

## HUMAN BEHAVIOUR IN ECONOMIC THEORY. IMPLICATIONS FOR MANAGEMENT

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### Abstract

Whereas the study of human behavior has an old history, the interest for the economic behavior of the individual is much more recent. This behavior represents a key point of the economic theory and for this reason it consists the starting points of the economic theory are the presuppositions regarding human behavior. Unfortunately this foundation is not so strong and stable as it is needed. There are numerous arguments against the axioms of rational and maximizing behavior proposed by the orthodox economic theory, neoclassical.

The criticism is both theoretic, Nelson and Winter introduce the concepts of ability and routine as important determinants of behavior whereas Herbert Simon defines bounded rationality as a substitute for perfect rationality, and empirical, Kahneman and Tversky propose relevant experiments in the area of rationality.

The implications of the theories regarding individuals' economic behavior on management are numerous and important at all levels of management functions: planning, organizing, coordinating, controlling.

### I. Introduction

The economic theory deals with the functioning of the economy both at the micro and macro level. The development degree and the complexity of the analytical toolbox in this area are impressive. But behind the economic laws, equations and models stands the human individual. The economic behaviour of the individual represents the key of the entire picture. This is why the starting point of the entire economic theory is defined by presuppositions regarding human behaviour. Unfortunately this foundation is not as strong and stable as it seems at first sight. Herbert Simon<sup>1</sup> says about this issue that we don't have data about how human beings build their expectations and act. This is essential for testing the theories' hypothesis: supply side, rational expectations, monetarists and keynesians. According to Simon this is the main conflicting area between different economic schools but has a strategic place in the structure of economic theory.

The subject is both important and actual. The issues are very diverse. Is the individuals' behaviour rational and maximizing? Is he perfectly informed? Can we consider his needs as exogenous variables, or we have to take into account their social conditioning? On these answers depends both the understanding of the economic phenomena and the efficacy of economic policies.

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<sup>1</sup> Laureate of Nobel prize for economy in 1978 "for his pioneering research into the decision-making process within economic organizations", [www.nobel.com](http://www.nobel.com)

In the second part we present the human behaviour during the history from ancient time to the beginning of economics as a science and the connections of economic theories with individuals' behaviour.

The second part highlights the controversies regarding economic behaviour between contemporary economic schools.

In the fourth part are presented the main functions of management in modern organization.

The fifth part is devoted to the analyzes of the implications of rejecting the maximization and rationality postulates on management

Conclusions are drawn in the sixth part.

## II. Human behaviour in phylosophical writings and economic theory

The understanding of human behaviour was of a constant interest for man since he became aware of himself. Why do we behave the way we do? What actions are good, moral, and which should be avoided? These are questions, along with many others, which come again and again, the answer being the key for the basic question "Why do we are?"

We start with the first major European civilization in Antiquity<sup>2</sup>, the Greek one. Their phylosophers tried to undertand the human soul in order to understand the good, the beauty, and the value of human life. It is interesting to see that none of the Greek phylosophers are interested in goods consuming and accumulation.

For instance Democritus, give a greater value to liberty than to satisfaction due to material goods. In his opinion poverty in a democracy is prefferable to prosperity under a despot as much as the liberty is preferable to serfdome. Utility is relative and subjective, like value, depending on place, time and person. He says that satisfaction has its source inside man and, in order to get it, moderation is essential.

Another great phylosopher of Antiquity war Aristotle, whose work have influenced mankind for over a millennium. Even if Aristotle wasn't specifically interested in economic behaviour he makes many references to subjects studied today by economics.<sup>3</sup> He talks about propriety, money and what he names the art of acquisition. His approach is normative, establishing what is good and correct and what is not. Aristotle makes for the first time the distinction between usage and exchange. The right way to use a good is for satisfying needs that are natural to man and not for money gains that are unnatural. He makes the difference between natural needs that are limited and unnatural needs that are unlimited.

In Middle Age, the conception about economic behaviour was influenced by the Church, its ideas about good and truth. The approach was strongly normative. The behaviour was limited by the fear of sin – thoughts and actions forbidden by moral principles and dogma. The thinking was mystical; the faith in a given faith was predominating. The posesion of many goods, the wealth exceeding the the current needs of people, the desire to have more were discouraged. Charity was a promoted value.

