ENTERPRISE BEHAVIOUR IN INDUSTRY

By

Z. Román

Institute for Industrial Economics of the Hungarian Academy of Sciences

The economics of industry and industrial enterprises — in Hungary and abroad alike — has been preoccupied for a long time at trying to find out what kind of methods and rules can be deduced — under typical circumstances — from the principles of rational economic activity.

The expansion of *empirical studies* has been a very important step towards a better understanding of reality and an increased applicability of theoretical findings. These studies have aimed at a more exact and if possible numerical examination of the facts already known or guessed from practical experience, about the process of industrial development, the kind of methods enterprises actually apply, the extent to which the principles of rational economic activity are effectively used, etc.

These examinations have emphatically confirmed the fact — otherwise well known by those familiar with practice — that also *non-economic motives* play a very important role in economic activities. This has given another stimulus to the efforts aimed at explaining actual phenomena and determining methods to be applied in economy by employing the results of other branches of science as well.

One of the most important tendencies over the past decades is indicated by the efforts, aimed on the one hand at

— the formation of a general science of rational human activity (praxeology) and the creation of the economics of greatly different non-economic activities (such as the economics of education and health) and on the other hand,

— at the integration of the results of economics and other sciences dealing with human beings and their activities (such as psychology, sociology antropology, behaviourism, organisational theory, managerial science, etc.).

On the basis of the above mentioned requirements the Institute for Industrial Economics of the Hungarian Academy of Sciences in its research work intends to lay stress upon two main points: (*i*) to reveal the facts as exact and complete as possible and (*ii*) to rely on the methods and experiences of different sciences to the possible greatest extent.

The revelation of the facts primarily requires empirical studies in the field of the economics of industrial enterprises, too. From the different kinsd of empirical studies analysing the present state of the enterprises, management methods, intentions and anticipations, attitudes, etc. which may give important informations — under our present circumstances — we consider as of primary importance the study of enterprise behaviour.

The importance of the examination of enterprise behaviour

The new system of economic guidance in Hungary has given an increased independence to enterprises and tends to influence their activities mainly by indirect methods. The success of this influencing primarily depends on the fact, whether or not we are able to well estimate the effects of the tools and measures applied, their direction, dimensions and ultimate resultant. We can only form enterprise environment, and the whole system of regulations in accordance with our objectives, if we know in advance *what the reaction of enterprises will be.*

The behaviour of enterprises is influenced by a multitude of factors such as different judgement of present and future, security and risk, individual, group-, and social interests, the divergent and changing "weight" of various economic motives and last but not least a lot of not purely economic considerations. The prediction of enterprise behaviour requires the knowledge of

— the motives determining the way of management in general and in particular situations,

— the kind of typical situations enterprises may get in,

— the kinds of behaviour of decision-making individuals and groups which can be considered as rational in various situations under the conditions of a given system of regulators,

— the extent to which the principle of rationality predominates and other factors which can have a role in enterprise decisions-making,

— the forces, backing various attitudes and motives, etc.

The concept of behaviour has widely been employed first in psychology and was adapted by economics from here. Its meaning, however, is not absolutely unambiguous. Professor LAJOS KARDOS [1] for instance in his university textbook "General Psychology" writes as follows: "It really is only a matter of agreement which term to use: action, behaviour, and attitude are more or less synonymous, their meaning is mostly in conform." As for us, we would like to categorically distinguish *actions*—taking place only once under definite circumstances from *behaviour* (attitude), which is typical, and can be identified from the common features of individual actions. That is in our opinion, behaviour manifests itself in actions and can be investigated by analysing the circumstances of actions.

The knowledge of enterprise behaviour seems to be of primary importance when predicting future enterprise actions. Ideas concerning future, anticipations and even definite intentions, can only be realized if original conditions unchanged. The knowledge of behaviour can help us just in estimating the kind of behaviour we can expect in *different* situations, under different internal and external conditions.

