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The Goals of Farmers — a Pilot Study

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A common way of analysing decision-making is to use a means-ends scheme. It is evident that it is impossible to analyse the rationality of a decision without knowing the goals of the decision maker. There are several difficulties involved in such an analysis. First, means and ends may be intertwined. Lindblom (1959) points out, in connexion with policy making, that there is no definite distinction between means and ends but that in principle there are only different policies, each having a fixed combination of the two components. Probably this situation is valid only for short-run goals. Second, the long-run goal might not be explicitly mentioned but might exist and govern the actions. There are great individual differences in the ability to formulate a particular goal and then to discuss separately how to reach it. This is especially the case for goals which concern society as a whole. Such a general goal would be to achieve a high level of living, but if that goal is taken to be paramount while the means available for reaching it are disregarded, certain difficulties arise for the decision maker (compare Merton [5]).

Among the goals discussed in the literature the relative importance of *profit maximization* in economic decisions is particularly noticeable. It does not seem, however, to be worth while to attempt to measure the influence of economic and non-economic goals for any particular action (compare Wilkening and Johnson [11]) since this problem is mainly a question of definition. Many "non-economic" goals can be redefined as economic ones. For example, "convenience in farming"—a so-called non-economic goal—can be expressed as a minimization of effort the value of which can be expressed by the utility of leisure time obtained. In principle, all farmers aim at profit maximization (Petrini [8]). This has been shown in a study of the afforestation of arable land. The farmers' decisions were studied for different resources situations: labour surplus on the farm, labour opportunities outside the farm, building space available, small land areas available, low yield level, unfavourable layout, restrictive capital

supply. The results of the afforestation decisions in these respects were compared with the normative optimum solutions according to linear programming, and it was found that the two solutions were very similar. Thus, profit maximization must be the highest goal for the farmer, since the optimum solution is based on that assumption.

It is true that in many situations there is a need for simplification in the computations and then a "feasible" solution is sought. Simon [10] stated the principle of bounded rationality in this context. The intendedly rational decision maker wants to earn a satisfactory return—not a maximum one. This was also the result reached by Katona [3] from his interviews. In a difficult economic situation there was a more pronounced demand for high and immediate returns. Otherwise, satisfactory income meant, according to Katona's interpretation, the same return as that of the preceding year or as was reached by neighbours. Other authors too have treated this aspect. One interpretation is given by Niehaus [6]. A satisfactory income is attained when it enables the entrepreneur to have a standard of living prescribed as adequate. Hague [2] stressed the importance of a comfortable and secure income.

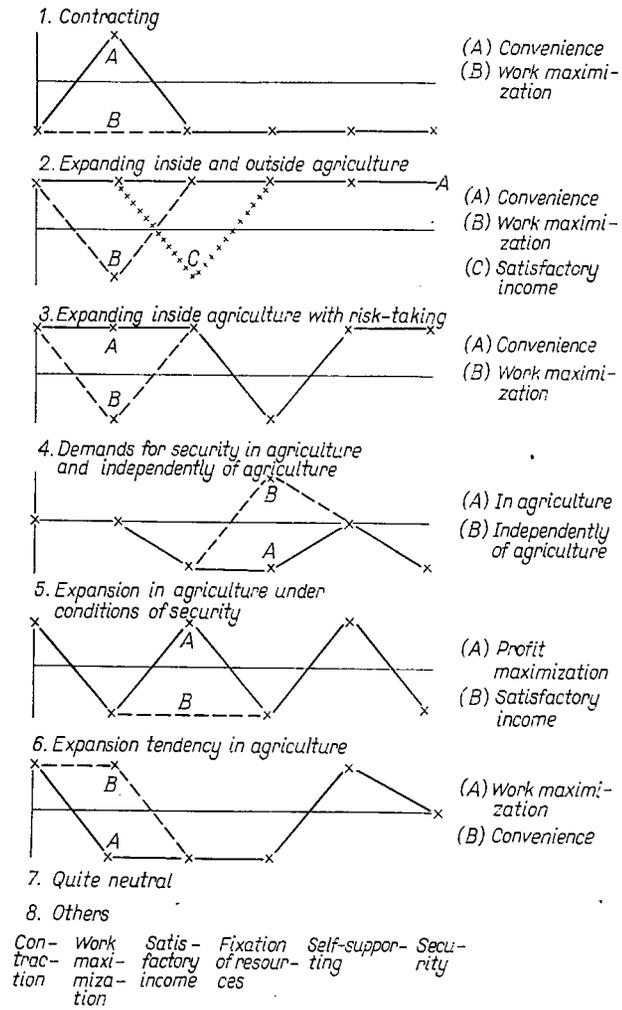
Quite another type of goal dimension is the aspiration of the farmer *to stay in farming or not*. If a farmer wants to obtain his main income and possibly also his main source of food from his own farm, certain problems and alternative solutions are not recognized, but within that frame of reference the optimum or feasible solution is sought and his behaviour is rational. This has been studied empirically (Petrini [8]). Those who emphasized maximum return for a given investment—among the goals also listed were yield maximization, leisure activities, and convenience—were all in the group where the main income and/or food was obtained from the farm.