The end of Middle Age brings a relaxation of restrictions on behaviour. A sign of this change was the decline of charity and the pursuing of material gain.<sup>4</sup> Renaissance brings in

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<sup>2</sup> We present only societies from Europe, the place where economic theory has developed.

<sup>3</sup> The word economy has a Greek origin and means "management of household".

<sup>4</sup> This problem of charity is important because suggest the dominant values of the period and the way the motivational sturcture order the economic life.

front the rationality, the idea that man is the master of his destiny and of nature. The rigid system of Guilds was gradually replaced by a competitive system where every individual acts on his own for survival. Self interest and rationality used for attaining it define, in this context, the concept of individual.

The XVI and XVII centuries marks the end of Middle Age and of an entire thinking system and of a way of life. Are formulated the first economic theories that try to explain the new phenomena.

Hobbes says that man is, in natural state, selfish and agresive. At the same time, according to Turgot the individual is the best judge of his own interest. Economic individualism, based on a conception of rationality of people became a model used in economic theories. Real people are converted, through a process of abstractization, in "homo economicus". It is due to the work of classical economists Smith, Ricardo, Say and Mill, who have built on this foundation a sound economic theory.

The one who defined the concept of "homo economicus" was Jeremy Bentham who said that nature put man under two masters, the pleasure and the pain, who determine all of our actions. Pleasure and pain can, in his opinion, be arranged in order according to their value, value that can be estimated through some "dimensions": intensity, duration, certainty or uncertainty, the distance in time of a pleasure or of a pain. On this basis he developed a rational, utilitarist model of decision making. After a "felicific" calculus the individual can compare the pleasure and pain involved by different options and to decide which one offers the greatest satisfaction. This idea represents a first draft of the model of the rational and maximizing individuals from the XX-th century economic theory.

This conception was often criticised both from a theoretical and empirical perspective. Thorstein Veblen, one of the main critics, proposed an evolutionary theory to characterize the economic development in terms of cause and effect, based on an economic actor that is constantly changing in terms of knowledge and habits of thought.

### III. Individuals' behaviour in contemporary economic theories

There isn't a general accepted opinion regarding human behaviour in economic theory. The basic disagreement oppose the mainstream, neoclassical economists who accept and support the utility of the Postulate of the rational and maximizing behaviour and the economists who dispute more or less the realism and implications of this Postulate.

The axioms which define this behaviour are:

1. For every individual A and any options x and y, is true one and only one of the following three statements: A prefers x for y, A prefers y for x, A is indifferent between x and y
2. The preferences of A between alternatives are transitive
3. A tries to maximize his utility, where utility of an option x is bigger than the utility of an option y if and only if A prefers x for y. The utilities of two options are equal if and only if A is indifferent between them.
4. If option x consists in getting the bundle of goods x', and option y in getting the bundle of goods y', and y' contains a quantity at least as big of every good as x', and at least for one good a bigger quantity, then all agents will prefer y for x.
5. Marginal utility of a good x for an agent A is a decreasing function of quantity x which A dispose.
6. The behaviour of any agent A is maximising, the consumer maximizes his utility through consumption of goods, and the producer maximizes his profit.

These axioms reflect a behaviour that is perfectly rational and maximizing. The individual (“homo economicus”) is an abstractization of the real individual, abstractization which doesn’t influence the theoretical conclusions.

The critics of this model are very strong and are sustained by the results of other sciences: psychology, sociology, and biology.

A strong critic, of the idea that individuals are rational and maximizing, comes from Thorstein Veblen, the first representative of economic Institutionalism. Veblen made a difference between instrumental (industrial) behaviour and ceremonial (ritual) behaviour. At the same time he identified an evolutionary component and a path dependency of behaviour. Veblen rejects the hypothesis of the given individual, with exogeneous preferences who passively adapt the environmental constraints. Although he accept the idea that economic theory presuppositions cannot be entirely realistic, he considers that neoclassical theory is inadequate. In fact Veblen tries to internalize the preferences of the agents. Even Joseph Stiglitz, a representative of neoclassical economics admits that some aspects of human nature are endogeneous to the system and that traditional economic theory was wrong treating the individuals as unchanging.