Enterprise behaviour also had an importance in the centrally directed economic system but for a long time it was neglected as the subject of well-based scientific examinations. When analyzing enterprise activities we started from the fact, that enterprise objectives, and — to a great extent — also the means of achieving them, were prescribed by authorities in the form of planned figures. In a system like this enterprise objectives were limited to the performance of prescriptions within a rather restricted scope of actions, allowed by obligatory planned figures. During the first years of the directive economic system we mostly assumed that enterprises and their managers were not influenced by their own aims even within this limited scope of actions, but they followed the easily identifiable interests of national economy. Nevertheless, by piling up practical experience it became more and more obvious, that enterprise interests prevailed in this system as well, sometimes in a very striking, grotesque form (bargaining on the plan, the under-planning of possibilities and obligations, etc.). First we tried to rule out this behaviour stemming from enterprise interests and qualified as negative, by widening the scope of obligatory figures and by introducing more elaborated indicators. Thus the scope of independent actions for enterprises became even more limited.

Some critical analyses of this system of economic guidance have conspiciously shown that in many cases it is rather difficult to identify the interests of national economy and these interests frequently get confronted with individual and group interests. The solution is mostly a sort of compromise. Only a few studies have been carried out dealing in detail with the conditions under which these compromises get established, but their most important types and the dangers inherent in them — a striving for loosely planned figures, a formal fulfillment of plans, holding back overfulfillment, etc. — have been disclosed. Having in mind this experience we tried to work out a new system of economic guidance in such a way as to enable to avoid these dangers. To achieve this we created a system of economic regulators to ensure the convergence of the interests of national economy and those of enterprises and to provide adequate possibilities of compromise, if a confrontation of interests takes place.

Experience gained so far suggests that the system of economic regulators is capable for functioning. However this does not mean that its original form — as introduced on 1st January 1968 — does not require an improvement in several respects. From the point of view of the modernization of the system

of economic guidance — in our opinion — it is of vital importance to more thoroughly study the behaviour of enterprises, to learn — in addition to theoretical examinations — the kind of aims they actually follow, the means they prefer, the way as managerial decisions are made, the role of individual decision-making motives, etc.

An empirical study of enterprise behaviour can be carried out in *several ways*, as for instance.

— by preparing detailed case-studies, which attempt to explore decision-making processes and the main factors determining them,

— by collecting and (econometrically) analyzing statistical data characteristic to the outcome and the determining factors of a great number of similar decisions,

— by analyzing the interconnections of more general data (as for instance profits and investments) characteristic to enterprise behaviour,

— by a direct or indirect inquiry into the motives of managerial decisions, most characteristic to the behaviour of individual enterprises.

Our examination presented below is based on the latter method. Taking into consideration that it was carried out at the initial stage of research, and with a limited program, our questions could only touch upon a few aspects of enterprise behaviour. Nevertheless the publication of results, together with all reservations, seems to be reasonable, since, stimulating dispute, control and completion, it may provide a certain basis for future research of this kind.

The method applied

A number of methods are available to empirically study enterprise activities. They range from interviews with individuals and groups, questionnaires, and detailed case-studies to an econometric analysis of statistical data. The aim and method of examination are interconnected; a given aim can only be reached by definite means, and applying certain methods limits the character of questions which will be reliably answered.

Foreign experiences are rather limited from the point of view of this examination. While surveys of enterprise expectations and intentions, and the prediction of enterprise behaviour based on this have a past of several decades, business tendency surveys are widely made in several countries at regular — monthly or three-monthly — intervals, the number of empirical studies dealing with the internal situation of enterprises, and their behaviour, as far as we know, is relatively small.[1]

[1] A short review about these types of investigations can be found in the Review of Industrial Economics No. 6. (pp. 11—12) of the Institute for Industrial Economics of the Hungarian Academy of Sciences. The review also contains the detailed results of the examinations concerned.

We set as an aim of our study to receive *the most reliable answers* and *to burden enterprises as little as possible.*

The first requirement — the reliability of answers — obviously demanded anonymousity. To meet the second requirement it was necessary to only ask questions which could be answered directly, *without any additional work* (collection of data, etc.).