Let us stop and check how far we have reached. Rationality can only be studied when the goals of the decision maker are known. Usually he intends to maximize his profit, but in his effort to reach that goal he makes certain simplifications. Moreover, he has other goals, such as convenience and farming as such, which restrict the range of possible solutions. It is of interest to continue the analysis with possible goal profits, i.e. constellations of goals for different individuals (Petrini [9]). The basic hypothesis of this paper is that the *goal-orientation is a variable* which varies between different farmers. The overall goals influence both the perception of the planning situation and the farmer's economic behaviour, but the sub-goals are determined by the planning situation. A goal profile has to be constructed on the basis of certain *dimensions*. Possibly the following six dimensions are relevant:

(a) to expand or to contract, with regard to acreage and/or turnover;

- (b) to reach a certain income level with minimization of the labour input (labour convenience), or without regard to the labour input;
- (c) to maximize income, or to reach a satisfactory income;

(a)	(b)	(c)	(d)	(e)	(f)
Expansion	Convenience	Profit max.	Mobility of resources	Marketing alignment	Risk-taking



- (d) to regard the labour input as a mobile resource within and outside agriculture, or to give preference to the labour input within the farm;
- (e) to depend completely on the market (production policy and purchase of service), or to depend mainly on natural economy (consumption of own production);
- (f) to take risks at profit opportunities, or to demand security.

The author made a pilot study in a Swedish province in 1966 of 54 farmers selected in such a way that if possible at least four persons were found in the same situation with respect to the goal of expansion or contraction as well as to such variables as age, farm size, education, and liquidity. Each farmer interviewed could be put in one of three categories for each goal dimension: either he was indifferent or he aimed at one of the two opposite goals along the dimension. Thus, goal profiles can be worked out according to the Figure and different patterns can be found. Hypothetically the following goal groups and the number of cases found can be stated:

Contracting:	with labour convenience	6
	with labour maximization	1
Expanding within or outside farming:		
	with labour convenience	5
	with labour maximization	4
	with satisfactory income	2
Expanding within farming, risk taker:		
	with labour convenience	3
	with labour maximization	8
Expanding within farming, security demand:		
	with income maximization	7
	with satisfactory income	—
Propensity for expansion within farming:		
	with labour maximization	5
	with labour convenience	2
Security demand:		
	within farming	6
	within or outside farming	3
Others		2
Total		<u>54</u>

Owing to the selection procedure, the frequencies can be used only for comparisons within the groups and only hypotheses can be formulated on the basis of such a small sample. Organization of the labour input towards convenience, then, seemed to be particularly pronounced in the two extreme groups, viz. the contracting farmers and the expanding ones within or outside farming. In the former case the farmers were rather old while the result from the latter case—where the farmer showed no emotional attachment to farming—was in agreement with a study by Goldstein and Eichhorn [1]. They found that rationality in terms of profitable use of a certain machine decreased, the stronger a farmer emphasized his labour input. The rational farmer found great satisfaction in extended leisure time. In the remaining expansion groups—those who wanted to expand

only within the farming sector—there was a certain preference for a high labour input as the basis for expansion.

Another hypothesis can also be formulated. The aim for profit maximization was very pronounced among those who had definite expansion tendencies. On the other hand, all those who only showed a slight propensity to expand aimed at a satisfactory level. Those who demanded security also aimed at satisfactory income levels, but this relationship was not valid in the group where expansion under security was prevalent. In this case the expansion goal dominated the demand for security.

