# SOME ASPECTS REGARDING ECONOMICAL AND FINANCIAL ANALYSIS CONTRIBUTION TO THE BRANCH OF ECONOMICS

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**Abstract**: The analysis adequate to different considerations represents a method of scientific research having a large domain of utilization: economical, financial, judicial, medical, engineering etc. In the economical field, a new discipline formed and crystallized having different labels, frequently encountered as economical and financial analysis. This scientific method used to study different economical and financial phenomena contributes to develop branch of economics or not? The article comprises many points of views regarding economical and financial analysis contributions and many arguments for its transformation into a scientific discipline.

**Keywords**: science, analysis, method, methodology, economics

## 1. Introduction

Science is a system of acquiring knowledge from different domain of human activity. It is based on scientific method and has the role to organize body of knowledge gained through research. Scientific method is a sum of techniques for investigating phenomena and acquiring new knowledge as well as for correcting and integrating previous knowledge. It is based on gathering observable, empirical and measurable evidence [7].

A phenomenon (Greek: *φαινόμενο, pl. φαινόμενα*) is an observable event or something that can be seen. Derived from the noun φαινόμενον (*phainomenon, df. appearance*), it is also related to the verb φαινειν (*phainein, df. to show*). In scientific usage, a phenomenon is any event that is observable, even if it requires the use of instrumentation to observe it. Knowledge is generally, what is known. There is no single definition of knowledge and numerous theories continue to debate about the nature of this fundamental concept. The term knowledge is also used to mean the confident understanding of a subject, potentially with the ability to use it for a specific purpose. Knowledge acquisition involves complex cognitive processes: perception, learning, communication, association and reasoning.

There are identifiable features that distinguish scientific inquiry from other methods of developing knowledge even procedures vary from one field of inquiry to another. Scientific researchers propose specific hypotheses as explanations of natural phenomena, and design experimental studies that test these predictions for accuracy [3]. These steps are repeated in order to make increasingly dependable predictions of future results. Theories that encompass wider domains of inquiry serve to bind more specific hypotheses together in a coherent structure. This helps to form new hypotheses, as well as in placing groups of specific hypotheses into a broader context of understanding.

There are multiple ways of outlining the basic method shared by all of the fields of scientific inquiry. The following examples are typical classifications of the most important components of the method on which there is very wide agreement in the scientific community, each of which are subject only to marginal disagreements about a very few specific aspects. The scientific method involves the following basic facets:

a) Observation. Represent a constant feature of scientific inquiry;

b) Description. Information must be reliable, repeatable as well as valid and relevant;

c) Prediction. Information must be valid for the past, present, and future observations of given phenomena;

d) Control. Actively and fairly sampling the range of possible occurrences is the best way to control. Whenever possible and proper, counterbalance the risk of empirical bias is opposed to the passive

acceptance of opportunistic data;
e) Falsifibility. Is a gradual process that requires repeated experiments made by multiple researchers who must be able to replicate results in order to corroborate them. The elimination of plausible alternatives, one of the most frequently contended, leads to the following statement: *All hypotheses and theories are in principle subject to disproof*. Thus, there is a point at which there might be a consensus about a particular hypothesis or theory. As a body of knowledge grows and a particular hypothesis or theory repeatedly brings predictable results, confidence in the hypothesis or theory increases [5].
f) Causal explanation. Many scientists and theorists argue that concepts of causality are not obligatory to science, but are in fact well-defined only under particular, admittedly widespread conditions. Under these conditions, the following requirements are generally regarded as important to scientific understanding [6]:
- Identification of causes regarding particular phenomenon to the best achievable extent;
- Covariation of events. The hypothesized causes must correlate with observed effects;
- Time-order relationship. The hypothesized causes must precede the observed effects in time.

The following is a more thorough description of the method. This set of methodological elements and organization of procedures will in general tend to be more characteristic of natural sciences and experimental psychology than of disciplines commonly categorized as social sciences. Among the latter, methods of verification and testing of hypotheses may involve less stringent mathematical and statistical interpretations of these elements within the respective disciplines. Nonetheless, the cycle of hypothesis, verification and formulation of new hypotheses will tend to resemble the basic cycle.