Finally, to achieve the third objective — in accordance with our research hypothesis that enterprise behaviour is determined by the attitudes of decision-making managers, it is a resultant of individuals' behaviour — we asked for an (individual and anonymous) answer not from enterprises as a whole, but *from their managers.*

This way our aims determined the main characteristics of applicable methods which in turn determined the types of questions we could ask and the way of evaluating the answers obtained. The inquiry was based on a questionnaire containing 30 questions with pre-coded answers. The majority of the questions required a qualitative answer (yes—no; smaller—same—bigger; ranking) and the answering of only 5 questions needed the estimation of a percentage share.

The questions asked — deliberately limited in number — were related to three main subjects: the judgement of enterprise activities during 1968, the enterprise's situation in the same year, and the characteristics of enterprise behaviour.

A few questions referred to the status and age of those questioned and to the branch of industry the enterprise was belonging to, but in such a *concise form* that no conclusion be allowed concerning the person of those giving the answer.

The survey covered only manufacturing industries (i.e. coal mining and electric energy industry were not examined) and primarily the *bigger enterprises.* 268 questionnaires were returned altogether, from approximately 60—70 enterprises (the method applied does not allow to exactly establish the number of enterprises). The results have been analysed also by 4 branches, 3 spheres of activities and 2 age-groups and a further group also was formed: "enterprises without competitors" i.e. where managers felt the presence of neither home, nor foreign competitors. However, a combined examination of these groups did not seem reasonable, due to the relatively low level of representation.

As concerning the reliability of the results, answers given to questions of different types require a different way of judgment. Since in the position and anticipations of the enterprises at a given point of time there may be essential differences from this point of view the sample can not be considered as characteristic to the 4 branches separately investigated, but only for manufacturing industry as a whole. The results relating to enterprise behaviour

seem to be relatively reliable even from this point of view — among others because of the frequent coincidence shown by the answers.

The survey was carried out in September and October, 1968, and for this reason the answers reflected the opinions concerning the nine months' period following the introduction of the new system of economic guidance. Aside from this, answers were influenced by at least four other factors:

1. the interpretation of the question,
2. the information available for giving an answer,
3. a subconscious bias and
4. a possible deliberate modification of answers.

The role of these factors with the various groups of questions is different, and their effects can not be entirely eliminated even by the use of more sophisticated methods.

When judging and interpreting answers we tried to possibly separate these factors. Unfortunately, we did not succeed — and could not succeed — in each case. It can be presumed that among the factors influencing the answers the objective knowledge and former experience of managers played a decisive role. However to prove this is subject to further research.

Every program of such surveys is obviously the *result of compromises* — we can not simultaneously reach a diversity of aims. Anonymous answers, pre-coding, asking about individual and not enterprise opinions, etc. equally have advantageous and disadvantageous sides. (In the present case anonymousity was the factor which primarily demanded to give up a number of — otherwise obvious — analytical possibilities.)

The different methods of examination — case-study, detailed interviews with individuals and shorter ones with groups, etc. — and different programs mutually complete each other and from this point of view this survey can only be considered as an element of a large-scale study.

Enterprise objectives

One of the most important — if not basical — determinants of enterprise behaviour is the kind of aims it follows. Several tests are known from the literature of capitalist countries, in which this question was asked from managers. Since answers have generally reflected a multitude of enterprise objectives, a *ranking of objectives* had to be asked for. A French survey for example resulted in the answers, shown in the Table 1.[2]

[2] The survey embracing 400 enterprises was made by the French Productivity Centre in 1964. Its publication is under press.

Table 2

Objectives	The per cent of enterprises putting the indicated objective		
	to the 1. place	to the 2. place	on the 1. and 2. place together
Increasing production, i.e. sales volume	30	17	47
Increasing profits	14	14	28
Maintaining position within industrial branch	26	12	38
Gaining new markets	9	21	30
Employment	12	23	35
Others	9	13	22

This survey also contained a question concerning the means enterprises intend to rely on to reach their aims. The "*means*" indicated below were ranked as of primary and secondary importance according to the proportions as follows:

expanding productive capacity	38 per cent
raising the technical parameters of products	37 per cent
reducing production costs	31 per cent
increasing productivity	25 per cent
penetrating into competitors' markets	25 per cent
gaining new consumers by market-research	23 per cent
widening the range of products	10 per cent

Answers may naturally disguise or palliate actual situation, but it is remarkable that tests of this type, almost without exception, had the result, that enterprises follow a *great variety* of objectives, and not always profit takes the first place among them.[4]

There is a strong emphasis on the word "direct" because many of the aims overlap and are in connection with profits. According to the French survey for instance, the increase of production or that of realization or the keeping and strenghtening of market position are obviously directed to the assurance and increase of profits.

