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COMPETITIVENESS AND RELATED CONCEPTS: A LOGICAL APPROACH TO DEFINITION

The purpose of the paper is justification of the competitiveness concept definition as an object of quantitative measurements and related basic concepts of the theory of competitiveness based on their logical deduction from the minimum number of basic concepts and fundamentals of economic theory to ensure the internal consistency of the theory's system of key concepts.

In spite of a large number of studies devoted to the theory of competitiveness and the problem of its measurement in recent decades, the state of the conceptual and categorical apparatus of the theory and, first and foremost, the definition of the very concept of competitiveness, cannot be considered satisfactory. Based on the requirements of logic imposed on scientific concepts and systems of concepts in arbitrary scientific field, as well as on basic concepts of economic theory, the paper attempts to clarify the content and formulation of the competitiveness concept and to construct a system of key concepts of the theory through logical deduction. This has required clarification (revision) of a number of the theory's concepts formulations and, first of all, the concept of economic agent; allowed to identify and/or establish logical connections between them; determine the place of each of them in the concepts' system; to discover concepts, which scientific consistency as well as expediency of inclusion into conceptual system of the theory of competitiveness are debatable; achieve rigorous definitions of these concepts and internal consistency of the concept system as a whole; identify the range of theoretical issues to be solved and/or more in-depth study, which logically follow from the proposed wording of key concepts' definitions of the theory of competitiveness.

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Introduction

In a globalized economy and strong competition at all levels of the economy, the problem of increasing the competitiveness of economic agents occupies a central place in the management system and management theory. The solution to this problem involves the implementation of strictly defined, generally accepted in management theory steps, the initial and key among which is to measure the level of competitiveness of an economic agent – an object of management.

The theory of competitiveness is one of sections of the theory of management, in which the object of management is competitiveness of economic agents. In this regard, Typical tasks of the management theory must be considered in the theory, among which the main ones are to find out the nature of the subject management, develop methodology and methods for assessing its condition, reveal the whole set of influencing factors and study the patterns of influence of these factors on the state of the subject management, set goals and develop methods of influence on the subject management to achieve the objectives. The theoretical basis for solving these problems must be well-developed conceptual, categorical and terminological apparatus.

Despite the fact that problems of competition and competitiveness have been actively studied by scientists all over the world for more than four decades, the bottleneck is the theory concepts system, imperfection of which is one of the important sources feeding the difference of views and approaches in dealing with basic tasks of managing and often insufficient level of scientific validity of the proposed solutions. This is evidenced, first of all, by the variety of the theory's basic concepts interpretations and, first and foremost, the theory's key concept – the concept of competitiveness, a significant number of methodologically incorrect definitions of the theory's key concepts, the emergence and wide dissemination of scientifically insolvent concepts.

The lack of rigorous definitions of scientific concepts is a characteristic feature of many, even fundamental, monographic publications. The meaning the author puts into one or another concept often becomes clear only from the context of the publication. This, without generally accepted ideas and unity of views among scientists, is an obstacle to correct understanding of the authors' ideas and gives rise to non-constructive discussions from the point of view of deepening and developing the theory. Insufficient rigidity of the key concepts' definitions and some negligence in the use of appropriate terminology leads to unclear distinction between related concepts. A vivid example of this is the confusion of such concepts as competitiveness and the competitiveness factor, which was clearly demonstrated in the discussion raised by Krugman (1994 a, b, c, 1996).

It should also be considered paradoxical that the central concept of the theory – the competitiveness of an economic agent, according to the opinion of the world's leading scientists, is unsatisfactorily defined, however, nevertheless, frameworks for measuring competitiveness are developed and used for decades in practice as well as obtained with their help results of competitive comparisons (see, in particular, WEF (The Global Competitiveness Report) and IMD (World Competitiveness Yearbook) frameworks).

Generally, in the scientific publications, insufficient attention is paid to the problem of forming a coherent, internally consistent system of basic concepts of the theory of competitiveness, which leads to the emergence of debatable or even untenable concepts, the use of different terms to designate the same concept, or the same term to designate different concepts, which is due, above all, to the traditionally low level of formalization of the theory of competitiveness and insufficient rigor of reasoning.

Considering the above stated, the main goal of the paper is to substantiate a methodologically rigorous definition of the concept of economic agents' competitiveness as an object of quantitative measurements through logical deduction from the basic concepts and fundamentals of economic theory and competition theory. To achieve this goal, it is envisaged to solve such problems as determining a list of concepts and theoretical provisions that can serve as such a basis; clarification of the content and formulations of the competitiveness concept and related concepts of the theory, allowing to reflect the most important properties of the concepts being defined and to ensure their full consistency as elements of a holistic conceptual and categorical system of theory.

1. Literature Review

The most figurative assessment of situation regarding the conceptual apparatus of the theory of competitiveness is given by Reinert (1994, p. 1), who identifies the problem as follows: "Competitiveness – 'corporate graffiti' invades economic theory" and explains its essence in such a way: "Even a casual observer of the practice and science of management will not fail to notice how a continuous flow of new concepts are born, become fashionable, and then disappear from management jargon. A recent article in Financial Times (1, p.10) suggests the term 'corporate graffiti' – or 'management graffiti' – to describe the unthinking use of buzz-words. Management language is 'opaque, ugly, and cliché-ridden', FT claims. The author further states (1994, p. 1; 1995, p. 24), "that, although often misused and mostly ill-defined, the term *competitiveness* properly used does describe an important feature in the world economy". A similar point of view can be found in almost every serious study on competitiveness issues.

Hatzichronoglou (1996, p. 17) considers that "One of the difficulties with which those seeking to analyse international competitiveness are confronted right from the start is that there is no agreement on how to define it. The term competitiveness may be used with contradictory meanings in various passages of the same article or report". Ketels (2016, p. 7) emphasizes: "The different views on what competitiveness is and what value it has for policy that emerged at the time were never really reconciled. ... Definitions of abstract concepts like competitiveness are never true or false. They can as conceptual tools only be evaluated with regards to their ability to shed light on the particular issues that they are being proposed to address".

