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A NOTE ON OFF-FARM INCOME OF FARM FAMILIES IN AUSTRALIA*

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Past studies of the farm sector have concentrated on the use of farm based resources in the farm context alone. Changes in the economic environment have widened the opportunities available to these resources and have thus tended to make this narrow definition of the farm firm less relevant. Some recognition of this situation has emerged in more recent studies. The aim of this note is to collate and examine the degree to which farm labour resources are employed in off-farm activities in Australia. The main conclusion drawn from the evidence available is that, while in aggregate part-time farming is a fairly minor activity, in some sectors it is increasing in importance and constitutes a considerable outlet for farm based labour resources.

I Introduction

The intention in preparing this note is to draw together the available information relating to off-farm work and income of farm operators and their families in Australia. This is undertaken in the belief that assessments of farm family welfare and efficiency of farm resource use require explicit recognition of the opportunities open to farm family owned resources in both farm and non-farm activities.

Too often in the past, it seems to the author, agricultural economists and policy makers have regarded those farmers enaging in off-farm work as a kind of unsatisfactory agricultural tail which 'resorts to off-farm work' instead of developing a 'viable' farm able to 'generate sufficient funds for its business and household needs'. Of late this attitude towards off-farm work has been changing, and researchers both overseas and, more recently, in Australia, have begun to take a broader view of the farm family as an economic unit.

In one of the earlier U.S. studies, published in 1965, Lee presented 'simple and logical conceptual criteria for allocating "farm resources" among farm and non-farm activities at the farm level' [11]. He showed diagrammatically that 'the decision by a farm operator to allocate part of his resources (chiefly labour) to non-farm employment may be both rational and consistent with the goals of maximizing family incomes and making efficient use of farm and family resources'. In 1971 Polzin and MacDonald [16] used a similar approach to interpret the work choice decisions of farmers in Montana, North Carolina, Mississippi and Kansas, concluding that 'the overall operation of the economy is not impaired (by advances in agricultural technology) because the division between on- and off-farm work seems to be consistent with

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requirements for maximum efficiency'. The following two sections examine the level and importance of this non-farm use of farm based labour resources in overseas countries and in Australia.

II Off-Farm Employment and Income of Primary Producers: The Overseas Situation

Studies in several overseas countries have shown a marked increase in the percentage of the farm labour force with off-farm employment.

In the United States in 1971, 45 per cent of the employed labour force residing on farms had non-farm jobs compared with 33 per cent in 1960, 16 per cent in 1950 and 10 per cent in 1940 [9]. An O.E.C.D. study of part-time farming in the United States noted that in 1964 about 25 per cent of farm operators had full-time (at least 200 days per year) off-farm employment [12]. During the 1960s net farm income in the U.S. increased by 44 per cent from $US11·8 billion to $US16·8 billion whereas off-farm income received by farm operator families rose by 101 per cent from $US8.6 billion to $US17.1 billion [10]. Off-farm wage and salary income of the farm population comprised 37 per cent of total farm and non-farm income in 1970, nearly two-thirds higher than in 1960 [17].

In Canada in 1971 an estimated 49 per cent of total net income of farm operator families came from off-farm employment [9], while at least 50 per cent of farm operators worked off the farm for some part of the year [2].

Another O.E.C.D. study of part-time farming, this time in Germany, showed that in 1975 40 per cent of all farms were 'supplementary income farms' (i.e., farms on which the operator spends less than half his working time and/or earns less than half the farm household's total income), compared with 33 per cent in 1965 [15]. The corresponding O.E.C.D. study for Norway indicated that in 1969 about half of all farm operators engaged in off-farm work [13].

Finally, OECD data for Japan show that during the period 1960 to 1974 the number of full-time farm households dropped from 2.1 million to 0·6 million while the total number of part-time farm households increased from 4·0 million to 4·4 million[1] [14].

The O.E.C.D. studies, apart from providing basic statistics on the number of part-time farmers, sketch socio-economic profiles of the typical part-time farmer and discuss the policy implications relating to part-time farming. The influence of various economic and demographic variables on the off-farm labour supply of farm operators in the United States has been examined by Sexton [17]. In general it appears that off-farm employment is undertaken to supplement unacceptably low farm incomes. The degree to which farm operators take up off-farm

[1]The definition of full and part-time farming and farm household in Japan make international comparisons with these data difficult. In Japan a *farm household* refers to a farm family which operates a farm area of at least 0·1 ha in Eastern Japan (at least 0.05 ha in Western Japan) or one with annual sales of farm products of 50,000 yen ($US170) and over, if the farm area is below these minima; a *full-time farm household* is a farm household in which no family member is engaged in off-farm work; and a *part-time farm household* is a farm household in which one or more of the family members, including the operator himself, are engaged in off-farm work.

employment also depends on such variables as age, family structure and the availability of alternative job opportunities.