After the Second World War both the psychologists and economists tried to explain the mechanism of decisions. Their efforts were fruitful, leading to what was named “cognitive revolution”. One of the most prominent economists of this school was Herbert Simon. His critic toward neoclassical theory starts from the individuals’ behaviour<sup>5</sup>:

- there are many difficulties in gathering information necessary for decision making, to generate all the possible alternatives;
- different alternatives are difficult to analyze and compare because of limited capacity of human brain;
- it is difficult to know our own preferences.
- the individual hasn’t a consistent utility function – the needs and values of the individual changes in time and are influenced by the environment;

Keneth Arrow proposes a similar explanation<sup>6</sup>. Neoclassical theory is wrong when it consider that all the variables relevant to decision making are permanently on the decisional agenda. Arrow distinguishes between 3 decisional areas: active, monitorized and passive. The way the problems are distributed between these three areas depends on the relative gains and costs corresponding to each decision.

Reality offers permanently examples of situations when one or more of the axioms of rational and maximizing behaviour fail. The researches of psychologists show the lack of consistency in human behaviour. An example is offered by Kahneman and Tversky. They have interviewed a number of subjects<sup>7</sup> with the following problem<sup>8</sup>:

“Assume that you have decided to see a play at the theatre where the price of the ticket is 10\$. When you enter the theatre you realize that you have lost the ticket. Would you pay 10\$ for another ticket? (Responses - Yes = 46%, No = 54%).”[Kahneman & Tversky, 1984]

<sup>5</sup> Herbert Simon, *Information processing in computer and man, Economics, Bounded rationality and the Cognitive revolution*, Ed. Edwards Elgar, 1992

<sup>6</sup> Arrow Keneth, *The limits of organization*, W.W. Norton & Company New York, 1974

<sup>7</sup> The studies made by Tversky and Kahneman, are based on surveys on samples of about 100 subjects. In brackets are presented the percentages of those interviewed who have chosen that option.

<sup>8</sup> Kahneman Daniel, Amos Tversky, “*Choices, Values, and Frames*”, *American Psychologist*, 39, 1984.

“Assume that you have decided to see a play at the theatre where the price of the ticket is 10\$. When you enter the theatre you realize that you have lost a 10\$ bill. Would you pay yet 10\$ for the ticket? (Responses - Yes = 88%, No = 12%).” [Kahneman & Tversky, 1984]

What is the point? The loss is the same in both situations but the difference can be attributed to the organization of mental topic. The action of going to the theatre means that we agree to pay 10\$ to see the play. Buying the ticket two times leads to a perception of a price of 20\$, which is beyond the price many people are willing to pay. In the second case the loss of 10\$ isn't associated with the ticket price, so many people are willing to pay the price. It is interesting that when the problems were presented in reverse order changed the answers.

An interesting perspective on human behaviour is offered by evolutionary economics. This theory describes the economic process as evolutionary and cumulative in which agents face uncertainty. It emphasizes the importance of institutions, of habits of thinking for human behaviour. Thus Nelson and Winter define the concept of ability, defined as a smooth sequence of behaviour which is efficient relative to objectives and given the context where it is assumed usually.<sup>9</sup> By the concept of ability Nelson and Winter reject the global rationality of neoclassical theory, which assumes that all the problems are at the same time on the agenda, and subscribe to bounded rationality proposed by Herbert Simon.

In the attempt to save the concept of a rational maximizing behaviour, the mainstream economics extended the decision making area including information gathering. The individual is assumed to maximize his utility function, a function that includes the cost of obtaining the necessary information. But he doesn't know if this is worth the effort involved by this action, he doesn't know when to stop. Thus he doesn't know if his choice is optimal. The individual takes into account the expected benefits and not the real ones, when he decides to stop the information gathering. The concept of satisficing option, defined by Herbert Simon, is necessary in order to break this vicious circle. Accepting the concept of bounded rationality has some important consequences.