Alexandros and Metaxas (2016, p. 76) also talk about the complexity and inconsistency of points of view on competitiveness: "Unlike the definition of macroeconomic competitiveness... the concept itself of national or macroeconomic competitiveness raises many concerns. It seems to be a vague concept with greatly disputed importance.

Competitiveness at the national level has not key features but there is also no consensus on whether ultimately this concept has meaning or not, namely if nations actually compete with each other or not". "America cannot address its economic prospects without a clear understanding of what we mean by competitiveness and how it shapes U.S. prosperity. The concept is widely misunderstood, with dangerous consequences for political discourse, policy, and corporate choices that are all too evident today" – Porter and Rivkin declare (2012, p. 55).

As can be seen, the opinion that concept of competitiveness, as well as other key concepts of the theory are poorly defined is widespread among scientists. Let's find out, mainly on the example of the competitiveness of nations, how this or that position is substantiated, and whether this ensures definitions' scientific credibility, as well as other concepts of the theory of competitiveness. First of all, let's consider the scientists' position, who believe that concept of the countries' competitiveness as meaningless and even dangerous.

Krugman (1994a, p. 30) makes serious arguments for the fact, "that concerns about competitiveness are, as an empirical matter, almost completely unfounded" and "that the obsession with competitiveness is not only wrong but dangerous, skewing domestic policies and threatening the international economic system". In particular, Krugman (1994b) justifies the illegitimacy of considering the competition of countries in the image and likeness of firms' competition, proves that dependence of the citizens standard of living on the international competitiveness of firms is not as obvious as the supporters of international competitiveness of countries concept imagine, and that many problems of countries caused by internal, but not external factors. Another example of such views is contained in Raik's review 1990, p. 925) on Porter's book (1990a), who wrote: "National competitiveness is one of those rare terms of public discourse to have gone directly from obscurity to meaninglessness without any intervening period of coherence".

However, analysis of the arguments of the countries' competitiveness concept opponents shows the following. As a matter of fact, not the concept of countries' competitiveness itself is wrong and even dangerous, but (i) the interpretation of this concept by proponents of the concept and governments, and their choice of direct management objectives based on this interpretation; (ii) selection of countries' competitiveness factors, influencing which governments do not achieve the expected results. Thus, there is an ascription of definitions disadvantages (definition wordings) of the competitiveness concept to the concept itself in the arguments of the countries competitiveness concept opponents, which is methodologically incorrect and replaces the discussion about the scientific consistency of the competitiveness definitions with a discussion about the most important factors of competitiveness, leaving the question of the competitiveness concept correct definition opened.

Direct response to P. Krugman's publications was an article by Dunning (1995), whose author argues in favor of the feasibility of making comparisons of countries' competitiveness and discusses various indicators used in such comparisons. However, this study does not raise questions about the correctness of the competitiveness definition as a scientific category, scientifically based choice of indicators for competitive comparisons, as well as the impact of these definitions and indicators on the choice of management objectives and the consequences (results) of such management. At the same time, the study

contains clear signs of insufficiently careful use of basic concepts and their differentiation, as evidenced, for example, by such statements as "Competitiveness is about **benchmarking** economic performance" or "Competitiveness should not be regarded as an end in itself. It is quite possible for a country's citizens to be relatively better off than those of another country, yet, in terms of GNP per head, to be worse off" (Dunning, 1995, p. 315, 316). In the first statement, competitiveness is essentially identified with a comparative assessment, which is wrong, and moreover, with an assessment of productivity, which is also debatable. As regards the second statement, the following should be noted. Firstly, if by a country's competitiveness we mean the ability to ensure a high standard of living for its citizens, the competitiveness should be the main objective of government activity. Secondly, the example of different countries' standard of living and the level of GNP per head indicates only that this indicator is an unsatisfactory indicator of competitiveness. Thus, in this case, there is a vague distinction between the competitiveness concepts and the competitiveness indicator.

Another example of strong objection to P. Krugman's views is the paper by Malcolm (1994), who claims that countries compete economically, although not in the same way as corporations; explains why it is difficult to define the competitiveness of nations; indicates that thinking in terms of competitiveness is far from being a threat to international economic system, but important for good economic policy; that clarification of ideas about competitiveness, improvement of methods for its measurement, progress in identifying the factors of countries' competitiveness and considering them in economic policy would eliminate P. Krugman's concerns.

In general, the arguments of both parties' representatives indicate that many of them do not clearly identify the basic concepts of the theory, such as the competitiveness concept, its content and definition, the competitiveness factor, the level of competitiveness, the measurement of competitiveness, etc. The problem of insufficient respect to basic scientific concepts' wording is clearly manifested in the question of defining the competitiveness concept and, in particular, the competitiveness of nations.

Porter's study (1990b, p. 76) contains the following statement: "The only meaningful concept of competitiveness at the national level is national productivity". Basically, this statement puts an equal sign between two qualitatively different attributes of the national economy, which is unacceptable in methodological terms. A clear understanding of the fact that productivity is just one of the factors of competitiveness, as well as a clear differentiation of such common concepts as an attribute and a factor, affecting the level of an attribute's manifestation, allows to avoid such inaccuracies. This disadvantage also affects such ideas about competitiveness as expressed in (Porter, 2004, p. 30): "The most intuitive definition of competitiveness is a country's share of world markets for its products". Unfortunately, despite the criticism of such views, the author of this publication does not indicate inadmissibility of identifying a characteristic inherent in the national economy as an economic agent with a market's attribute, where the agent is an operator.