Disputing the role of profits as a *direct* objective absolutely does not mean stating that profit is not the *final* goal in capitalist economy. We steadily refuse the ideas, which — referring among others to such empirical results — try to prove the change of the most essential characteristics of capitalist economy. However it seems obvious that the strive for profits in capitalist enterprises can succeed through very complicated "transmissions" and this is why

[4] According to a test [2] made by James K. DENT in the USA, for instance, 36 per cent of interviewed managers put profit-increase to the first place, 52 per cent of them to the first three places.

many elements of the activities of capitalist enterprises require a more sophisticated explanation.

It is worth while to mention here the scientific school, which explains enterprise activities and decisions not by a simple theoretical deduction of interrelationships, but by relying on empirical observations, organizational and behavioural sciences. This school questions the traditional-marginalist theory of firm starting from the point that its basic assumptions, e.g. that of a perfect competition, are unacceptable. Its representatives (as for instance Herbert A. Simon, Richard M. Cyert, James G. March) dispute that the only aim of (capitalist) enterprise is to achieve maximum profits and, what is more, they frequently question even that enterprises strive for a maximization, instead of more modest *expectations*. This "school" has naturally won not only followers but definite opponents[5] as well, and it really appears that so far they have reached more in criticizing former theories than in developing and verifying their own.

The importance of these debates is further increased by the fact, that our new system of economic guidance sets profits in the centre of enterprise activities. Taking this as a starting point, several attempts have recently been made by using the tool of deduction to explain actual enterprise actions and to set up standards for future enterprise activities with various formulations of the enterprise's *objective function*. We have no doubt that in certain cases this allows to establish some useful rules, but the course of events in reality is much more complicated and to learn them requires empirical studies.

Detailed empirical studies concerning the aims governing the managers of socialist enterprises require a thorough preparatory work both in respect of hypotheses and the elaboration of the methods of research. As the first step we set up a much more modest aim. We only asked the question, that when setting the enterprise's production program, what is the role (the weight) of the indicated motives in *decision-making* in forming the respondent's choice and in the actual enterprise decisions. We know of course that answers of this kind are predominated by a subjective judgement, and the way of asking these questions has in itself an influencing effect. At the same time this type of drafting the question has the advantage of being more concrete, and can be answered more easily than if inquired about enterprise objectives in general; furthermore not a ranking, but a more strict weighting is required, with an added distinction between own standpoint and actual enterprise decisions.

The weights of the indicated factors (as percentage ratios) at the *actual* decisions concerning the production program were as follows:

[5] Some speak about different "approaches" and try to reconcile different theories this way. See for instance Fritz Machlup's article [3].

increasing the volume of profits	27 per cent
increasing per capita profits	12 per cent
increasing production volume	14 per cent
satisfying demands	23 per cent
utilization of capacities	15 per cent
assuring employment	7 per cent
others	2 per cent

In the case of this question a reliable answer, based on objective evidences, can only be obtained by means of long and complicated investigations and it is not impossible, that even managers themselves fail to properly judge the weight, indicated motives are having in their decisions. It also must be taken into consideration that individual motives overlap (for instance the increase of production promotes the increase of profits), and they get confronted only in a few particular cases.[6]

Nevertheless, the weights attributed to the factors mentioned do not fail to indicate that which factors and to what extent may get a primary role in decision-making. (It is worth mentioning otherwise, that the weights, characterising the respondents' attitude, did not essentially differ from the weights concerning actual enterprise decisions.)

Determining the production programme is of course only one of the fields of decision-making, and *it would be too early to form a general opinion* on this basis about the motives of enterprise decisions.

