limited natural resources ; an exceedingly high dependence on agriculture, in which productivity, both per acre and per man engaged is low, a high density of population on the land , widespread under-employment, a high birth rate and lack of alternative employment opportunities in the region. Fortunately, however, the area does possess a relatively good infrastructure, in the form of communications, health services, public utilities and power in the urban and in some rural districts, a fair measure of educational facilities, good administrative services, a homogeneous population, intelligent and responsive when given good leadership, freedom from class and caste systems and religious differences, and close contact with a developing exchange economy in the rest of the country.

All these are favourable to economic development, and constitute assets not enjoyed by other under-developed regions or countries, whether they be in Europe or overseas

Now we do have a school of thought that holds that the entire State is best described as an under-developed country relative, to say Britain, or to the Six Countries of the Common Market and that therefore it is futile to single out any particular area or region within the State as one calling for a special development programme and that our secure resources of capital, technology and enterprise would be best deployed in those parts of the State that offer the quickest and most remunerative return, namely in the Dublin region, in Leinster generally and perhaps in the Cork City area.

However, whether this school of thought is correct or not in its assessment of the state of our economy, it is not a line of argument that is judicious to proclaim too publicly at this particular juncture in our fortunes, when we are about to enter in negotiations with the Economic Commission of the E.E.C. with a view to seeking full membership of that Community, as a viable and developing economy, capable of accepting to the full the obligations of membership as a pre-condition to enjoying the fruits of membership, particularly as far as our agriculture is concerned.

It would be quite correct, I think, to describe the Republic as a whole as an under-developed economy, if we regard Britain and Ireland as one economic entity. This would place us in the same category as Northern Ireland or Scotland or parts of Wales are in relation to England.

But as we are an independent political unit, a sovereign State, pursuing our own political, social and economic policy, we must look at the economy of the Republic as a separate economy from that of Britain and in that perspective it is undeniable that some areas within the State are less developed economically than others.

And there can be no denying either that the under-developed region of the Republic comprises the five counties of Connacht, plus Kerry, Clare and Donegal. These are the counties of greatest net emigration, with the greatest decline in agricultural population and with the lowest per capita incomes. In these eight counties, agricultural production has remained relatively stagnant ever since the foundation of the State. These are also the counties in which we find the highest proportion of the small farm groups, under 30 acres, the great majority of them, at the present time, being economically non-viable units, pursuing a pattern of farming, extensive farming, the production of dry cattle and sheep, a form of "ranching without the ranches" as it has been so aptly described in the Inter-Departmental report I have referred to.

Not a great deal of the benefits of the industrial boom we hear so much about has percolated to these counties.

As Mr Attwood points out, since January 1952 and up to mid 1961 the 55 firms which had received State grants for the development of industry in these counties to the extent of £1,723,000 under the Under-developed Areas Acts only employed 2,632 people. Furthermore, the Report of Foras Tionscail for 1960-61 indicates that the estimated employment content of all firms for which grants had been approved amounted to 8,268 people, which will involve the State in an estimated total expenditure of £4½ million.

Considering that the rate of decline in numbers engaged in the agricultural sector has averaged 4,500 over the last decade, the task of providing employment outside of that sector in the West is a formidable one and one likely to demand more expenditure than has been hitherto devoted to it, whether it be in an expansion of manufacturing industries, fishing, afforestation, service industries and tourism.

I find myself in agreement with Mr Attwood that a policy of planned agricultural investment in the West, on the lines comparable to that carried out by An Foras Tionscail for industrial expansion should be seriously considered. It could well be that the results in the form of increased agricultural output and higher farm incomes, certainly in East Connacht, would show themselves much more quickly than has been the case hitherto in the industrial field.

But it is highly important that there should be a co-ordination of programmes for the development of the West. In the past, even within the industrial sphere, efforts at development, I think, have been sporadic, and unplanned. Surely the time has come when we must follow the example set by the dynamic area of the European scene, that of the Six countries of the Common Market, each of which is pursuing Regional Development Programmes. We too have our regional problem, in the Western counties, and also in Cavan and

Monaghan and the only effective way I can see of rehabilitating the economic and social life of these areas lies in the formulation of a Regional Economic Development Plan, within the context of an overall National Economic Development Plan.

