A NOTE ON THE METHODOLOGICAL PROBLEMS OF USING THE EMPLOYMENT DATA FROM THE FARM MANAGEMENT STUDIES

During the last two decades, dozens of farm management studies were conducted in India to understand the economics of farming—the structure and distribution of holdings, resource utilization patterns, employment, incomes, costs and so on. Later researchers have relied on the data contained in these reports on the "Studies in the Economics of Farm Management".¹ There are two major methodological problems that arise in the use of employment data from these studies. The objective of this note is to highlight these problems without attempting to analyse their implications. The first problem is in the definition of earners or in some cases 'size of family' and the second is in the computation of the human labour days used on the farm on crop and livestock activities.

**Definition of Earners**

Some studies have grouped the population into three categories 'Earners', 'Earning dependents' and 'Dependents'. Others have only two categories—'earners' and 'dependents'. In the former case, the earning dependents are 'converted' into earners by assuming the equivalence of one earning dependent = ½ earner.² The rest of the analysis then deals in terms of earner equivalent units. As a result, the number of earners (in equivalent units) could be under-estimated since women and children are classified as earning dependents though they work on the farms.

In a West Bengal study,³ a child worker was treated as equal to half a unit but a woman worker was treated as equal to a man worker without any discounting factor.

In the Madras study one woman earner was taken as half a unit of man in analysing the correlation between size of farm and family size.⁴ Children were ignored. One of the conclusions reached was that smaller families have smaller farms.

**Definition of Labour Days**

There is a two-fold problem in the interpretation of data on human labour days from these studies. First is the conversion of female and child labour into equivalent adult-male days called invariably as 'man-days'. The second problem is the lack of uniformity of the conversion factors from region to region or even within a region, over the years. This obviously renders the data non-comparable or non-amenable to aggregation, as presented.

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¹ All the Studies are published by the Directorate of Economics and Statistics, Ministry of Food and Agriculture, Government of India.
² See also Studies in the Economics of Farm Management in Uttar Pradesh, 1954-55, p. 32.
³ Inference from the Tables 1-8, 1-9 and 1-10, pp. 15-16.
⁴ Studies in the Economics of Farm Management in Madras, 1954-55, Table 3-3-5, p. 33.
In the Madras study in calculating the actual days of labour input not \( \frac{1}{3} \) but a slightly different conversion factor has been used. To quote: "Labour is assessed in terms of days of 8 hours each. Women and child labour have been converted into terms of adult male labour on the basis of the ratio of present wages for men, women and children." Since the average daily wage rates were Rs. 0-15-4 for men and Rs. 0-8-3 for women the conversion factor works out to

\[ 1 \text{ woman day} = 0.54 \text{ man-day}. \]

In later studies in Tamil Nadu female labour was converted into man-days units in the ratio of 3 : 2, based on wages. There is generally no mention of child days.

In Uttar Pradesh, on the other hand, one female day is taken as equal to \( \frac{3}{4} \) man-day and one child day = \( \frac{1}{2} \) man-day.

Other studies seem to have settled for this ratio of 3 : 2 for woman to man and 2 : 1 for child to man-days conversion. There are some studies (Uttar Pradesh, 1966-67, for instance) which have not stated the actual conversion ratios but have reported that "all human labour have been converted to adult male-days."

In human labour days, only child labour has been converted to equivalent (\( \frac{3}{4} \) man-day) units but not the female days in the West Bengal study. For the earlier study in West Bengal for 1955-56 it is not clear whether any conversion has been used but my implicit understanding from the Appendix B of that report is that for women days there has been no conversion factor. (Would this affect any comparison on human labour productivity in West Bengal and Madras for instance?)

Studies in Gujarat for 1966-67 and 1968-69 report the data in 'man-days' with the obvious indication that the conversion factors have been used. The exact ratios employed, however, are not indicated. In the Mysore study they have used the following definition: "Each day of woman and child labour was converted into man-days in the ratio of 0.66 and 0.50 respectively."

In Assam one woman day was taken as equivalent to \( \frac{3}{4} \) man-day and one child day as equal to \( \frac{3}{5} \) man-day.

In Andhra the conversion ratios were one woman hour = \( \frac{3}{4} \) man-
hour and one children hour (sic) = $\frac{1}{2}$ man-hour. These were arrived at on the basis of average wage rates during the year.

In Rajasthan studies14 "the labour of man, woman and child has been given proper weightage, after keeping in view the average market rates in each case."

In Orissa 'man-day' has been defined as "work equivalent of 8 hours of work of a male adult worker."15 Specific factors used have not been indicated.

These instances are not an exhaustive list of variations but are indicative of the methodological problems that could give rise to serious misinterpretation of data leading to erroneous inferences.

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14. Studies in the Economics of Farm Management in Pali District, Rajasthan 1963-64, p. 367. Also 1962-63 to 1964-65, p. 145. However, it is not clear whether the average wage rates which presumably fluctuated from year to year also affected the relative conversion factors used from year to year.


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