It is remarkable, from the viewpoint of assessing the state and progress (to be precise, the lack of progress) in development of the conceptual apparatus of the theory of competitiveness, that two identical statements by one of the founders of this theory, M. Porter, have been expressed within years: "Competitiveness remains a concept that is not

well understood, despite the widespread acceptance of its importance" (2004, p. 30) and "there is not even an accepted definition of the term "competitiveness" as applied to a nation" (1990b, p. 76). This situation practically remains unchanged ever since. In this vein, the following very accurate remark of the study's author is important: "often the disagreement is not about the definition used itself, but about the issue to be studied and the policy implications to be drawn" (Ketels, 2016, p. 7).

An example of how an agent's attribute (a competitiveness) is determined through the level of subordinate attributes' manifestation can be the competitiveness definition as formulated in OECD (1992): "competitiveness is *the degree* to which, under free and fair market conditions, a country can produce goods and services which meet the test of foreign competition while simultaneously maintaining and expanding the real income of its people". The World Economic Forum (Cann, 2017) defines economic competitiveness as "*the set* of institutions, policies and factors that determine the level of productivity of a country", i.e. as a set of qualitatively different things (institutions, policies, factors), which have just one trait in common – all these things have an impact on the country performance. Thus, in such a definition, a country's economic competitiveness is identified with a specific set of productivity factors, and the "economic competitiveness" term is introduced only for such a set of factors designation. In other words, using such a definition, the "economic competitiveness" term is defined rather than the economic competitiveness concept. The definition given in (IMD, n.d.), should be considered alogical in such a formulation "International competitiveness can be defined as *a process* in which higher levels of competitiveness are achieved at different levels, that is, at firm, regional and national levels". In this definition, international competitiveness is interpreted as forming the competitiveness of high hierarchical levels systems, while the very concept of competitiveness, in particular, of lower levels systems, is not defined.

It is no surprise that such an environment contributes to inconsistency in views on competitiveness and the construction of eclectic constrictions. In particular, examples of such inconsistency and the terms' eclectic application are contained in article (Bierut and Kuziemska-Pawlak, 2017). Thus, based on above definition of competitiveness as a *degree*, the authors of the article use particular concept of technological competitiveness in relation to the competitiveness concept, which is defined as a certain *ability* (Bierut and Kuziemska-Pawlak, 2017, p. 1): "Technological competitiveness can be defined as *the capacity* to innovate, as well as to increase efficiency and reduce costs", and the term of structural competitiveness which is defined as *a set of characteristics* (Bierut and Kuziemska-Pawlak, 2017, p. 2): "Structural competitiveness can be defined as *a set of characteristics* of an economy, including human capital, infrastructure, labour and product market regulations, and the legal and institutional framework".

Currently, the most common is the competitiveness concept as a certain ability of the economic system. The differences within this concept mainly concern the characteristics of economic system ability. For example, Fagerberg (1988, p. 355) notes: "... it is rather rare to see the concept of international competitiveness of a country defined. However, few would probably disagree with the view that it refers to *the ability* of a country to realize central economic policy goals, especially growth in income and employment, without running into balance-of-payments difficulties". Unlike J. Fagerberg, Scott (1985, p. 14-15)

mainly focuses on standard of living and ways to increase it: "National competitiveness refers to a nation's ability to produce, distribute and service goods in the international economy in competition with goods and services in other countries, and to do so is a way that earns a rising standard of living".

Hatsopolous et al., (1988, p. 299) also introduce the concept of standard of living in the definition of the country competitiveness and emphasize that national economy must possess this ability on a long-term basis: "The proper test of competitiveness, then, is not simply *the ability* of a country to balance its trade, but its *ability* to do so while achieving an acceptable improvement in its standard of living".

The US Competitiveness Policy Council (1992, p. 1) adheres to the same position, which defines the country's competitiveness as: "*the ability* to produce goods and services that meet the test of international markets while our citizens earn a standard of living that is both rising and sustainable over the long run". The OECD (Hatzichronoglou, 1996, p. 20), that has defined competitiveness as "the ability of companies, industries, regions and nations or supra-national regions to generate, while being and remaining exposed to international competition, relatively high factor income and factor employment levels on a sustainable basis".

The most common and similar views of this publication's authors are definitions of the nation's competitiveness, proposed by Fagerberg in one of his later studies (1996, p. 48): "A consensus definition of international competitiveness might perhaps be that it reflects the ability of a country to secure a high standard of living for its citizens, relative to the citizens of other countries, now and in the future" and Aiginger (2006, p. 162): "competitiveness should be defined as the ability to create welfare".

Therefore, the lack of sufficient justification of the definition structure, as well as strong arguments for including certain characteristics of such an ability in the definition of competitiveness (which necessity of reflecting in the definition would follow from the very nature of the economic agent), is common to authors who pursue the competitiveness concept as a certain ability of an economic agent.

The accuracy, rigor and unambiguity requirements in the competitiveness concept definition and a number of other related concepts of the theory especially increase in the framework of the problem of quantitative measurements and competitive comparisons, a scientifically grounded solution of which involves the determination of informative indicators of the competitiveness level; factors affecting this level; developing methods for quantitative measurement of these factors' state and their compilation into integrated indicators of competitiveness.

2. Methodological Provisions Used in the Study

Theoretical foundation to clarify the content and formulations of the basic concepts of the theory of competitiveness and the formation of an integrated system of such concepts is the well-known principals of logic and economic theory.

Logical basis

The need for detailed presentation in the paper and strict adherence to the logical foundations of a theory's system of concepts formation is due to the following reasons. Firstly, in insufficiently formalized sections of economic theory and the theory of competitiveness, including non-compliance with the requirements of logic for definitions of scientific concepts is the rule rather than the exception. Secondly, the proposals of the authors of this study as to the structure of the conceptual apparatus of the theory of competitiveness and the formulation of its basic concepts strictly follow the provisions of logic as stated, and their presence in the paper's text allows us to verify the strictness of compliance with the relevant requirements.

The following fundamental principles of logic which considered in details Cornel, 1972; Getmanova, 2012; Gorsky, 1974 and shown in Getmanova's revision (2012), were taken as the basis for clarification and systematization of key concepts of the theory of competitiveness.