III The Situation in Australia

The situation in Australia with regard to the level of off-farm employment undertaken by primary producers and their families is difficult to ascertain owing to the lack of appropriate statistics.[2] The number and percentage of the agricultural labour force recorded as being multiple job-holders give some indication of the number of farmers engaged in additional occupations. Over the period 1965-1975 the agricultural labour force fell by 19 per cent from 446,300 to 362,100, while the number of multiple job-holders with a main job in agriculture fell by only 16 per cent. More importantly, the number of multiple job-holders with a main job in agriculture and a second job in non-agricultural industries increased by 24 per cent. [1].

Further information on the level of farm household income earned off-farm has been derived from a survey of primary producer taxpayers,[3] conducted by the Taxation Commission for the Industries Assistance Commission (I.A.C.) inquiry into Rural Income Fluctuations. Over the period surveyed, 1968-69 to 1972-73, wage and salary income for all primary producer taxpayers increased from an average of $487 to $827.[4]

Furthermore, all primary producer taxpayers, with the exception of those classified as sheep graziers, recorded a consistent annual increase in the level of wage and salary income (the incomes of primary producers classified in the hunting/fishing/trapping/forestry category were not examined). Between 1968-69 and 1972-73 wage and salary income as a percentage of total farm household income rose to a peak in all States and industry categories in either 1969-70 or 1970-71 before declining to about the 1968-69 level. This fluctuation occurred because wage and salary income increased steadily over the survey period while farm incomes varied.[5] Furthermore, survey data show that the percent-

[2] The only apparent sources of data on the level of off-farm employment income are the Taxation Statistics Annual Reports; Bureau of Agricultural Economics industry economic surveys; a survey of a sample of primary producer taxpayers undertaken by the Taxation Commission for the IAC Inquiry into Rural Income Fluctuations—Certain Taxation Measures; a survey of fruitgrowers in the Riverland region of S.A. conducted by the IAC for the Fruitgrowing Reconstruction Inquiry; and Australian Bureau of Statistics Multiple Jobholder statistics.

[3] The data were obtained by the Taxation Commission from returns made by a sample of 5,644 primary producer taxpayers. The sample data have the advantage of avoiding the inconsistency of classification of the aggregate Taxation statistics. Sample returns selected for 1972-73 were traced back to 1968-69, thus ensuring that the composition of the sample was constant.

[4] These figures are considerably higher than those obtained from the population statistics. This could be attributable to sample bias, the means of estimation and the fact that they include wage and salary components accrued by the sole trader enterprise and also the individual's portion of any wage and salary income of any partnership of which the primary producer taxpayer is a member.

[5] Although not examined in detail in this paper, off-farm non-employment income of primary producer taxpayers has contributed a proportion of total farm household income comparable to non-farm employment income and has also increased over the survey period.

age of individual primary producer taxpayers recording wage and salary income increased from 22·91 in 1968-69 to 26·72 in 1972-73.

So far it has become evident that at the aggregate level off-farm employment income in Australia represents, as yet, only a fairly small, though increasing, proportion of total farm income. However, the real level of importance of off-farm employment income becomes more apparent when statistics relating to certain sections of rural industry are examined. For example, results of the Riverland survey[6] show that in 1972-73 income earned by the operator and his family other than from the farm averaged $1,824, 40 per cent of a total household income of $4,563. Of this off-farm income, 69 per cent was earned by the operator, 29 per cent by the operator's spouse and 2 per cent by other dependents. In 1973-74, income earned off the farm averaged $2,400, 37 per cent of a total household income of $6,496. The proportions of non-farm income earned by the operator, spouse and dependents were 72 per cent, 26 per cent and 2 per cent respectively. Data from the Riverland survey show that of the 121 farm owner-operators surveyed, 15 (12 per cent) had full-time non-farm work in 1973-74 and 14 (12 per cent) had an average of 15 weeks per year of part-time non-farm work. In the same year 5 per cent and 17 per cent of farm owner-operators' spouses had full-time and part-time work respectively, the latter averaging 22 weeks per year.

Results of the same survey show that, in 1972-73, 56 per cent of farm operators and 90 per cent of farm families had some non-farm employment income. In 1973-74 these figures were 60 per cent and 88 per cent respectively.

