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# THE ASSOCIABILITY AND EFFECT OF FARM MANAGEMENT EXTENSION SERVICE

NILS WESTERMARCK

IN mapping down and penetrating the economic thinking of the farmer-entrepreneur, his decision-making and his actions, we still stand in an initial stage of research. Modern psychology does not accept the doctrine of "the economic man", but considers the motives lying behind human behaviour to be usually irrational. Reasons are often emotionally coloured, not based on logic. The classical economist's "economic man" is therefore regarded as an abstract construction without correspondence in reality. Of course it cannot be denied that income plays a very important part as the main-spring of human actions but it is not alone decisive. Representatives of modern psychology maintain that it is chiefly against the background of the social situation of the human being as a whole that the economic factor assumes significance.

According to the conception of the author it has often been the source of the farmer's lack of understanding of the extension service that the economist-adviser has not operated on the wave lengths of the farmer-entrepreneur. The experiences that have been obtained, among other places, in Finland for the so-called study-farm activity, seem to support the conception of the modern psychology that the farmer, as little as other entrepreneurs, is some pure-cultivated "homo economicus."<sup>1</sup> A non-businesslike activity and thinking do not play an unessential role.

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1. N. Westermarck, "Management and Success in Farming, Part III—Influence of Individual Advisory Services," *Acta Agriculture Scandinavia*, X : 4, Stockholm, 1960.

The commonness of subsistence thinking has been established in the study conducted by the author.<sup>2</sup> Thus, it has, for example, been indicated that whereas on the basis of economic calculations the pattern of crop should change completely from potato cropping to sugar beet cropping on a particular farm, the actual production pattern is different, it being swayed by consideration for satisfying the requirements of the farm family. Another good example is when one keeps some ten hens, a household pig or a couple of lambs for home use. This could be economically correct as purchase prices could be used for the products in calculations, but often animal husbandry practised to a very small degree is uneconomical, as the animals are tended less rationally and the labour consumption per unit is particularly high.

The foregoing observations correspond completely with the experiences of the Dutch rural sociologist van den Ban.<sup>3</sup>

Evidently similar attitudes tend to render difficult the farmer-entrepreneur's production adaptation in a changing world. When a farmer thinks along such traditional lines he is not receptive of innovations in the same degree as the manager of a modern business. Within the extension service activity of agriculture one, however, presumes often, and all too one-sidedly that all farmers completely think and act as entrepreneurs, while their actions actually are influenced by the thought of subsistence farming.

In order to avoid misunderstanding it is necessary to state that the farm management extension service naturally will endeavour to promote the business-minded thinking of farmers. It is, however, not possible to disregard the existence of the traditional subsistence thinking. In the farm management extension work the farmer is considered as a business unit in which all enterprises are integrated so as to secure the fullest and most efficient utilisation of the land and also of the financial resources and equipment as also of the financial reserves and managerial skill of the farmer.

Even if the existence of subsistence thinking is excluded, at the final selection among the various management plans it is not seldom the non-economic motives, at least partially, that influence the crucial decisions, though perhaps not so that one selects the alternative that includes the smallest alterations in regard to the prevailing pattern of production, but perhaps rather so, that on account of emotional and traditional causes, harmony in daily life, convenience, etc., one does not accept the most profitable. In the farm management extension service in Finland it has been found that among others, the following factors have been conducive for rejecting the most profitable alternative:

*Antipathy* toward a certain production branch. On the other hand, a clear interest toward a certain production branch can lead to an over-dimensioned less profitable selection.

*Conservatism*: Often the activity of farmers is dictated by a conservative attitude toward certain alterations. This, for example, regards transfer from dry hay making to silage making in certain regions of Finland.

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2. *Ibid.*

3. A. W. van den Ban, "Research in the Field of Advisory Work," *Netherlands Journal of Agricultural Science*, 9 : 2, 1961.

*Carefulness:* Even though a certain production branch according to calculations is economically superior to another, it often happens that the farmer does not venture to take the step thoroughly and expand the profitable production branch as far as resources allow.

*The example of neighbours:* The tendency of most farmers to follow the example of the immediate neighbours in regard to selection of the line of production is clearly observed in the cultivation of so-called speciality crops. Often one even observes that owners of small farms endeavour to follow the example of some successful large scale farmer, which often leads to a line of production far from the optimal for the small farm.

*Exaggerated interest for mechanization:* The farmer usually has a strong inclination towards production branches that can be mechanized, although these require more manual labour and are economically more advantageous according to calculations.