First, this kind of rationality doesn't optimize. The process of decision making stops when a satisfactory result is attained.

Second, the individual is considered rational and purposive but has some limitation in doing this.

Third, there is no guaranty that the individuals' decisions are consistent.

Fourth, the result of choice can depend on the order the two options are presented. (if both are satisficing)

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<sup>9</sup> Nelson Richard, Winter Sydney, *An evolutionary theory of economic change*, The Belknap Press of Harvard University Press, Cambridge, Massachusetts and London, England, 1982

#### **IV. The functions of management in modern organization**

An exhaustive definition of management is very difficult due to the complexity and dynamics of the economic phenomena. Management can be understood as the art or science of coordinating the work of a group for attaining common objectives. The main elements a manager operates with are material resources, human resources and information. Depending on the efficiency of the combining of these the organization can be or not succesful.

Management can be presented througuh defining the functions it has in an organization. One of the first approach on management was made by Henry Fayol who identified:

- function of forcasting
- function of organizing
- function of leading
- function of coordinating
- function of control

This structure of managerial functions remained in broad lines even today. A modern approach of management functions distinguish between planning, organizing, leading, coordinating and control.

Planning is based on the activity of forcasting of future evolution of diverse phenomena: economic, social, politic, demographic, etc., which can have an impact of the organization's activities. Anticipation of the possible and probable situations permits to take the decisions which can put the organization in a favourable position relative to other organizations and to increase the chances of reaching the objectives.

Organizing consists in defining activities and allocating the resources: financial, material, human, organizational, and informational necessary to perform them. This function is completed based on the programs elaborated during the planning. The main elements of this function are organizational structure, processes and informational system.

Leading consists in guiding people in the processes they take part in. In recent times an increasing importance has motivating personell for performing activities and reaching the objectives.

Coordinating reflects the need for equilibrium between the components of an organization and it is necessary because of the number and the complexity of the interdependences existing in modern organizations. Coordination is requisite in order to assure the coherence of the activities and to avoid the waste of resources.

Controlling reflects the necessity to monitorize the activities, to asses the results and to determine the degree of fullfiling the organizational objectives. Control has to be systematic at both quantitative and qualitative level, both for processes and for results. Any gap observed is an alarm signal that has to trigger a decision making process and a corrective action. Controlling is an essential element for knowing the situation in organization, optimal usage of resources and finally reaching the objectives.

#### **V. Theories about economic behaviour of the individual and the management functions**

Individuals' behaviour is a key element both for economic theory and for management. The theories of management have a strong relationship with presupposition regarding human

nature and human behaviour.<sup>10</sup> Especially contextual leadership examines the leader-subordinate relationship in various situation defined by different subordinates characteristics, different activities, different organizational characteristics. Yet the influence of behavioural variables both at the leader level and subordinate level were somehow neglected in the case of management theories.

This fact, along with the idea that the position relative to the axioms regarding the rationality and maximization of the human behaviour lead to the different conclusions and approaches in managerial area, constitutes good reasons to analyze this hypothesis. We present next some of the main implications.

First we analyse the planning. In the case of this function the bounded rationality prevent a perfectly informed decision making. We cannot collect all the informations relevant for the given problem. The diversity, complexity and volume of disposable informations makes imposible the exhaustive search of all the necessary data. Sorting of information face difficulties because of the same limited computing capacity of the human brain.

The elaboration of all the options possible is not possible in conditions of a limited capacity of the memory<sup>11</sup>, and when almost all people don't have an unchanging utility function.

Finally exploration of all implications of a chosen alternative isn't possible due to difficulties in allocation probabilities for all the variables that define a scenario. This is even more difficult in the case of non routine activities we deal with in the case of forecasting and planning.

In the case of organizing the inconsistencies of preferences and of behaviour cannot be overlooked. Resource allocation and designing of organizational structure has to take into account the specificity of human resources, their lack of stickness which is determined, according to Thaller, cited by Williamson to three limits of of human behaviour: "bounded rationality, bounded will, bounded selfishness"<sup>12</sup>

Difficulties due to bounded rationality can be seen at the level of designing the structure – a rule of thumb says that a person in a hierarchical position has to coordinate a number of no more than 7 functional subunits.