## 2. Financial and economical analysis place in the branch of economics

There is no consensus on how some academic disciplines should be classified. More generally, the proper criteria for organizing knowledge into disciplines are also open to debate. O classification frequently met realizes a grouping in: humanities, social sciences, natural sciences, formal sciences, and applied sciences. Economics are part of the social sciences beside anthropology, archaeology, geography, political science, sociology and others.

Examples of discipline from branch of economics are: ecological economics, econometrics, economic systems, macroeconomics, managerial economics, monetary economics, monetary economics, financial economics etc. Is the economic and financial analysis part of them or not? Studying the requirements and contributions at the branch of economics can be included in their category.

The economical life complexity made that, in the research and knowledge progress does not use only a single method. Thereby is designed and elaborated many types of methods, each of them having a certain instrumental value in data collecting, processing and interpretation about one specific economic phenomenon or another. From this category of methods is detaching analysis, frequently used to study different phenomenon from the following field: economical, judicial, medical, social, engineering etc.

Generally, analysis means a research method consisting in object or phenomenon decomposing into its elements. With specific methods and techniques, the activity research supposes that every component of assembly in order to determine relation of causality and their generating factors. The final scope of analysis consists in the conclusion elaboration for next decisions fundamentation, as well as the phenomenon improvement. Indifferent of purpose, the analysis is oriented from complex to simple. In the same time represent a way of gathering information and knowledge, when the observed assembly constitutes an imperceptible complex at once views. Normally, analytic cutting up is followed by regrouping realized, adequate theoretical and normative methods, in so-called synthesis operation means reassembling in one whole. Together the analysis and synthesis are interfered having a continuous character, serving to the reconsideration some conclusions and decisions then appear new situations [4].

The method concept derives from the Greek noun *methodology* means “device”, “way of exposition”. According to the etymology, the methodology, (Greek: *Μέθοδος + λογότυπα*) means „the science of methods”. Thereby, the methodology form an assemble of methods and techniques having the role to realize a research. The concept of methodology has a sphere of comprising larger that the method. The methodology reflects above the experiences, elaborates strategies of investigation, indicates

both possibilities obstacles and deficiencies and the ways or solutions to obtain some valid scientific results [1]. The obtaining of research results determines the enrichment, revision or methodology restructuring. When specific elements of methodology coming up in contradiction with concrete dates of research, they need to be revised and modified.

In conclusion the method represents an assemble of principles, criterions, rules and instrumental, techniques procedures, used with the scope of yielding, editing and interpretation dates about one phenomenon, object or others. The used method is always subordinated to the certain objectives that materialize in two modalities:

- the determine of what is need to know;
- the formulation a specific hypothesis (a preposition that anticipates the results related with the state and transformation studied object).

In function of the objective nature and the hypothesis content, the researcher chooses and elaborates the research model that includes the method. It is necessary to find a compatibility relation between the objectives of research and method for investigation. In different types of concrete researches, used methods will be different in smaller or larger limits. The require consists in covering the entire sphere of the economic phenomenon research objective.

Every research activity requires the using of own method or belong to connected sciences. Thereby the economic and financial analysis, practical and theoretical activity retains the attention to other disciplines as law, economy, sociology, engineering science, mathematics or applied sciences. The analysis borrows techniques and information but the same time is a supplier of instruments and results to them.

One of the most productive procedures used for understanding studied phenomena is that of brooding horizons through the knowing limitrophe sciences. Opposite is the procedure oriented toward the phenomenon essence. In this way will be founded explanations for the events at the reality surface and possibilities to determine the economic activity in the directions considered as useful and efficient.

In the case of economic phenomenon, the scientific method is more comprising. This aspect is necessary because the investigated phenomenon is dissimilar and complex. The area of research is positioned above the limits of pure economic activity. Using methods and last accomplishments of different sciences is assured a complete investigation and, at the same time, a base of elaboration for the content and amplitude economic phenomenon.

The economic phenomenon research supposes the existence some adequate procedures, principles, methods and instruments specific to the science and economic field. The method assures, through used procedures and instruments, detachment from the economic reality and introduction in the scientific theory of regularities, principles and laws that determines and govern the economic phenomena. Thereby the financial and economic analysis studies the activities and phenomenon from economical point of view, therefore from consumption of financial, material human and environment resources and obtained results. The results under cause relation laws or hypothesis are added to the database of economic sciences.