*Exaggeration of the first year's experiences:* Especially when the extent of so-called speciality crops are decided the experiences obtained by the preceding year have considerable influence on the decision. If a new production branch has been unsuccessful in the first year the farmer is inclined to cease it for ever. Similarly, an exceptionally good result in one year is allowed to influence the cropping plan of the following year all too much.

On the other hand, there is no reason to under-estimate the capacity of at least the more advanced farmer to think and act businesslike. It is symptomatic that he mainly thinks marginally and alternatively and not within the frames of average costs and quantities. For example, if he decides to expand a certain production branch, he is aware that within the frames of the scarce resources at hand it requires the sacrificing of an alternative production branch. Here the variable quantities, not the average, are decisive.

An important requirement in the planning method is that it is built on the ability of the farmer to understand and adopt. The alternatives are not unfamiliar to him insofar as the calculations of income, variable costs and limitations of resources are concerned. It has even been evident that the planning built on the gross margin (revenues less variable costs) principle corresponds with at least the more advanced farmer's way of thinking and therefore it has won understanding among them.

One can make the hypothesis that an entrepreneur with theoretical professional education has better possibilities in understanding abstractions than an entrepreneur without such an education. In an opinion study made by the author,<sup>4</sup> it appeared that entrepreneurs with theoretical professional training consider such factors that are in connection with their own mental ability, to be more important than do entrepreneurs with only primary school education. Such factors are, for instance, organization capacity, ambition and one's own theoretical professional education.

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4. N. Westermarck, "The Human Factor and Success in Farming," *Acta Agricultura Scandinavica*, 1 : 2, Stockholm, 1951.

Even among entrepreneurs with only primary school education the first two factors mentioned above came high in the ranking scale, but simultaneously it was observed that such outside factors as the co-operation of the wife, the help of the children and harmony in daily life were given more significance than was the case with theoretically trained entrepreneurs.

Likewise, the author drew the conclusion from the opinion study that a rationalistic way of thinking seems to be relatively common among persons with professional theoretical education while emotional factors take a relatively more prominent place in persons with only primary school education.

It should be a common notion that farmers preferably think and discuss inductively. Glenn Johnson<sup>5</sup> who made a pioneering study of the farm management and decision-making processes of a group of 31 farmers has clarified to what extent inductive and deductive thinking respectively prevailed. On interviewing, 20 farmers answered that the inductive way of thinking was closer to them while 11 reported that their world of thought was preferably deductive.

In reality, the economic world of thought is a mixture of both inductive and deductive thinking and that it is not a question of either or. Glenn Johnson's researches indicate that the proportions between inductive and deductive thinking vary and this requires that variation should be given due importance in the planning service farmers are offered. Knight and Greve<sup>6</sup> emphasize on the basis of their own researches that a deductive way of thinking more often appeared in young farmers and farmers with theoretical professional training.

For persons with a mind for preferably deductive thinking one can in farm management extension service activity start with general information on general economic principles, *i.e.*, create a foundation for a deductive thinking activity and after a certain guidance one can expect that the farmers alone are capable of making out their plans.

The farmers with mainly inductive orientation are best served by that they first observe concrete facts before they can build themselves a conception of the elements of the plan and how the plan can be executed and worked out. They are not able to advance according to a general principle, but they must have available empirical plans and solutions.

Little attention has hitherto been devoted to the training of the farmer-entrepreneur in respect of assisting his decision-making and subsequent actions.

A demonstration on a farm is an opportunity suitable for the inductively orientated farmer. He understands facts without having to use too much imagination. Another measure serving the same end is to give him a ready-made plan. There he sees the facts on paper.

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5. Glenn L. Johnson: Managerial Concepts for Agriculturalists, Kentucky Agriculture Experiment Station, University of Kentucky Bulletin 619, 1954.

6. Dale A. Knight and Robert W. Greve: Farmers Use and Understanding of Inductive and Deductive Reasoning and Figuring Costs and Returns, Agriculture Experiment Station, Kansas State University Technical Bulletin 107, 1960.



Farm management research has to a particularly high degree been normative in its character. That this has been the case is quite natural, as through the normative models one obtains a clearer and a pedagogically well-founded conception of economic theory. Within a branch of science that even touches the actual behaviour of the human beings it becomes necessary to complete the normative studies with positivistic models.