Another idea is that process design and resource allocation: human and material have to take into account the informational and decisional level loading that permit good human performances.

In the case of leading the impact of the characteristics of human behaviour are obvious. The limitation of brain computing capacity and the habit based behaviour put limits to capacity and accuracy of communication between people, with direct impact on the leading efficiency. The maximizing characteristic, which is in discussion, influence the way the leader can motivate people to act in a certain way. Different social and cultural contexte put limits to the disposable motivational tools, and call for contingency leadership.

In the case of coordinating an important element is represented by habit based behaviour and the routinized functioning of an organization. A lot of the information that allow coordination is ingrained in organizational routines. A possibility to understand a routine is to see it as organizational memory. This organizational memory is controlled only partly by the

<sup>10</sup> In this sense the theories regarding leadership styles are derived directly from consideration about human behaviour – mainly those related to motivation. (n.a.)

<sup>11</sup> It is important to mention that psychologist's studies showed that people have many difficulties when they have to operate with more than 7 variables simultaneously. (n.a.)

<sup>12</sup> Oliver Williamson, *Human actor and economic organization*, ISNIE Conference, Paris, 1998, www.isnie.org

managers (for example the job descriptions defines the tasks for every employee) but there are also informal routines that are set through repeated practice and are beyond the control of management. The acknowledgement of the existing routines, formal and informal, is important in order for management initiatives to be successful. The changes that are intended to be implemented can be done through definition of new routine which replace or modify the old ones.

In the case of controlling the key elements for success is the existence of an informational system regarding the actual performance on different levels and segments of organization and of a correcting mechanism. The transparency of the activity of productive and administrative structures represents an important factor of economic performances.

The control function contributes decisively to the organization's performance through systematic monitoring of it, through reducing temptation for an opportunistic behaviour, and through increasing the professional quality of operative personell and administration.

If there is a lack of control, the employee can act opportunistic promising things that they don't fulfil. In the case of controlling function the limits of rationality and opportunistic behaviour represent the key points that make the difference between success and failure. Opportunism reflects the tendency of people to not fulfil an assumed obligation. According to Oliver Williamson opportunistic behaviour is facilitated by incompleteness of contracts and the difficulties of monitoring them. The efficacy of controlling function depends thus on limiting opportunism. This can be done through punishment that constrain behaviour, or through facilitating an environment characterized by a dense network of social interactions, knowing the fact that in this case the temptation for an opportunistic behaviour is reduced.

The efficacy of control can be increased also by increasing the complexity and specificity of the labour contracts, which reduce the limits for opportunism.

## **VI. Conclusions**

The debates about foundational axioms of human behaviour in economic theories continue. Both those who support the presuppositions of rationality and maximization of behaviour and those who are against them have solid arguments.

Yet, even neoclassical theory is mainstream, it is inevitable an indepth inquiry in psychology and a dynamic approach to economic processes.

The reality offer permanently example of situations in which one ore more of the rationality and maximization axioms are broken. In this respect Nelson and Winter introduced the concepts of ability and routine as important deteminants of behaviour and Herbert Simon defined bounded rationality as a substitute for perfect rationality from standard economics. The implications of these theories regarding individualist behaviour for management are many and important. We can identify consequences at level of all management functions: planning, organizing, leading, coordinating, controlling.

In the case of planning the bounded rationality prevent a perfectly informed decision making. Also, the generation of all alternatives and exploring all the implications of a decision is virtually imposible.

In the case of organizing resource allocation and designing the organizational structure have to take into account the inconsistency of preferences and finally of behaviour.

In the case of leading the main elements: communication and motivation are influenced by the behaviour that doesn't fit the behavioural axiom of rationality and maximizing.

In the case of coordinating it is essential to know the individuals' habits of thinking and the organizational routines in order to have efficient intervention.

In the case of controlling the limits of rationality and the opportunistic behaviour are key elements for the functioning of the organization making necessary an informational system and a correction mechanism.

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