Even within the context of membership of the Common Market I can see strategic advantages in acknowledging publicly that we too have our regional problem and thereby are entitled to seek special concessions in connection with the development of that region. While the Rome Treaty in Article 92, Section I, does state that State aid which distorts or threatens to distort competition by favouring certain enterprises or certain productions is deemed to be incompatible with the Common Market, nevertheless, it also contains an escape clause. Section 3 (a) of Article 92 declares that "aids intended to promote the economic development of regions where the standard of living is abnormally low or where there exists serious under-employment shall be deemed to be compatible with the Common Market". Surely the Western counties would fall within that category. It is alleged that one reason that has influenced certain foreign industrialists in coming to this country to establish new industries has been that they see in this country a safe haven from the rigours of the Cold War and the hectic pace of competition in the Common Market.

It may well be that we will yet see Irish industrialists hastening to establish themselves in the haven of the Western counties and to take advantage of concessions in the matter of State aid that may be permissible even within the Common Market and the provisions of the Treaty of Rome under Article 92 (sub. 3) <sup>1</sup>

Yet, I do see two rays of hope for the small farmers in the West that will emerge from our membership of the Common Market; one is a possible change in the pattern of farming in the West from extensive to intensive farming and the other is the social policy of the Common Market in relation to agriculture

I think it may be truly said that the small farmers in this country generally have been among the first casualties of the British policy of subsidisation of agriculture, in particular the subsidisation of her home production of the products traditionally associated with the small farm economy, pigs, bacon and dairy products, eggs and poultry. Britain's entry into the Common Market will mean also the end to that policy and with it better market prospects for the Dutch, the Danes and the Irish farmer in the production of dairy products and eggs and poultry intended for the British market.

From figures recently published by the E.E.C. it appears that even with Britain, Denmark and ourselves in the Common Market, the enlarged market would not be completely self sufficient in these products, nor in beef, sugar and mutton, and we can expect a rising demand in that market for such products, given a continuance of economic growth and prosperity in the Common Market area.

Furthermore, it is a proclaimed aim of the Community to formulate and apply a policy of social improvement for the farming community, to raise per capita income in agriculture and to carry through a programme of co-ordination of structural re-organisation policies in agriculture and to grant financial aid for structural improvement in agriculture.

In short, we have a policy of planned and a staggered withdrawal from small scale farming.

Now that the Common Market has entered into stage two of the transitional period and has adopted a common policy in agriculture, we can expect a speeding up of this programme

As members of the Common Market, we could not remain immune from these developments which would be ultimately for the betterment of the Western countries

In conclusion, may I say that we are indebted to Mr Attwood for giving form and substance to many of the personal impressions that can be derived from observations made by travelling through this part of the country, for pinpointing some of the vital difficulties and for suggesting promising fields for development in the West

As he himself implies, there is a great deal of research yet to be done in the field before we acquire an accurate and complete account of what really is happening, socially and economically in Ireland's Under-developed Region, west of the Shannon

An excellent start in these studies has been made by Mr Attwood in this paper and also in the recent contributions of Miss Rosemary Fennell, another member of An Foras Talúntais staff, on the subject of industrial development in the West

In common with other members of this Society I welcomed the establishment of both An Foras Talúntais and the Economic Research Institute as filling long felt gaps in our institutions devoted to the furtherance of knowledge of the social and economic structure of this country. We are indebted to the Directors and staffs of these two organisations for the contributions they have made to that sum of knowledge even within their brief period of existence to date.

In conclusion, might I respectfully suggest that some means might be devised whereby An Foras and the Institute could co-operate with the Universities in the field of economic research in this country ?

*Dr. T. Walsh.* The Paper presented by Mr. Attwood which is an analytical approach to the problems of Western Ireland, based on information now available, is of special importance at the present time.

It can well be examined against the background of the recent report of the Interdepartmental Committee on Small Farms, which set a basis for action on small farm problems. It is obvious to all concerned that in order to implement the proposals in that report, much precise information must be obtained on the various parts of the jig-saw which make up the puzzle of the Western type economy. The problems of this economy are, of course, long standing. With the change in development concepts associated with impending international economics these problems have taken on a completely new meaning and their solution must be approached accordingly. Basically some of the major problems are structural, being associated with farm size considered against the background of the resources available for farm development. Up to now possession of a farm had, in general, a meaning for the occupier other than that of a primary viable business enterprise. It was a source of subsistence and a way of life. The present economic development needs require farms which are viable economically and capable of providing a satisfactory standard of living for their occupiers.

