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NOTES AND COMMENTS

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BOOK REVIEWS

THE MANAGEMENT FACTOR ON FAMILY FARMS WITH ABUNDANT LABOUR

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The organizing on every farm business is characterized by the proportions in which land, labour and capital are combined. Productive agents are not, however, available in unlimited quantities. Should the entrepreneur not have sufficient land or capital or available labour to reach an optimum scope of business, he strives, at any rate, at a combination which, under the given conditions, yields the highest profit. The different possible combinations in the technical respect are also remarkably great. Regardless of the scope of the business there is a certain proportionality and conformity to law between its component elements, which is specific for every type of business and which is dependent on the existing conditions.

Every disturbance of the equilibrium inevitably brings about a more or less obvious reduction of productivity, on account of the production diverging from the optimum balance between the productive agents. Economic equilibrium can be attained at different balances between input and output. It can be carried out at both extensive as well as intensive level.

When an optimum structure and scope of a family farm[1] is to be obtained, a fixed quantity has to be reckoned with, viz. the family of the entrepreneur or to be more accurate those members of the family working on the farm. As the family cannot arbitrarily be increased or decreased, the other productive agents must be combined with this in the most favourable proportions. This implies that the scope of the busines is restricted within relatively narrow limits and is proportioned as a function of the family's labour capacity.

Should the scarcity of the other productive agents, *inter alia* land and capital be so perceptible that an optimum proportioning with regard to the farm family's labour capacity cannot be effected, it is necessary to procure off-farm earning. If this is not available the farm family becomes supernumerary and the superfluous members of the family have to find their livelihood elsewhere.

In a patriarchal peasant farming community, the entrepreneur invests the labour of his family as a capitalist with his capital, viz. he places it where he obtains the greatest marginal revenue in relation to marginal labour input. TSCHAJANOV, who has carried out extremely significant investigations on the peasant farming prevailing earlier in Russia, shows that capital has here a different significance than in a capitalist economy. He points out that the size of the farm business depends on the size of the family and on the balance which exists between the supplying of necessities and the effort thereby involved, and not on the access to capital. In family farming one aims at increasing the gross

1 When in the following context the term family farm is used, it is to be understood that the farm business has plenty of available labour without this being especially mentioned.

revenue with unchanged access to capital through increased input of labour, despite the fact that this leads to a decreasing labour income per hour and reduced recorded net profit.

In any particular situation the predominant system of farming on the family farm is determined, *i.e.*, with regard to the scope of the undertaking and the relation of input/output, by the density of the population. Qualitatively considered, i.e., with regard to the structure of the economic activity and the most favourable combination of the productive agents, the system of farming is determined by the market situation and the physico-geographical conditions. This applies automatically only to the family farm. Large farms which are to be regarded as capitalist undertakings with obvious scarcity of labour always strive for a system of farming which yields the highest possible net profit.

One can, of course, debate the validity of TSCHAJANOV's above stated theses for the modern system of family farming in America and certain West-European countries. On account of the continuous depopulation of agriculture, the mechanization of farming, when the productive agent labour is exchanged for capital, and the growing tendency towards a weakening of family ties, the significance of the farm family as a unit of labour has undeniably been weakened. The predominating majority of farm businesses in Europe, not to mention Asia, still retain their character of family farms, hence these cannot be regarded as purely capitalist farm businesses, but are in many respects stamped with features quoted in this connection.

It is especially evident in the family farm that the size and composition of the farm family influences the economic activity. The loadstar for this in the entrepreneurial respect is to create full time employment for the family. Whereas the size of a purely capitalist farm is determined by access to capital and land, the maximum size of a family farm is determined by access to available labour, and the minimum size, by the amount of utilities which the family needs for its maintenance. The greater the requirements, the greater the volume of production performed by the family.

The arguments adduced here thus lead to the conclusion that, *on family farms with abundant labour, there is a preference for investing more hours at a low hourly wage than few hours with a high hourly remuneration, for the purpose of obtaining a high gross revenue, in other words, typical gross thinking.*

Considered from an entrepreneurial point of view, it is thus justifiable on family farms to restrict consumption of labour within a certain enterprise, only provided the hours of labour saved can be disposed of elsewhere for an increase of income, *i.e.*, by expanding some other enterprise instead. The question assumes, of course, a different aspect if social considerations are taken into account, when the time of labour saved can be utilized in the form of longer time for leisure etc. The social consideration is, however, ignored in this context.

In a case study carried out by the author on 17 successful Swedish family farms, gross thinking was clearly evident among the entrepreneurs. On these farms, which had purposely been chosen on the basis of their success, it was established that the gross revenue exceeded by 25-30 % the average level of all record-

keeping farms in the same size group and district. The expenses on these profitable farms were, on the other hand, not by any means lower, but significantly enough exceeded the average level by 10 %.