Table 1. The Composition of the Goal Profile Groups

Goal profile	Average age	Average area, ha.	No vocational school training, %	Entirely solvent, %	Location near public road, %
Contraction					
Convenience	58	46.8	83	83	17
Work maximization	63	15.0	(100)	(0)	(100)
Expansion generally					
Convenience	43	20.4	100	80	80
Work maximization	50	19.0	75	50	75
Satisfactory income	49	14.3	50	50	50
Expansion, farming, risk-taking					
Convenience	53	38.3	100	100	67
Work maximization	46	29.8	50	50	50
Demand for security					
In farming	63	23.5	100	50	33
Independently of farming operations	51	24.2	67	100	100
Expansion, farming, security					
Profit maximization	41	26.3	71	29	29
Satisfactory income	—	—	—	—	—
Propensity to expand					
Work maximization	48	41.4	80	100	40
Convenience	35	52.3	50	100	50
Others	53	17.5	100	0	100

It is possible that the goal of market orientation does not give any further information beyond what can be found from the other five-dimensions. It seems plausible, however, to conclude that there exist a certain concentration and relationship between different goals, and it is possible that the goals of expansion—security contraction determine other goals in the profile to some extent.

The goal profile groups had rather different compositions with respect

to such situational circumstances as age, size, education, liquidity and location with regard to the proximity of public roads (Table 1). The following hypotheses may be formulated. The contracting group is heterogenous and needs further specification. It is characterized by high average age, liquidity and wide difference in farm size. Most of the farms were located at a certain distance from a public road, which may be one of the explanations to the contraction process. Those who wanted to expand within or outside farming were younger than those in the former group and cultivated smaller farms which were located close to public roads. They thus had a long planning horizon, felt obliged to expand owing to farm size, and possibly had many opportunities to commute between dwelling house and other jobs. Other expansive groups also had relatively low average ages but their farm size is larger and this is particularly true for those who showed only a propensity to expand. The last mentioned groups were only gradually building up enterprises which were already established, while the remaining expansive groups had probably not yet built up their firms sufficiently. The difference between the farmers within this remaining expansive group seems to be particularly related to the liquidity situation. Those who emphasized expansion combined with security had a lower degree of liquidity than the others. Even if differences between these groups would be expected with regard to the degree of vocational school training, the table does not show any relationships of such a type. For all expansive groups the relationship seems to hold, that the liquidity was solid when convenience was the aim. As soon as a farmer obtained such a liquidity situation that he could substitute machine for labour he aimed to do so. Possibly, those who contracted had a similar aim since even in their case it was a question of enterprise transformation. The difference between the two transforming groups in this respect was due, probably, to the fact that the contracting farmers as a rule had already built up their liquidity during the period which preceded the contraction. Those who emphasized the security demand either aimed at employment completely or partly outside the farm or wanted to stay under unchanged conditions in farming. In both these cases the average farm size was relatively small, but otherwise the sub-groups were completely different from each other. The average age was lower in the former than in the later group. In the former the location with respect to commuting opportunities was more favourable than in the other group. Also, the level of vocational school training was higher in the first group.

The conclusion from this discussion could be, then, that the planning situation is determined partly by some situational circumstances. Owing to certain overall goals in the goal hierarchy this planning situation is perceived in different ways by different farmers. Such overall goals may be contraction-expansion and particularly mobility and fixation of re-

sources. Thus both the goal profile and the situation circumstances in the planning situation influence the economic behaviour of the farmer. There remain to be demonstrated some relations between goal profile and economic behaviour.

In Table 2 this relationship is illustrated. The income variations between the goal groups are not large. In principle three conclusions may

Table 2. *The Relationship Between Goal Profile, Economic Behaviour, and Goal Achievement*

Goal profile	Average income, Sw. Kr.	Increase of capital investment, % of total	Goal achievement (absolute numbers)			Low degree of goal achievement without taking action, % of total
			high	low	total	
Contraction						
Convenience	14,833	40	4	2	6	17
Work maximization	6,500	(0)	—	1	1	(0)
Expansion generally						
Convenience	12,000	20	1	4	5	60
Work maximization	15,375	0	3	1	4	75
Satisfactory income	22,000	0	1	1	2	100
Expansion farming, risk-taking						
Convenience	10,333	33	—	3	3	33
Work maximization	15,375	38	2	6	8	50
Demand for security						
In farming	12,667	17	3	3	6	33
Independently of farming operation	19,000	0	3	—	3	33
Expansion, farming security						
Profit maximization	11,429	29	2	5	7	71
Propensity to expand						
Work maximization	16,600	40	4	1	5	20
Convenience	13,500	100	—	2	2	100
Others	13,000	0	1	1	2	50