Nevertheless, it seems to be an important circumstance that

(*i*) the increasing of production is no more a primary aim of our enterprises, and

(*ii*) the increasing of profits, although the most important factor by making decisions, is not an absolutely predominant factor.

The experiences of our investigation — despite its problems — have confirmed our opinion, that enterprise behaviour is likely to be over-simplified by the models and theories trying to limit the explanation of main enterprise decisions to the striving for increased profits (or to per capita profits, share fund, etc.). Taking into consideration that the "weights" of the enterprise's objectives are undoubtedly influenced by the level of being satisfied at the moment, it seems reasonable to ask the questions several times, in different situations, and to carry out a more thorough-going analysis. At the time of our survey, in the autumn of 1968, the majority of our enterprises were expecting to reach the planned volume of profits and in many cases they were afraid of that the level of profits would be too high.

A further research could be started to establish the weight, profit motive should preferably get, furthermore whether or not we have to or may strive

[6] In case of a definite confrontation of motives we intend to analyse the behaviour by special "conflict" tests.

for giving a greater role to profits (if the dimensions of this role can be determined at all). Another question, still left unanswered is, that whether or not enterprises can be blamed for asserting their profit-interests to only a limited extent, or they are not to be expected, or may not be expected to do so? Naturally, almost all of the other ambitions (the increase of production, the utilization of capacities, etc.) help indirectly — in the long run or for shorter term — to ensure or to increase profits. However, these objectives may be more or less independent, and what is more, they may even get confronted with profit motive. In particular cases, especially when *a certain satisfaction of profit requirements has already been achieved*, other aims may be preferred to increasing profits. Results of recent research work using organisational and behavioural science approach seems to support this supposition and if further investigations justify it *under our circumstances* as well, important conclusions may be drawn from it also concerning the further development of our economic system.

A surprising result of the present survey is the similarity in the judgement of decision motives in different industrial branches. If we only wish to mention the most significant deviations, there is hardly anything to stress. (For instance the satisfaction of demands plays a greater role than the average in food industry, the exploitation of capacity and the assurance of employment have a relatively smaller role in chemical industry.) A further, interesting investigation could be from this point of view to analyse the character of individual branches and to compare reasonable deviations with existing ones.

Answers also show a relatively unsignificant deviation, if examined according to the spheres of activity (general directors, technical directors, economic directors) and age groups,[7] and this repeatedly confirms the fact that our managers have a rather firm and unanimous idea about enterprise objectives. (This of course does not exclude the case that this picture does not — or it does, but unexactly — correspond to reality.) The judgement of the weight of particular motives — as already mentioned — also shows only a slight difference, if compared the individual attitudes and actual enterprise decisions. As for the latter aspect, we may draw some cautious conclusions from smaller differences, as for instance:

— in the opinion of economic management their standpoint concerning the increase of per capita profits does not satisfactorily prevail, while a greater attention than desirable is paid to the increase of production or to the satisfaction of demands,

— the answers of sales management allow the conclusion, that the satisfaction of demands in their opinion — lags behind the desirable level, while the exploitation of capacities is over-emphasized.

[7] Answers given by the managers of enterprises having no competitor, do not show a deviation, either.

A few other characteristics of enterprise behaviour

We would like to deal with three more groups of questions, which may be of primary importance for the further study of enterprise behaviour. They are as follows: the competitive position of enterprises, investment decisions, questions of development.

The competitive position of enterprises

One of the most important external factors essentially influencing enterprise behaviour is competitive situation. Two questions were asked in this relation: whether or not competitors'activities can be felt, and if so, to what extent from the point of view of prices, quality and assortment and delivery terms.

The major part of the managers questioned had the opinion that their company was having — a possible — competitor, but many of them did not feel the presence of even potential competitors. 38 per cent of those interviewed indicated the absence of domestic, 46 per cent that of foreign competitors, and 21 per cent indicated a total absence of competition. (These latter ones provide the group of "companies without competitors".) Among individual branches machine industries were prominent with a smaller proportion of domestic and a greater proportion of import competitors (corresponding data for machine industry are: 61—33—33 per cent).