A concept is a form of thinking that reflects the essential attributes of a single-element class or a class of homogeneous objects.

Attributes are something in what things are similar or differ. Properties and relations are attributes (the terms "attribute", "property" further used as synonyms).

Essential attributes are attributes, each of which is necessary while taken separately, and taken altogether are sufficient so that it is possible to distinguish (allocate) with their help a given things from all the others and generalize homogeneous objects to a class.

A term is a linguistic form of a concept's expression.

Every concept has *scope* and *content*. *The content of a concept* is a set of essential attributes of a single-element class or a class of homogeneous objects, reflected in this concept. *The scope of a concept* is a class of things generalized in it.

A concept is formed on the basis of generalization of essential attributes inherent in a number of homogeneous things.

Concept definition is a logical operation that reveals the content of a concept or establishes the meaning of a term.

The concept definition explicitly indicates the essence of things reflected in the concept, reveals the concept's content of and thereby separates the range of things being defined from other things. In an explicit definition, a concept, the content of which must be disclosed, is called a *definable concept*, and the concept by which it is defined is called a *defining concept*.

Basic requirement to the concepts' explicit definitions

1. A definition must be proportionate, i.e. the scope of defining concept must be equal to the scope of defined concept.

2. A definition must not complete a circle. The circle, in the particular case of tautology, arises when the defined concept is determined through the determining, and the determining concept in its turn is defined through the defined concept.
3. A definition must be clear and precise. This means that the meaning and scope of the defining concepts must be clear and definite. The definition should be unambiguous, free from ambiguity. Its substitution by metaphors, comparisons, etc. is not allowed.

Additional requirements to scientific concepts

4. Scientific concepts must reflect objective and subjective reality under the study.
5. Scientific concepts must occupy a specific place in the system of concepts and categories of relevant science, not contradict and be consistent with other concepts of the conceptual and categorical system of this science.

Thus, the system of scientific concepts is a collection of current knowledge, a way to reflect relevant subject area. Obviously, concepts can predetermine possible areas of research in relevant subject area and be themselves objects of the study.

Economic basis

According to the authors of this study, the concept of an economy agent (regardless of the hierarchical level), as well as the theoretical insights of the nature and role of economic agents in economic systems, should serve as the starting point (theoretical basis, analogue of the minimum necessary set of axioms), on the basis of which it is possible to deduce, based on logical approach, the central concept of the theory of competitiveness – competitiveness and other related concepts. At that, the ideas presented below accumulate only the most important properties of these objects, which are necessary for constructing a system of basic concepts of a formalized theory of competitiveness and are generally accepted in economic theory and, above all, in mathematical economics. The only exceptions are formulations of economic agents' definitions *themselves*, which are adjusted taking into account the above-mentioned requirements of the logic and goals of this study.

Economic agents

Let's use the following ideas about economic agents as a basis for further consideration, highlighting four main classes from their entirety, leaving out the discussion about the concept of an economic agent, as well as a number of other common concepts used in the study, on which there is a certain consensus in economic theory at the substantive level.

Households are economic agents functioning to meet own (present and future, physical, physiological (mental), and social) needs by final consuming (for own use) goods and services, and to reproduce labor power and supply labor as well as other own resources (to agents of other types).

Firms are economic agents founded and functioning for the purpose of making money (profit) on a sustainable basis (on a long term basis) by transforming consumed productive resources into goods and/or services to sell (to other agents).

Governments (governing bodies) are economic agents founded and functioning for the purpose of providing rules of interaction and governing of economic agents forming the system by transforming consumed goods and services (productive resources) into the relevant rules and control actions.

Non-profit organizations (other agents including non-business entities, non-profit institutions, etc.) are economic agents founded and functioning for non-profit purposes by transforming consumed productive resources into goods and/or services (for own needs or other agents). (Economic agents of this type are not considered further due to their specificity and for simplification of presentation.)

Such ideas of the nature and role of households, firms, and governments are classic in macro and microeconomics (see, for example, Mankiw (2016), Nicholson and Snyder (2008)).

The above definitions reflect the following key properties of economic agents:

- an economic agent is a holistic system;
- integral component of an economic agent is a group of individuals (social entity (SE)) that animate the system;
- target behavior (objectives and the desire to achieve them) is inherent to an economic agent;
- behavior of an economic agent is rational (respect for the principle of optimality);
- observance of *going concern principle* (for enterprises) and its analogues (for economic agents of other types with the exception of management agents and public organizations initially established for a short period to solve specific problems).

It is known that economic agents can be elementary, i.e. the simplest in structure, (for example, a household, or sole proprietorship) and complex, composite (for example, an enterprise that includes other enterprises as subsystems, a territorial association of households, etc.).

This allows to introduce the concept of the national economy in the most general form without involving other economic concepts, only postulating the main goal of its functioning.

The national economy is an aggregate of economic agents of a given country in standing interaction acting as a whole serving a national population (for the public benefit).

In this definition, population is understood as the totality of societies of households, and also emphasizes the original purpose of the economy as a means to satisfy the needs of people.

The national economy is a composite and complex in structure economic agent (economic system of the highest hierarchical level within the country) and inherits all above mentioned the characteristics of the economic agent.

Considering that the issue of the nature of the economic agents' immanent goals is still debatable, the below-stated ideas of this study's authors about goals can be considered as assumptions (hypotheses), the productivity of which, in particular, can be judged by logical consequences arising from them.

Objectives of economic agents

The nature of the objectives of an arbitrary economic agent as a system is determined by the nature of society (SE) as its integral structural component and studied by Alyokhin (1993) and Savchuk (2007).

When describing the objectives of economic agents, let's distinguish between immanent objectives and the ones that set from outside. The latter will be called directive objectives.

Households. Households' objectives coincide with immanent objectives of a group of individuals, i.e. are immanent for the economy agents of this type, and to satisfy present and future, physical, physiological (mental), and social needs of the societies on a long-term basis. In economic theory, as a particular case of the consumer concept and without taking into account the time factor, utility maximization is considered as such an objective.