be drawn in this context. First, the goal of satisfactory income seems to be dependent on the income level. The highest income level can be found among those who want to expand within or outside farming and who aim at satisfactory incomes. One reason for expansion among the farmers was evidently an unsatisfactory level and this explains why the profit-maximization goal was usual among those who expanded. Second, those who searched for security within or outside agriculture showed the highest income level next to the group just mentioned. They succeeded in getting well paid off-farm jobs. Third, there is a trend in the table showing that those who wanted to expand only in the farming sector under risk-taking and convenience took the risk of reaching low income levels. As has been shown in Table 1, these farmers did not operate particularly small farms. Thus, the goal structure may have a great influence on the income level

reached. An example of economic behaviour as such is the planned increase of capital investment in farming. The relationship is found in Table 2. Those who expanded within or outside agriculture were not particularly inclined to invest in farming, since they perceived a series of alternative investment opportunities outside agriculture. In these ways they would be at the same level in this respect as those who emphasized security—regardless whether this security was sought within, or independent of, the farming sector. In the security group there was a general hesitation regarding the profitability of the investments in farming, but no alternative investments were considered either. Those who were involved in a transformation process within agriculture—expansion or contraction—showed the highest figures. Those groups thus had a great need of information, and this has been observed also for the expanding group but perhaps not to the same degree for those who contract.

The greatest possibility of demonstrating the use of the goal profile is, however, the goal achievement. The degree of goal achievement determines to a high extent whether a problem is recognized or not. If there is a large gap between the achieved and the aspired level, farmers may react in at least three ways, according to Nielson [7]. They recognize that a problem exists and try to improve the situation; they quit farming and obtain employment outside agriculture; or they reduce the aspiration level. Table 2 shows the relationship between the goal profile and the goal achievement. A simple index has been constructed for the goal achievement in such a way that those persons who stated that they were far from, or relatively far from, the achievement of 20 listed sub-goals were given two marks, while one mark was given for "close or rather close" and no mark for answers which meant complete achievement. High scores thus mean a low degree of goal achievement. Among the sub-goals listed are the level of living, of the labour input on the farm, of debt percentage, of farm size and stock size, of turnover, of degree of convenience in farming, of security, and of degree of leisure time. All these sub-goals are supposed to be related to the goal profile. Table 2 shows that only those who emphasized the security demand within or outside farming had high degrees of goal achievement. Possibly, they had found stable income sources outside farming. Also, among those who were inclined to expand within the farming sector the majority had high degrees of goal achievement. On the other hand, those who wanted to expand within the farm—and this was particularly so for the risk takers—showed in principle low degrees of goal achievement. The remaining groups seemed to be in a situation in between these two cases. The following hypothetical explanation may be possible. Those who aim at security within agriculture have certain difficulties in combining this demand with satisfactory income levels and will thus reach low degrees

of goal achievement. Those who show propensity to expand are already well established and have passed the period when the aspired level was high and far from being achieved. Now the level, in principle, has been reached and is pushed upwards only gradually. Those who want to expand are, however, in the early phase of the development of their farms and have not had any chance of reaching their aspiration levels. It is possible that the risk-takers among those who expand have special economic strains—the income level might demonstrate this effect—and consequently have lower degrees of goal achievement. A more probable explanation is, however, that the risk-takers are pushing the aspiration level higher than those who aim at an expansion in combination with security.

The contracting group again offered special problems. It showed a certain level of goal achievement. The problem here, however, is that the level which was formulated earlier and partly reached during a period which was long enough to make the achievement possible, had subsequently to be modified and reduced for certain sub-goals. Those who expanded within or outside farming showed an intermediate position in goal achievement. This could be explained by two forces working in opposite directions. On the one hand, the aspiration level is high among all who expand. On the other hand there are alternatives available in order to reach the aspiration level. It is shown in the material (Table 2) that this particular expansion group showed the highest consistency among all the goal groups studied. More than any other they showed plans for the future improvement of those sub-goals which were not reached. The lowest degree of consistency—measured in this way—was shown by those who contracted. In this case there seem to be few alternative means available for carrying out the contraction.

The conclusion of my paper, then, is that there exist a profile with a hierarchy of different goals, that this goal profile varies between farmers, partly owing to different planning situations, that the overall goals in this goal profile influence the perception of this planning situation and, consequently, the farmer's economic behaviour. There is an interaction between the goal profile and the results of economic behaviour. If the farmer in the long run does not achieve his main goals he must either change his goals, his means or both.

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