Answers concerning competitive position were nearly the same also if examined according to the age-groups of those questioned, but the comparison according to the spheres of activity showed some deviation. (Certain differences, since questions referred to potential competitors, are acceptable.) General managers for instance considered more competitors than "other" categories (corresponding data are: 34—30—13 per cent).

The competition is, however, — according to the picture gained from answers — rarely strong. This is also due to the fact, that at the time of the survey demand was in many cases considered to exceed even the *possibilities* of production (as shown by the answers given to another question), and this in turn might give rise to the appearance, that not even the sales of *extra* output would be limited by competition.

According to the answers, regarding the intensity of competition 12 per cent of those answering indicated a strong domestic competition, 17 per cent a strong foreign competition, and 40 i.e. 46 per cent did not feel any competition at all. (Answers given to the former question indicated the presence of *potential* competitors as in 62 and 54 per cent of the cases a part of which obviously did not mean an actual competition.) Strong domestic competition was mainly reported in prices, import competition primarily in quality and assortment.

While domestic competition in the machine industries, particularly in a stronger form, was far below the average, import competition was indicated to highly exceed it. The effects of both domestic and import competition were felt stronger than average by managers in the textile and apparel industries. When calculating the group averages of answers, concerning domestic and external competition in the aggregate according to the spheres of activity both regarding competition as a whole and its individual elements (price, quality-assertment and delivery terms) it came to light that the existence of competition was primarily felt by directors. As for the deviation by age groups the presence of competition was to some extent more frequently indicated by older managers (both regarding delivery terms, and competition, as a whole).

A similar question was also involved in the French survey, already noted. According to the answers obtained in France (in 1964) 26 per cent of French enterprises experienced strong, 60 per cent strong or medium competition and those not having been pressured by any competition, comprised a total of only 28 per cent. In the view of different conditions these data can only be compared with Hungarian ones with great caution, but in any case they reflect a much stronger competition (which must have been further increased since then, in the frame of the Common Market).

In our programme we also requested for an estimation of the ratios, by which 1968 year profits could be attributed to the change in production costs, and other factors. The managers questioned attributed only as much as 1/5 of expected profit change to the change in production costs and almost 1/3 to the change in prices, 1/4 to the change in production volume and nearly 1/5 to the modification of product-mix. The modest role of reducing production costs is also backed by statistical data indicating a rather moderate increase of productivity and by other analyses published since then. The market conditions of 1968 obviously played an important role in this and it is of fundamental importance to establish demand and supply conditions, more intensively forcing to increase productivity and technical development, and to reduce production costs.

Investment decisions

It is well known that the majority of investments simultaneously serve several aims and for this reason it is difficult to *exactly* determine — by even sophisticated calculations — their distribution among different objectives.

In the course of our survey — like in the case of decisions on production programme — we asked for estimating the weight of motives that play a role at making decisions on productive investments. Based on the aggregate of answers the order of importance of the factors indicated are as follows:

increasing production volume	(36 per cent)
reducing production costs	(30 per cent)
introduction of new products	(25 per cent)
others	(9 per cent)

The numbers quoted in brackets are relating to actual enterprise decisions while estimates concerning personal attitudes were asked as well. The small differences in the answers given to the two kinds of questions dimly show that the questioned persons had the feeling that the reduction of production costs should have played a somewhat greater and the increase of production volume a somewhat smaller role.[8]

Results of a similar survey, made in the FRG in 1960 are also known [4]. This survey investigated not the motives of investment decisions, but the primary objectives of investments already completed. These two are not entirely the same, consequently an exact comparison is impossible; the picture is otherwise similar to the one obtained by us. The proportion of investments aimed at the expansion of capacities (i.e. production) is 37 per cent according to the German survey, that of the investments aimed at reducing production costs 23 per cent, the ratio of investments for product-development is 15 per cent; 12 per cent of all investments is intended to level off labour shortage or work-time reduction and 15 per cent serves replacement purposes.