Firms. When considering the enterprises' objectives, it is necessary to distinguish between two types of enterprises. Let's consider enterprises in which the owner directly performs management functions to the first type. The second type includes enterprises to be managed by employees.

The objectives of enterprises of the first type, for example, a sole proprietorship, as well as the objectives of households, coincide with immanent objectives of SE of a given agent, i.e. the entrepreneur's objectives, the business's owner, and are to ensure (generate) acceptable profit for the owners of the enterprise on a long-term basis. As a special case (without taking into account the time factor), the objective of such an economic agent can be profit maximization. This is a classic case considered in the theory of the firm (Jones and Felps (2013, p. 207), Mankiw, (2016, p. 13), Pfarrer (2010, p. 86).

For enterprises (firms) of the second type, where the owner does not participate in management directly, the objectives are more complex.

Let's consider the objectives of the enterprise's employees, who constitute SE of the enterprise. The following reasoning is a logical consequence of the ideas about the nature of household and firms.

The main objective of the employee is to obtain a reasonable wage (wage maximization) on a stable basis. This objective is immanent for him and represents the main motive of human activity as an employee. In fact, the achievement of such an objective is one of the means to achieve the objectives of people who are at the same time elements of the household's SE

(see household objectives), i.e. means of meeting all their needs, including the need for self-realization.

Let's single out top managers among hired employees of enterprises, i.e. decision-makers. These immanent objectives (and the desire to achieve them) of top managers have a decisive influence on the activities of relevant economic agents.

The objectives of enterprises under consideration are set from the outside by the creators (owners) of such agents. For enterprises, such directive objectives are inherent objectives of entrepreneurs, owners (see the objectives of the first type of enterprises above).

In general, directive objectives of such enterprises may conflict with the inherent objectives of employees and, especially, with inherent objectives of top management. In this case, actual objectives of the enterprise (as a system) will be a certain synthesis of directive and immanent objectives, and the level of achievement of directive objectives will depend on the coherence with objectives of top management.

Thus, the objectives of enterprises are the objectives of the owner, if he performs the functions of a top manager. In this case, they are immanent for the enterprise. If an enterprise is managed by employees, objectives of the enterprise are determined by directive objectives set by the owner and immanent objectives for top management, i.e. are the result of these objectives interactions.

Governments (governing bodies). The nature of **governing bodies'** objectives practically coincides with the nature of the objectives of enterprises of the second type. The difference is that the directive objectives of **governing bodies** are determined by its founders and reflected in assigned/mandated functions.

National economy. The objective of the national economic system is to ensure quality of life acceptable (or, as a special case, the best possible) to the country's citizens on a long-term basis. (As can be seen, as the goals of the country's economy, the goals postulated in the definitions of the competitiveness concept are taken, formulated by Aiginger (2006), Fagerberg (1996), Hatzichronoglou (1996), Hatsopolous et al., (1988), Scott (1985), Competitiveness Policy Council (1992), etc.)

The objectives of the national economy, as well as the objectives of enterprises of the second type and the objectives of the **governing bodies**, are inherently mixed. Directive objectives are formed by the efforts of SE and ideally should reflect (integrate) the immanent objectives of the country's citizens (population). However, in addition to citizens, any other economic agents can project their objectives on the objectives of the government (for example, by lobbying business interests or local governments their own interests). Therefore, directive objectives of the national economy are a certain combination of the objectives of all economic agents that are part of it. Eventually, actual objectives of the national economy are determined by the objectives inherent to the government as an economic agent and directive objectives, and the objectives of citizens (during the functioning of the national economy) are pursued to the extent that they are consistent with the objectives of the government and directive objectives as prescribed.

The ideas about economic agents as stated in this section, which act as an analogue of axioms, allow to construct by logical deduction an internally consistent system of the theory of competitiveness concepts, which is crowned with the central concept of the theory – the concept of an economic agent's competitiveness. At that, each concept, each term is defined in such a way as to meet all the requirements for scientific concepts. The proposed formulations of these concepts definitions are unambiguous and in a strict logical relationship with each other, so the defined concepts form an integral conceptual and categorical apparatus and theory thesaurus for the purposes of quantitative measurements.

The results of this deduction (conclusion) are presented in sections III-V, each of which, as a rule, contains: (i) list of specified main (viability, viability factor, competitiveness) and auxiliary (internal and external environment of the economic agent, their condition, attribute, attribute level, attribute level assessment, etc.) concepts and the wording of their definitions; (ii) list of objects properties that are important for solving the measurements problem, which are determined using these concepts, which directly follow from the proposed formulations; (iii) list of research objectives that logically come through accepted assumptions.

The importance of the latter type of consequences is conditioned by, at least, the following reasons: (a) such consequences indicate the consistency of the totality of the initial theoretical assumptions and ideas; (b) they indicate problems whose solution within the framework of the accepted assumptions is mandatory (it does not matter if these issues are solved by modern science, whether they are under development, or were not considered at all).

3. Viability of Economic Agents and Related Concepts

The natural consequence of the ideas about the economic agents as stated above is the concepts of the enterprises' viability and national economies defined as follows. The wording of these concepts was significantly influenced by definitions that were close to the content in content to the concepts of competitiveness of economic agents (see Aiginger (2006), Fagerberg, (1988, 1996), Hatzichronoglou, 1996), which legitimacy of using as analogues is due, as will be shown below, to the close correlation of these concepts.

Enterprise's viability is the ability of an enterprise to generate net profit without outside assistance on a long-term basis. (The issue has been studied by Alyokhin (2012), Lin (2011), Savchuk (2007)).

The concept of a nation (country) viability is introduced by the authors of this study by analogy with the concept of the viability of enterprises and, in general, can be formulated as follows:

Country's viability (viability of the national economy) is the ability of nations to ensure (create) the quality of life of a population without outside assistance on a long-term basis.

In these definitions, the viability of respective economic agents is identified with their ability to perform their inherent economic roles in complete analogy with the viability concept of living organisms and their communities in biology.