A survey of the dairy industry for the period 1971-72 to 1973-74, conducted by the B.A.E., indicates that average off-farm employment income over the period for all Australian dairy farms was $97 per annum. This was 1.35 per cent of net farm income. The average annual level of off-farm employment income over the period ranged from $33 (0·96 per cent of net farm income) in Queensland to $290 (5·18 per cent of net farm income) in Tasmania [3].

A report prepared by the B.A.E. for the Bureau's submission to the 1975 IAC Dairy Industry Inquiry examined data relating to the farm and farm operator characteristics of dairy farmers who had withdrawn from dairying between 1970 and 1974. The increasing importance of off-farm employment income to these operators (who, as a rule, still resided on farms) is indicated by the data which show that average off-farm income increased from $361 in 1969-70 to $1,579 in 1973-74. The report notes that 'according to results for 1973-74, operators' wives contribute an average of $417 per annum to the household incomes of exit farms.[7] Average off-farm income was estimated to be $1,600 or about half the estimated average farm income of $3,296 for exit farms'.[8]

In this case off-farm employment appears to have been undertaken

[6] See footnote 2.

[7] 'Exit farms" refers to those which had ceased dairying between 1970 and 1974.

[8] Types of off-farm work undertaken, classified into self-employed, manual, other farm, council or Government work and service work, were found to be approximately of equal importance.

during a transitory stage from full-time dairying to non-dairying activities. In 240 cases (19·8 per cent farms surveyed) the post-exit occupation was non-agricultural work in urban areas [7].

A further B.A.E. study [6] indicates that the proportion of rejected applicants for debt reconstruction assistance under the Rural Reconstruction Scheme who have subsequently undertaken off-farm employment ranges from 23 per cent in Western Australia to 42 per cent in Tasmania. As this report suggests, 'off-farm work may increase a property's longer term prospects for viability by providing finance for structural change. It may also permit total income to be raised to an acceptable level through the pursuit of part-time farming'.

A study of off-farm income and employment of woolgrowers in the Australian sheep industry [4], based on data collected in the B.A.E. 1972-73 Australian Sheep Industry survey, indicated that 20·1 per cent of all woolgrowers in Australia (or 16,000) supplemented their farm incomes by off-farm employment and approximately 31 per cent of these (or 5,000) received over 30 per cent of their net income from off-farm sources. It was found that small-farm operators and those in the high rainfall zone of the industry had the greatest incidence of off-farm work. For the industry as a whole, an estimated 60 per cent of those with off-farm work undertook work within the rural sector, the remaining 40 per cent having off-farm income from non-rural employment.

IV Conclusions

The above evidence indicates that, although in aggregate terms the level of off-farm employment is still fairly low, in some industries it constitutes a very important source of income.

Overseas studies have indicated the economic rationale underlying the use of farm labour resources in off-farm employment opportunities and the circumstances under which such use occurs [9]. Both Lee and Polzin and MacDonald suggest that a farmer will choose to apply his labour to the farm until the marginal return from farm work is less that that from off-farm work. Polzin and MacDonald conclude that the level of off-farm work depends largely on the ratio of average hourly wages in manufacturing to gross realized income per farm, distance to off-farm work and the number of non-farm jobs in the area. Lee suggested that the extent to which off-farm employment is undertaken is influenced by, *inter alia*, institutional constraints on off-farm work, the off-farm wage rate, the return to labour employed on the farm and the rate at which this return diminishes, the farmer's preference for farm work and the farmer's preference for leisure rather than both farm and non-farm work. Some of these factors will in turn be affected by characteristics specific to the location and the individual farmer, such as age, education, farm size, farming experience, type of enterprise, attitude to work, and so on. Unfortunately, lack of data in Australia as yet prohibits both the testing of theoretical models and the sketching of socio-economic profiles of farm families partaking in off-farm employment.

To the extent that circumstances surrounding agriculture in Australia are similar to those existing overseas similar results could be expected. At the same time, it is probably safe to assume that characteristics

peculiar to the Australian rural situation (such as isolation from large population centres) will influence the extent of, and criteria surrounding, the undertaking of off-farm employment.

The indications are that the implications of part-time farming are significant enough to warrant greater documentation and examination of the situation in Australia. The effects of part-time farming on the efficiency of resource use, the socio-economic structure of rural communities, the variability of farm family income, supply responses to price changes and so on, are as yet unexplained in Australia despite the implications they may have for the sector and for agricultural policy. Most importantly, part-time farming may well represent an important means of autonomous adjustment to changes in the economic environment and a potential means of assisting further adjustments.

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