From the point of view of actual decisions our survey showed only minor differences among individual branches (mostly due to branch-character): the weight attributed to increasing production was 32—37, that of reducing production costs was 27—34 and the one of introducing new products was 18—30 per cent (food industry, chemical industry). Considering personal attitudes deviation is greater: the motive of increasing production had a weight of 27—38 per cent (textile, and apparel—food industry) that of reducing of production costs was put between 29—37 per cent (chemical industry—building material industry) and the figure attributed to introducing new products was 16—31 per cent (food industry—chemical industry). As a result it can be established that answers concerning decision motives, if examined by branches, show a more significant difference between individual and enterprise attitudes than in the aggregate.

The role of economic and non-economic factors in decision-making is one of the major problems of enterprise behaviour. Our questions regarding the frequency and role of calculating economic efficiency helped to throw some light upon this problem. However, answering this question requires a more complex and detailed study. The frequency of calculating economic efficiency also depends to a certain extent on the level of management. We say "to a

[8] The two pairs of data relating to personal attitudes and actual decisions are: 33—30 and 34—36 per cent.

certain extent", since we have to presume, that the frequency of such calculations is also influenced by the role, enterprises are assuming them to actually have. Furthermore, to establish the methods of economic efficiency calculations, adjusted to the present system of income regulation in Hungary probably needs a longer period. It is known that under the "former mechanism" enterprises were obliged to execute a lot of efficiency calculations, destined to back the decisions of authoritative organizations. The interests of national economy and those of enterprises got confronted in these calculations; and being prepared now for exclusively own purposes they are having a totally different content.

Our survey shows that in the opinion of those questioned decisions concerning production program are in 65 and those on investments in 73 per cent based on economic efficiency calculations. The first group of decisions calculations have a dominating role in 56 per cent of cases, and as regarding the second one in 67 per cent. (If combining the noted figures we can get the result that 36 per cent of all decisions regarding production program, and 49 per cent of all decisions on investment are based on economic efficiency calculations.) It is probable, however, that when making more important decisions efficiency calculations are more frequently applied. Nevertheless, we have no sufficient basis to presume that in these cases calculations also have a greater role. Only more detailed case-studies will enable us to answer this question. If examined according to branches, the highest frequency and the greatest role of calculations is characteristic to textile and apparel industry, while the lowest figures are shown by machine industry.

As a result it can be stated that the role of economic efficiency calculations is much smaller in practice, than presumed by theoretical works. Results of similar foreign studies point out this fact as well, establishing at the same time that in most cases enterprises only apply the simplest methods. This was emphasized in the above quoted work of Thomas Oursin, too (based on the examination of 49 enterprises in machine industry), and a similar picture was drawn by a survey — even concerning American enterprises — reported in 1965 at the conference of the Industrial Development Centre of the UN (its present name is UNIDO) in Prague [5]

The problems of development

Problems of development were touched upon by our survey at several points. Two extremely important elements determining enterprise behaviour are the estimation of present and future requirements and the assumption of risk. As concerning them we only asked two simple questions. Answers show a surprisingly high satisfaction; the existence of a stronger competition would certainly prove that there is no sufficient reason for feeling so.

According to the answers, preparing for future was considered to be satisfactory by 83 per cent of those questioned, 3 per cent of them considered it to be exaggerated and 14 per cent to be unsatisfactory. Individual branches showed a considerable difference concerning this question, those on the extreme were machine industries, where 30 per cent, and food industry, where 2 per cent of those questioned considered the activities, aimed at preparing for future, as insufficient. This is mainly due to the different character of the two branches, whith particular attention to the speed of product change.

The differences in status did not results in any remarkable deviation of answers; the proportion of the the "satisfied" was between 78 and 89 per cent. In the older age group the proportion of those giving a negative answer was somewhat higher (18 per cent, as against 13). The 15 per cent, which pointed out the preparation for future to be unsatisfactory, mentioned as its primary reason the shortage of resources, and "short-term" thinking, and as its secondary reason the resistance to take risks and the absence of competition.