The fundamental difference between the above formulations of these concepts' definitions and the well-known ones is refusal to fix level of the objectives achievement by the economic agent.

Thus, for example, according to the definitions of enterprises' viability, proposed by the authors (Alyokhin, 2012, p. 23; Lin, 2011, p. 104; Savchuk, 2007, p. 129), only the ones that are able to provide an *acceptable* level of profitability for their owners, enterprises that allow *normal* functioning on a long-term basis are considered viable, i.e. enterprises that provide a certain level of achievement of their inherent objectives. In accordance with such definitions, an enterprise can be either viable or non-viable, depending on whether or not it allows its owners to make a profit of a certain (acceptable) level, i.e. the viability of the economic agent is defined as an attribute that has dichotomous nature. However, this inevitably requires the application of a nominal dichotomous scale for measuring level of viability, which contradicts existing conception of viability in economics as an ordinal or interval attribute, does not meet the needs of managing the level of viability and established practice of measuring the viability of enterprises and nations.

In formulations of viability as proposed in this study, this attribute is not linked to the level of objectives achievement inherent to economic agents, which at the definition level does not impose any restrictions on viability indicators and their level.

The consequence of this definition of the viability concept is a number of properties of this attribute as an object of measurement. Taking these features (peculiarities) into account when developing methods for measuring and conducting the measurements themselves is an important prerequisite for obtaining scientific-based estimates of the economic agents' level of viability. In particular, main peculiarities of *viability* as an economic agents' attribute are as follows (Alyokhin, 2011, p. 24; Karapeychik, 2013d, p. 250; Savchuk, 2007, p. 318):

- absolute attribute of an economic agent, the presence of which is determined only by the fact of the economic agent existence (and functioning) itself, it is an inherent property of the economic agent;
- latent attribute, whose observation and direct measurement is impossible;
- interval attribute, i.e. an attribute defined on a certain period of time;
- conditional attribute (the level of viability depends on certain conditions and may vary from one condition to another);
- the most common (within the framework of the theory of competitiveness and, probably, in the theory of management) objective attribute of the economic agent.

A direct consequence of such a feature of the attribute, as an interval character, is the competence to consider the concepts of long-term and short-term or instant viability (as a special case of long-term viability without taking into account the time factor).

Definition of the economic agent's viability as one of its attributes makes meaningful the concept of the viability level, as well as a number of related concepts. The importance of a formally rigorous, unambiguous definition of these auxiliary concepts is due to the frequent cases of mixing these concepts in economic literature, which are unacceptable in formalized theories.

The level of economic agent viability is intensity of this attribute manifestation.

Indicator/indicators of viability (level) is a characteristic of the level of viability that can be assessed by a person.

A characteristic is a description of a feature or quality belonging typically to a person, place, or thing and serving to identify them.

The natural (arising from the needs of management) requirement for indicators of the economic agent viability is the requirement of their measurability using ordinal scales, and preferably with the help of metric scales: interval scales, ratios, and absolute values.

Assessment of viability level is the result of measuring the level of viability (the value of the corresponding indicator), presented in quantitative or qualitative form.

As can be seen, the above formulations are consistent with the wordings of well-known definition dictionaries and have uniquely defined meaning.

From the absolute nature of viability as one of the attributes of an economy agent, the requirements for viability estimates derive. The viability's assessments should ensure the comparability of any economic agents according to the level of this attribute. This means that if the viability level of various economic agents is measured independently of each other, then the corresponding estimates should be comparable, i.e. should ensure the comparability of these agents in terms of viability.

The requirement of comparability of the economic agent in terms of viability results in implying the requirement of viability level measurability in metric scales.

The predictive nature of the attribute assessments follows from interval nature of the competitiveness attribute. Competitiveness assessments should characterize the ability of an economic agent to achieve its inherent objects on a long-term basis in the future, i.e. act as a definite prediction.

The viability criterion is a condition imposed on the level (level assessment) of viability.

Introduction of the viability criterion concept makes obvious the principal difference between the viability definition considered in the framework of this study and the known ones. This distinction consists in the exclusion the viability criterion from the viability concept formulation.

4. Viability Factor's Concept and Related Concepts

To justify the definition of the concept of economic agent competitiveness (its logical deduction) it is necessary to use a number of related concepts.

Internal environment of an economic agent we define as a set of essential attributes of the economic agent (including functioning attributes).

External environment of an economic agent as a system is a set of all *things* of a *supersystem*, which properties' change causes a change in the state of the economic agent, also whose properties are changed in response to change in the state of this economic agent.

State of an economic agent is a set of indicators values (parameters of state) of essential attributes of the economic agent, including parameters of functioning.

State of the economic agent's external environment is a set of indicators values (parameters of state) of external environment essential attributes of the economic agent.

Hereinafter, the concepts of the attribute level, an indicator of the attribute level and an assessment of the attribute level are used in the sense as they defined above in relation to the concept of economic agent's viability.

As is known, the following environmental classes are important in the theory of competitiveness.

An environment is a combination of abiotic and biotic things of the environment.

Social, political, economic environment is a combination of social, political, economic things of the external environment.

In relation to any single economic agent, all other agents are things of an economic, social or political environment.

It is obvious that internal and external environments of different economic agents, even of the same type, can differ significantly. This creates significant objective difficulties in measuring the viability of economic agents and their comparison by the level of viability.

The concepts as introduced are sufficient to define the concept of a viability factor. (As a prototype, the ideas of competitiveness factors as set out in (Savchuk, 2007, p. 187) were used.)

Viability factor is an arbitrary property of an economic agent or its external environment, the change of which has (may have) an impact on the level of viability of this agent.

Due to the hierarchy of the external environment as a supersystem of an arbitrary economic agent, a combination of the agent's viability factors also has a hierarchical structure. This justifies the need to introduce in the conceptual apparatus of the theory of competitiveness the concepts of elementary (primary) and generalized (group, composite) life activity factors.