In order to gain an idea of the significance of labour and of capital as business agents on family farms, the author, in accordance with a method prescribed by MÄKI, has divided the net farm income on small Finnish record-keeping family farms (area of arable land under 25 acres) in relation to labour and capital.[2] In this connection it was established that 70 % of the net farm income was labour income, and the capital income only 30 %. Even though these figures naturally relate in the first place to Finnish conditions, it should also be possible to regard them as significant for family farms in other countries. *It is thus obvious that family farms are in the first place labour businesses.*

Net farm income has been divided into the labour income and the capital income in accordance with the following formula :

$$\textit{Capital income} = \frac{\text{Net farm income} \times \text{Imputed interest}}{\text{Imputed interest} + \text{Imputed value of entrepreneur's and family labour}}$$

$$\textit{Labour income} = \frac{\text{Net farm income} \times \text{Imputed value of entrepreneur's and family labour}}{\text{Imputed interest} + \text{Imputed value of entrepreneur's and family labour}}$$

By a liberal use of the abundant productive agents, the entrepreneur strives to utilize to the best advantage the productive agents regarding which there is a scarcity. This can be suitably illustrated in the same way as HOPKINS has done in his text-book "Elements of Management". One pictures a field with a successively increasing number of land tillages.

TABLE 1—VARIATION IN RERURNS WITH DIFFERENT NUMBERS OF CULTIVATIONS

Number of times cultivated	Net return per acre	Net return per cultivation
0	—700	..
1	—50	—50
2	260	*130*
3	370	117
4	*400*	110
5	390	78

2 Considered from an entrepreneurial point of view it is not relevant to distinguish between the productive agents land and capital, hence the value of the land is included in the value of the capital. Net farm income is the gross cash receipts, any increase in inventory, together with the value of farm products used in the home and for hired labour less the cash expenses, any decrease in inventory and depreciation but not interest, rent and family labour. Net farm income therefore consists of the results from the input of capital and entrepreneur's and his family's labour. Only agriculture is taken into account, but not forestry and extras.

It can be seen from the table that the highest profit in respect to the area of arable land is attained with four cultivations, but calculated per cultivation, with two cultivations. The question therefore remains, is one to continue to till the land up to four times, or to stop at two cultivations. An entrepreneur with a scantily apportioned area of land, but with abundance of labour, regards the problem with a view to obtaining the highest possible return per unit of area, and an entrepreneur with ample access to acreage, but with scarcity of labour, views the results in relation to the use of labour. On family farms with ample labour it is justifiable to attain *higher intensity in production.*

In a discussion regarding the management factor on family farms, one is not to forget the economic part played by the *entrepreneur's wife.* According to accounts available from record-keeping Finnish farms, the farmer's wife's share of the labour has been as follows :

TABLE 2—THE WIFE'S LABOUR INPUT, FISCAL YEAR 1951-52 ON SOUTH FINNISH RECORD-KEEPING FARMS

Size group acres	No. of farms	Working hours Agriculture	Household	Total
< 25	19	1396	1317	2713
25-62.5	34	1355	1315	2670
62.5-125	30	729	1420	2149
> 125	10	700	825	1552

Especially on smaller farms the economic significance of the farmer's wife seems to be strikingly great, when one departs from the number of hours as a measure.

It would be particularly interesting to investigate the correlation between the wife's daily work and the success of the farm. The more hours the wife devotes to the farm, the more paid labour can be saved. The wife's share of the labour is frequently based on the motive of money saving. It has been said, and aptly, that with the help of the countless hours of labour which the farmer's wife has devoted to tending the cattle, expensive concentrates have been saved in the feeding. This means that the more expensive agent, concentrates, has been compensated for by an agent, the price of which is not calculated.

When the farms in the two smaller size groups were divided in the above table No. 2 into two sub-groups in respect to economic success, the result was as follows :

TABLE 3—THE WIFE'S LABOUR INPUT, FISCAL YEAR 1951-52 ON SOUTH FINNISH FAMILY FARMS WITH POOR AND GOOD ECONOMIC SUCCESS

Sub-group	Working hours		
	Agriculture	Household	Total
Below 25 acres, good economic success	1110	1430	2540
Below 25 acres, poor economic success	1671	1215	2886
25-62.5 acres, good economic success	941	1511	2452
25-62.5 acres, poor economic success	1769	1119	2888

The table clearly shows that on farms with poor economic success the wife has worked considerably more in agriculture than on farms with good economic success. The opposite applies to households.