A question that arises in this connection is whether the total improvement effect (=improvement on profitableness) becomes more significant if one concentrates the farm management extension service on farms, the profitableness of which at the initial stage is relatively low on account of disadvantageous natural and economic conditions and which have received little earlier contact with advisory activity, etc., or whether the activity should primarily be directed at farms with better potential conditions on account of better natural and economic conditions and earlier lively contacts with extension service activity but which also have a better profitableness consequently at the initial stage. In the following discussion it is assumed that there are no differences between abilities of the farmers.

In an earlier research study conducted and published by the author,<sup>7</sup> concerning the influence of intensified individual advisory services on success in farming the study material partly consisted of a group of southern Finnish family farms, numbering 32, and partly of a group of 9 located in central Finland. The average size in both was almost the same, *i.e.*, 12.6 hectares and 12.4 hectares of arable land respectively. Likewise, the mental ability of the entrepreneurs was the same on the average, *i.e.*, 40 mental points, while the average rating for the wife was likewise 36 in both groups. Regarding the method to express quantitatively the mental ability of the farmer and of his wife the above-mentioned research study is referred to. Of the two groups the former had fairly advantageous conditions while the central Finnish group had in the initial stage more disadvantageous conditions.

The magnitude recommended by Maki<sup>8</sup> in Finland was used as an indication of profitableness. This is called the *coefficient of profitableness* and is obtained from the following expression:

$$\text{Coefficient of profitableness} = \frac{\text{Net farm income}}{\text{Imputed interest} + \text{Imputed value of labour of the entrepreneur and his family}}$$

*Net farm income* is the gross 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 labour of the entrepreneur and his family.

The net farm income therefore shows how large a sum remains as remuneration for the labour of the entrepreneur and his family, and for the interest on capi-

7. "Management and Success in Farming, Part III—Influence of Individual Advisory Services," *Op.cit.*

8. *Ibid.*

tal. When the net farm income is divided by an amount which is made up of the interest claim calculated according to a normal interest rate for invested capital, and the value of the labour input of the entrepreneur and his family calculated at the normal rate for hired labour, the coefficient obtained shows whether the actual remuneration exceeds or falls below that which is considered normal.

In this instance the interest claim was calculated at a rate of five per cent.

The coefficients of profitability during the five-year period 1954-1959 are shown in Table I. When both columns are compared with each other it is seen that the level of profitability of the central Finnish group was in the initial stage considerably less than in the southern Finnish group. The improvement of profitability, *i.e.*, the development effect measured through the difference between the profitability coefficients during the last versus first year has, however, been greater for the central Finnish group.

Similar results are arrived at when the coefficients of profitability are transformed into relative index figures so that the coefficients for both groups for the first year is set at 100 and the rest of the figures are computed in relation to the basic figure.

TABLE I—COEFFICIENTS OF PROFITABILITY ON TWO STUDY FARM-GROUPS DURING THE FIVE-YEAR PERIOD 1954-55 TO 1958-59

Book-keeping Year	Southern Finnish Group		Central Finnish Group	
	Real value	Relative figure	Real value	Relative figure
1954-55	0.80	100	0.48	100
1955-56	0.84	105	0.64	133
1956-57	1.06	133	0.67	140
1957-58	0.96	120	0.83	173
1958-59	1.07	134	0.83	173

The figure series leave a clear impression that the economic improvement has been more significant for the central Finnish group, with a lower initial stage from the economic point of view. However, one can ask oneself whether the pace of improvement measured in absolute figures in the long run would follow a similar model. One can make the hypothesis that, *ceteris paribus*, the capacity of the study farms with more advantageous conditions to absorb inputs exceeds that of farms provided with less advantageous potential possibilities, for which reason the level with an optimal allocation of resources is reached later. No answer on this question could be obtained from the analysis of data for five-year period, but continued researches can assist in throwing light on the matter.

The foregoing discussion was based on the assumption that there was no difference in the average mental ability of the entrepreneurs and wives in the two groups.

In this connection, there arises, however, a question of further importance, namely, whether the farm management extension service should primarily be directed at the innovators or often at the large passive majority. One can, on the one hand, assume that the abstract nature of the farm management extension service is best received and applied by the category of innovators, whose concrete results then activate and stimulate the more passive farmers. On the other hand, one can make the hypothesis that even though the passive majority does not utilize the service to the same degree as the innovators, that is set at their disposal, the initial stage is rather much lower so that the effect becomes greater. If one furthermore assumes that the innovators are such that their mental ability helps them to make continual progress even without farm management extension service, the efforts should, according to this view, be concentrated on the passive majority.

This is without doubt an interesting field of research opening itself in order to verify empirically the correctness of the hypotheses.