Also, the following concepts directly related to the viability factor concept are relevant:

- **level of the viability factor** is (by analogy with the viability level definition) the degree of the corresponding property manifestation of the economic agent's internal or external environment;
- **indicator of the viability level factor** (analogous to the concept of the indicator of the viability level);

- **assessment of (assessment of state) viability level factor** (analogous to the concept of indicator assessment of viability level).

In this study, the term "state of viability factor", which is understood as indicator's value of this attribute level, is considered synonymous with "assessment of viability factor" term.

Obviously, the combination of the viability factors of a particular economic agent is a subset of the set of all attributes of internal and external environment of the enterprise, and the level of the economic agent's viability is a function of the state of its viability factors.

From the interpretation of the viability factor proposed above, it becomes obvious that the measurement of the economic agents' viability must inevitably be based on the following problems solution, the extent of the solution by modern economic theory can serve as an indicator of its development state:

- identification of the whole combination of the economic agents' viability factors;
- development of methodologies and methods of viability factors' classification for management purposes;
- systematization (development of classifications) of the economic agents viability factors;
- problem of factors state measurement, which includes such issues as choice of indicators for each of these factors, choice of scales and units of measurement, development of methods for measuring relevant indicators.

Obviously, such classes as endogenous and exogenous factors, governable and ungovernable factors, stimuli and counter stimuli factors, etc. should be reflected in the relevant classifications.

5. The Concept of Competitiveness and Related Concepts

The concept of the viability factor opens the way to the definition of concepts that directly characterize the processes of competition. The first of these are the concepts of external environment pressure force and the competitor.

The environment pressure force (or just pressure) on the economic agent is a measure of a negative impact of the environment on the level of viability of the economic agent, i.e. impact, reducing the ability of an economic agent to achieve its inherent objectives. (Unlike Savchuk (2007), who studied the concept of competitive pressure, the authors of this study believe that the concept of pressure is primary to the concept of competitive pressure.)

The introduction of this concept into the conceptual apparatus of the theory of competitiveness immediately puts on the agenda the following issues to be solved in the framework of the problem of measuring the economic agents' competitiveness, such as:

- problem of measurement, including the problem of choosing indicators, scales, units and methods of measurement, i.e. all classical components of the measurement problem (see above);

- problem of choosing the point of reference – the level of viability of an economic agent without external negative impact of the external environment (as one of the sub-problems of the previous problem).

It is the concept of pressure that makes it possible to give a definite and unambiguous meaning to the concept of a competitor.

A competitor (of an economic agent) is an economic agent whose activity (state) directly or indirectly exerts (can exert) pressure on an economic agent, i.e. changes (can change) the state of environmental factors in such a way that leads to decrease in the ability of an economic agent to achieve its inherent objects.

From this definition, it immediately follows that this concept has the following properties.

The concept of a competitor is conditional. Under some conditions, a certain agent may be a competitor in relation to the agent, with others it may not.

A competitor of a certain economic agent is an object of the agent's external environment.

The relation defined by a competitor concept is not symmetrical. This means that due the fact that agent A is a competitor for agent B, it does not follow that agent B is necessarily a competitor for agent A.

Also natural is the set of typical problems connected with classification of any economic objects (see above about the problems of the classification of viability factors), taking into account type of the economic agent, nature and level of pressure and other essential attributes.

Easy to see that the concept of a competitive environment derives from the concepts of external environment, external environment pressure and a competitor.

A competitive environment is an external environment, the pressure of which on the economic agent is directly or indirectly caused by the activity (state) of other economic agents, i.e. competitors.

Bearing this in mind, it is possible to speak of **competitive pressure** (*competitive force pressure*) as a particular case of the external environment's pressure, in which the pressure caused by the action of other factors is eliminated.

The whole range of tasks associated with an external environment pressure concept (see above).

Based on the concepts of the economic agent's viability and the competitive environment, the concept of the economic agent's competitiveness can be defined as follows: **the competitiveness of the economic agent** is the agent's viability in a competitive environment.

As a concept derived from the concept of viability, the competitiveness as an attribute of an economic agent inherits all features of viability as noted above.

With this in mind, the following concepts directly related to the concept of competitiveness acquire a completely definite meaning:

- **level of competitiveness** (defined by analogy with the concept of the viability level);
- **indicator of competitiveness level** (defined by analogy with the concept of viability level's indicator);
- **assessment of competitiveness level** (defined by analogy with the concept of viability level assessment).

In connection with the last paragraph, it should be noted that assessments of competitiveness inherit all attributes of a viability assessment of an economic agent as mentioned above.

It seems quite clear that the following concepts gain obvious meaning:

- **competitiveness factor** (analogue of the viability factor, which inherits all attributes of viability factor's concept);
- **level (state) of the competitiveness factor** (analogue of the viability factor state);
- **indicator of the competitiveness factor's state** (analogous to the viability factor indicator);
- **assessment (of level, state) of the competitiveness factor** (analogue of the assessment of the viability level, which inherits all the properties of the viability factor assessments).

Taking into account the above stated, the introduction into the conceptual apparatus of theory of the concepts of elementary (primary) and generalized (group) competitiveness factors, which are analogous to the concepts of elementary and generalized viability factors, is also quite natural.

Obviously, in the framework of assessing the competitiveness factor, the whole range of tasks associated with assessments of viability factors (see above) is relevant.

By analogy with the attribute of viability, the competitiveness level of an economic agent is a function of the state of whole set of competitiveness factors of an agent.

The concept of the competitiveness factor's state, in turn, makes possible to define unambiguously the concept of the economic agent's competitive advantage. The expediency of introducing this concept into the concept system of the theory of competitiveness, main reasons for its occurrence will be briefly discussed below.

The competitive advantage (disadvantage) of the economic agent can be defined as more (less) preferable (*in terms of achieving the main objective of an economic agent, as regards provided level of competitiveness*) state of the same elementary or generalized competitiveness factor comparing with the competitor's factor state.