The figures are not, however, to be interpreted in such a way that the more actively the wife partakes in the farm business, the poorer economic success. On the other hand, the conclusion is justifiable that on the profitable farms the initial circumstances were more favourable, in so far as a better level of prosperity had been attained, production had been rationalized and the wife's burden of work had been made easier. On farms with poor economic success the wife is obliged to carry out a number of agricultural tasks, and she has not the opportunity to devote herself to her home to the same extent as on the profitable farms.

An important management factor which still has to be discussed is the entrepreneur's *training*. In order to gain insight into the importance of education in respect to measures taken by the farm entrepreneur, the author has carried out an investigation, when altogether 410 Swedish farmers were questioned regarding their opinion on the significance of different personal factors in management and success. The answers were grouped on the basis of the farmers' education. A report on the answers given by the farmers belonging to the smallest size group 12.5-25 acres is given in the table below.

TABLE 4—AVERAGE REPORT FIGURES SHOWING THE SIGNIFICANCE ASCRIBED BY THE FARMERS TO THE INFLUENCE OF THE PERSONAL FACTOR ON ECONOMIC RESTULTS. THE ANSWERS ARE ARRANGED IN PROPORTION TO THE MOST SIGNIFICANT FACTOR=100. SUB-GROUP I=FARMERS WITH AT THE MOST PRIMARY SCHOOLING, II=FARMERS WITH AT LEAST RURAL FARM SCHOOL TRAINING

	I	II
Numbers of answers	48	22
Interest in farming	100	100
Wife's collaboration	83	70
Practical experience	71	88
Physical strength	68	61
Organizing capacity	67	78
Ambition	63	67
Harmony in daily life	57	45
Theoretical education	52	64
Children's help	48	51
Treatment of workers	29	34
Neighbours' help	19	15

It is striking how the farmers with more professional and theoretical education (*i.e.* rural farm school) *ascribe greater importance to factors connected with their own mental capacity, than farmers with only elementary education.* Into this category fall such factors as organizing capacity, ambition and theoretical education. Farmers who have only primary school education ascribe relatively more importance to rather different factors, such as the wife's collaboration, help from their children and harmony in daily life. It should therefore be possible to say that a *rationalistic way of thinking* is more frequently observed among persons with theoretical education, while emotionally coloured factors take a relatively more important place in the views of persons with only primary school education.

The second purpose of this investigation was to find out how far any *relationship* could be discovered between *managerial ability and economic results.* As exponents for this ability were used partly the farmers' theoretical, professional education ; partly their experience, especially their work in farming away from their own farms.

The results of this part of the investigation can be seen in tables 5 and 6. Only the farms in the size group 12.5-25 acres have been included in this.

Without going further into the concept "economic results", it may be stated that, as a measure of success relative to the farmer's managerial ability, the author took the *total net income* that constitutes remuneration for capital, and for the entrepreneur's and his family's contribution to the farm work. In this is also included remuneration for activities other than agriculture, *i.e.*, forestry and off-farm incomes (extras). Besides this calculation, *net farm income* calculated on the same principles (see also page 20) was taken for the purpose of orientation.

Since the size of the income is particularly influenced by the number of family members working in the farm business, income was calculated per consumer unit : it was this expression in indices which was taken as a measure of success.

TABLE 5—AVERAGE RELATIONSHIP BETWEEN THEORETICAL, PROFESSIONAL EDUCATION AND SUCCESS ON SWEDISH SMALL-SIZED FAMILY FARMS 1943-47. SUB-GROUP I=NO EDUCATION BEYOND PRIMARY SCHOOL. SUB-GROUP II=AT LEAST RURAL FARM SCHOOL

	I	II
No. of farmers	44	25
Average size of family in consumer units ..	2.83	2.86
Total net income	100	121
Net farm income	100	119

TABLE 6—AVERAGE RELATIONSHIP BETWEEN PRACTICAL, PROFESSIONAL EDUCATION AND SUCCESS ON SWEDISH SMALL-SIZED FAMILY FARMS 1943-1947. SUB-GROUP I=NO OUTSIDE EXPERIENCE. SUB-GROUP II=OUTSIDE EXPERIENCE

	I	II
No. of farmers	55	17
Average size of family in consumer units ..	3.08	2.70
Total net income	100	123
Net farm income	100	120

The tables show that *theoretical, professional education, as well as outside experience, have a clear influence on success in farming*. The differences in both cases were statistically significant.

The problems which the author has been briefly discussing here are problems which, in his opinion, have so far engaged too little attention. Yet they open new avenues of co-operation between farm management and sociological investigation. It might always by mentioned *that it is the farmer—the entrepreneur—who plays the bow, while the farm is merely the instrument.*

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