The acceptance of risks was considered as satisfactory by 88 per cent, while the rest (12 per cent) was equally distributed between those thinking it to be exaggerated, and those thinking it to be unsatisfactory. Examining by groups did not show any remarkable deviation. The considerably high satisfaction over the readiness to take risks urges to exactly clear up the problem of risks from the point of view of our enterprises. This may be followed then by examining the desirable level of taking risks, and the establishment of that whether or not this level is reached by enterprises.

The picture we gained concerning development concepts and long-range planning appears to be too favourable, and this question requires further investigation. According to the information, given by the managers questioned 96 per cent of enterprises had a development concept in the form of written documents. This ratio is certainly lower in reality and it is also probable that in many cases these concepts are not properly elaborated or sometimes they are obsolete. Due to the above ratio we have only received a few answers relating to the reason of the lack of written development concepts. These answers mentioned that the concept was just being prepared, or "they had no time to commence the work", "the management does not feel it necessary", or "other reasons" were indicated.

According to the answers given, 91 per cent of enterprises had a 3 *year-plan*, and 65 per cent of them 5—8 *year plans*. A lack of 3 year plan is primarily indicated (19 per cent) by managers in textile, and apparel industry. The existence of 5—8 year plans is more frequent in food industry (while textile and apparel industry show a ratio under the average, approximately 50 per cent).

As concerning the contents of plans, 3 year plans (with only a few exceptions) include the volume of production, in approximately an equal

proportion (80 per cent) product-, technology- and plant development, — and nearly in 50 per cent of cases labour. As for the contents of 5—8 year plans, production targets take the first place, with plant development closely behind it, targets of product- and technology development is made by 60 per cent, and labour supply in 40. The analysis of answers relating to the contents of plans according to the sphere of activity of those questioned also reflects to a certain extent that the planning of which technical — economic process is considered to be important by particular groups of managers. It is characteristic for instance that in three year plans a higher proportion is attributed to the planning of product technology- and plant development by technical, than by economic management. (As for 5—8 year plans, answers do not show such essential differences.)

Corresponding data from surveys abroad can also be quoted here. A survey made by the RKW [6] in 1963 shows that planning in FRG is considerably more frequent with big enterprises, than with smaller ones (primarily concerning plans for more than one year) but even in the first category planning is much less frequent, than with Hungarian enterprises of similar size. According to this test bigger German enterprises (with a number of employees above 1000) in 1963 prepared a production and sales plan in 50 per cent, investment plan in 70 per cent, but in only less than 20 per cent of the cases planning periods exceeded 3, and in 10 per cent 5 years. A more detailed survey made by the IFO-Institut in 1965 [7], shows a more favourable picture. According to its results overall plans were prepared by 60 per cent of enterprises with more than 1000 employees, while strategic plans were made by 80 per cent of them (this type of plan more or less corresponds to that what we call development concept, but generally for a shorter period) 25—30 per cent of plans exceeded 3 years.

The questions raised in this article, especially their last group, can be analysed more thoroughly if also other methods of empirical studies applied. The method of our survey was destined to be an experiment and we consider its results as hypotheses that are due to further control and research. At present we work on a research project in which different methods mutually complete and help each other in a complex revealing of "enterprise reality", contributing by this to draw up a business management corresponding to our new system of economic guidance.

REFERENCES

1. KARDOS, L.: Általános lélektan (General psychology), Budapest, 1965. p. 263.
2. DENT, J. K.: Organisational correlates of the goals of business management. Personal Psychology *12*, 365—393, 1959.
3. MACHLUP, F.: Theories of the firm: Marginalist, behavioral, managerial. American Economic Review, March 1967.

4. OURSIN, T.: Probleme industrieller Investitionsentscheidungen. Ergebnisse schriftlicher und mündlicher Befragungen des IFO-Institutes für Wirtschaftsforschung. Berlin—München, 1962. p. 65.
5. Evaluation of idustrial projects. UN New York, 198—228 (1968).
6. Rechnungswesen. Organisation und Planung im Unternehmen. RKW. 1965.
7. BEMERL, R., BONHOEFFER, F. O., STRIGEL, W.: Wie plant die Industrie. Wirtschaftskonjunktur, April 1966.