Scientific method depends upon increasingly more sophisticated characterizations of the economic and financial phenomena investigation. Scientific measurements taken are usually tabulated, graphed, or mapped. The uncertainty is often estimated by making repeated measurements or can be calculated by consideration of the uncertainties of the individual underlying quantities that are used. Counts of things, such as the number of people in an enterprise at a particular time, may also have an uncertainty due to limitations of the method used.
A hypothesis is a suggested explanation of a phenomenon such cash-flow or next investments evolution. For proposed hypotheses, the economical and financial analysis proposes a mathematical model. Mathematical models can take many forms, including but not limited to dynamical systems, statistical models or differential equations [6]. These and other types of models can overlap, with a given model involving a variety of abstract structures.

Even there are phenomena that can form the discipline objects if not constitute a method and methodology adequate for that phenomenon investigation there is no talk about that domain transformation into a science. The economical and financial analysis contribution to the branch of economics supposes construction of a model having as basic elements the following:

a) The object is constituted by the real facts from the economic field;

b) Pursue to discover the laws that govern the

economic phenomenon apparition and dynamics;
c) Has a descriptive-explanatory function;
d) It is composed both theory having explanatory-descriptive function and the methodologies of facts describing and processing, the construction of theories and their testing.

The economical and financial analysis legitimacy as science is banded by the methods existence and a set of modalities used for the economic phenomenon investigation. The scientific validation of financial and economical analysis supposes both the method existence and a methodology of research in the economic field.

## 3. Object of economical and financial analysis at microeconomic level

In function of the level, that analysis is developed can be identified two types:
- microeconomic analysis that researches the economic phenomena localized at the enterprise level or different functional compartment of this;
- macroeconomic analysis at the economic branch, sector or entire economy level. In this case, analysis works with global or aggregate indicators as GDP, industrial product, added value etc.

With the specific methodology of economical and financial analysis is created a base regarding the substantiation some decision for the enterprise activity such [2]:
- patrimonial and financial administration of the enterprise;
- buying, selling of tangible or financial assets;
- the opportunity to appeal for credits;
- actions of privatization or liquidation;
- retainer some investment projects;
- changing the mode of financing;
- signing or renewing of the management contracts;
- making a strategy regarding enterprise future evolution etc.

The economical and financial analysis represents an assembly of concepts techniques and instruments of information treatment having scope of diagnosis economic phenomenon state, quantitative level appreciation of their performances in dynamic and competitive environment. As result the analysis can be:
a) A result having as general expression the relation:

$$R = \sum_i X_i$$

where R is the result (added value, commercial efficiency ratio, turnover etc.);

$X_i$ represents the constitutive elements of result R.
b) A result modification from a comparative base expressed through:

$$\Delta R = R_1 - R_0$$

where $R_1$, $R_2$ is the value of result in current period and comparison base.

The base of comparison has to fulfil cumulative more characteristics. Examples of sizes that can be use in this scope are: results obtained by the enterprise in the past period, predicted sizes, performances of competitors etc.

## References

1. Chelcea, S.: *Metodologia cercetării sociologice (Sociologic research method)*. Economic Publishing House, Bucureşti, 2004 (in Romanian)
2. Gheorghe, C.: *Asupra finalității studiilor economico-financiare post-factum (Regarding post-factum economic and financial studies finality)*. **RECENT** Journal, vol. 2, no. 2(4), June 2001, ISSN 1582-0246, Brasov, Romania
3. Godfrey-Smith, P.: *Theory and Reality: An introduction to the philosophy of science*, University of Chicago Press, ISBN 0-226-30063-3, Chicago, USA, 2003
4. Gourierouz, C., Jasiak J.: *Financial Econometrics: Problems, Models and Methods*. Princeton University Press, ISBN13: 978-0-691-08872-3, New York, 2001
5. Helfert, A.E.: *Financial Analysis Tools and Techniques. A Guide for Managers*. McGraw Hill Publishing House, ISBN 0-07-137834-0, New York, USA, 2001
6. Maxwell, N.: *The Comprehensibility of the Universe: A New Conception of Science*, Oxford University Press, ISBN 0-19-823-776-6, Oxford, UK, 1998
7. Popper, K.: *The Logic of Scientific Discovery* (2nd English ed.). Publisher Routledge, ISBN 0-415-07892-X, New York, 2002