It is of significance that much of the information, technical and otherwise, on these areas, was obtained against a background of the old pattern of needs. There is, consequently, an urgent need now for

new information as a basis for adjustments and change. From my own personal knowledge of the land resources of the West, I can only say that this knowledge is insufficient as a basis for development. Only recently, this has come very forcibly to our attention in relation to some major series of soils in Co. Roscommon. These soils are in a highly important area yet we do not have sufficient technical information on which to base a new use programme for these soils.

While there are many difficult problems in relation to land use in the western area, these problems are by no means insoluble if tackled systematically. Certainly there are considerable areas of poor soils. On the other hand there are also very considerable areas of soils which lend themselves to a much higher level of output than is now being obtained. Based on a systematic approach, and there is no other logical basis, we have felt that there must be a detailed appraisal of farming systems and patterns as they now exist.

We have asked ourselves such questions as to what extent, taking environmental conditions into account, farming for meat production and dairying can be intensified on appropriate soils, the extent to which many areas of poor land can be developed for dairying and allied enterprises and the extent to which suitable areas of hill land can be developed for hill and mountain sheep farming. We would also like to know something more of the extent to which forestry and agriculture can be integrated as a land use pattern for certain areas in certain of the western counties, such as Leitrim.

Just as these problems must be tackled in a detailed, systematic fashion, so also must the associated organisational problems be approached. Already, as shown in Mr. Attwood's paper, the problem of farm size is being adjusted almost entirely through the painful process of emigration and subsequent amalgamation of holdings. This is one approach. The path of adjustment could be made smoother and, in the final analysis, more rewarding, if an appropriate system of co-operation could be developed in the areas concerned. This approach has not as yet been given any reasonable trial. Co-operation in the real sense has stood still at an earlier point in development.

Mr. Attwood, in his paper, has posed a number of highly important questions, questions based on a recognition of the real weakness in the present system. For some time past in our organisation we have felt the vital and urgent need for a more detailed look at the whole pattern of rural affairs in the West. A moderate resource survey, based on an appraisal, in so far as we can go, of land and people against the economic background, is already under way. The technique for this survey has largely been provided from the resource survey in West Cork which has provided us with a considerable volume of factual information on a relatively limited area.

Finally I would like to congratulate Mr. Attwood on his paper and to say that I am convinced that through this analytical approach which he and his colleagues are adopting in the evaluation of agricultural economic problems, much information of very great value will be available as a basis for realising the economic potential of the western area.

*Dr. Geary.* I rise particularly to deal with the interesting point propounded by Dr. O'Connor. Dr. O'Connor's point is that the proportion borne by gross agricultural output in the Western counties to output for the whole country is about equal to the proportion borne

by agricultural land, the paradox being that the land in the Western counties is much poorer than the average. The paradox resolves itself from the fact that in the Western counties the proportion of agricultural land in small holdings is much larger than for the country as a whole. If in two equal areas of land of the same quality one was set out in small holdings and one in large, the output per acre would be much larger in the former and the output per man much less. This fact, which is well known and which appears from Mr Attwood's Tables 2 and 5 explains Dr. O'Connor's paradox; indeed, the equality in ratios to which he refers indicates by itself that the land is poorer in the Western counties.

There are hazards in the allocation method used by the lecturer for his estimates. May I recall that I used this method many years ago for county estimates of gross agricultural output and, confronted with the fact of far too low an output in County Meath, discovered that this area of rich land accommodated two inflows of store cattle each year so that if the national ratio were e.g. £17 per beast at census date this figure should be doubled in its application to County Meath.

I wish to thank Dr Ó Nuallain for his remarks about the Economic Research Institute. I can assure Dr. Ó Nuallain that the Institute is most anxious to establish the closest rapprochement with the economic faculties of the universities at all levels, professorial, post-graduate and under-graduate. Definite steps to this end have already been taken.

I wish to join the other speakers in my appreciation of the paper.

The President (*Mr W. A. Honohan*) said that the paper was most timely, coming as it did almost simultaneously with the publication of the Report of the Inter-Departmental Committee on the Problems of Small Western Farms. He thought that it would be profitable for those responsible for action in this matter to take another look at what the Commission on Emigration and Other Population Problems had said, from the population angle, on the "Special Areas". While it might not be impossible to reach a fairly wide measure of agreement on the best theoretical solution—e.g. that the agricultural economy of the areas should be based on viable holdings—the nature of the social structure and the traditional habits of life constitute serious obstacles to any radical reorganisation.