Competitive advantage (disadvantage), thus, is a comparative characteristic (assessment) of the same competitiveness factors state of competitors.

Obviously, the concept of competitive advantage inherits the hierarchy property from the concept of competitiveness factor.

In the case of two or more elementary and/or group factors, one could speak of a competitive advantage as on more preferable combination of a certain set of competitiveness factors while comparing one competitor with another.

The difference in external environments of competitors limits possibilities and also increases objective difficulties in comparing factors of competitors' competitiveness with a decrease of factors' hierarchy level. Examples are enterprises producing qualitatively different products, or enterprises using qualitatively different resources for production. In such cases, direct comparison of enterprise's competitiveness elementary factors, as well as factors with low levels of commonness, is impossible. This possibility appears only by comparing factors of higher levels of commonness. In this regard, competitive comparisons of various economic agents may require solving the following problems: (i) problem of choosing hierarchical level of competitiveness' factors that allow their comparison for compared economic agents; (ii) problem of developing methods for identifying competitive advantages (disadvantages), the appearance of which is due to the very nature of the competitiveness factor and competitive advantage, as a concept derived from the concept of competitiveness factor.

The properties of competitiveness as a specific attribute of economic agents, identified through the logical analysis, are subject to quantitative measurement, predetermine theoretically possible ways of measuring, which, therefore, are also a logical consequence of the above theoretical constructions.

The next section of the paper gives a brief description of such opportunities that may be useful for understanding the nature of existing approaches to measuring competitiveness, their capabilities, strengths and weaknesses, possible directions for improving these approaches, as well as for developing new methods of economic agents' competitiveness assessment, which would take into account the internal nature of this attribute to the full extent.

6. Key Methodological Features of the Competitiveness Measurement

Complexity and methodology of the economic agents competitiveness measuring are due to the peculiarities of this attribute as an object of measurement. The most important among them are the latent nature, the complex nature (dependence on a large number of factors of different nature), and the qualitative difference between economic agents (their internal and external environments).

Due to the latent nature of competitiveness, which excludes direct observation and measurement of this attribute, the following approaches are theoretically possible:

- retrospective analysis of actual manifestations of the economic agent competitiveness and assessment of competitiveness on the basis of the analysis results extrapolation;
- analysis of actual state of factors of the economic agent competitiveness and development of the competitiveness assessment as a certain function of these factors' state;

- mixed approach as some combination of elements of the previous two approaches;
- an approach based on quasi-direct measurement methods, which are based on economic and mathematical modeling of the economy agent and its level of competitiveness (Brutman, 2012; Karapeychik, 2013 a, b, c, Savchuk, 2004; Shpak, 2018, p. 13).

In the framework of this approach, competitiveness level assessments are the calculated values of the competitiveness indicators reflected in the models.

Therefore quasi-direct measurement methods are able to provide direct observation of the economic agent's level of competitiveness (mediated only by the model of the agent), assuming that the economic agent's model is simulated.

Let's give a brief description of these approaches, naturally arising from their nature, on the example of enterprises, assuming that the assessment of their competitiveness is based on net profit's indicator for a certain period.

The competitiveness level assessment on actual manifestations

The main assumption

The competitiveness of the economic agent is directly correlated with the average assessment of actual performance during the observation period (for an enterprise, profitability averaged over period).

Advantages

Availability of statistical data. The information base of this approach is the time series of actual values of the net profit indicator's actual values.

Statistical methods application is possible.

Disadvantages

The result of the assessment is a predictive assessment of the actual manifestations of competitiveness, rather than the level of the attribute itself.

The complexity of assessment is due to the need to extrapolate (predict) the properties of things that undergo qualitative changes (in general case) as a result of measures for their competitiveness improvement.

Lack of assessments for solving basic tasks of managing.

Evaluation of the competitiveness level on competitiveness factors

The main assumption

The competitiveness of the economic agent is directly correlated with the average assessment of the competitiveness factors state.

Advantages

Availability of statistical data. The information base of this approach is multidimensional time series of indicators actual values characterizing the state of competitiveness factors.

Disadvantages

The result of the assessment is an assessment of the competitiveness factors' combination, rather than competitiveness.

The need to solve the problem of significant factors' choice.

The need to consider future changes of the specified factor's state during the assessment, i.e. relevant forecasts.

The complexity of constructing a scientifically based integral index of competitiveness in the form of a convolution of the state of factors indicators.

Inability to take into account the interaction of factors, the complex action of factors' combination.

Assessment of the competitiveness level on actual manifestations and competitiveness factors

The main assumption

The competitiveness of the economic agent is directly correlated with the average assessment of its activities' actual results and the state of competitiveness factors.

This approach inherits the advantages and disadvantages of both previous approaches.

Assessment of the competitiveness level based on modeling methods

The main assumption

The model is adequate to the object of assessment, the possibility of transferring the results of model's analysis to a real object.

Advantages

The assessment result describes the level of economic agent competitiveness.

The advantages of this approach are determined by the advantages inherent to modeling as a cognitive method. The main ones are the possibility of taking into account the complex influence of competitiveness factors on the level of the economic agent's competitiveness and the possibility of explaining all the causal links between the model's indicators.

Provides comparability of economic agents of any type (with the right choice of competitiveness indicators), i.e. allows to make full use of competitiveness absolute nature as an attribute of the economic agent when assessing.

Disadvantages

The complexity of adequate models' development and methods of their analysis (for large dimension models, considering dynamic and optimization nature, taking into account the uncertainty factor).

The models information base involves a development of competitiveness external factors changes' forecasts, if the model itself does not include the economic agent's environment model as one of its components.

7. Some Side Consequents

1. The discussion, initiated by P. Krugman, basically has nothing to do with the competitiveness as an attribute of the national economy and availability of such an attribute of the national economy, and testifies that, firstly, competitiveness basic concepts are not clearly defined by the participants of the discussion, in particular, the concept of competitiveness, the definitions (definitions' wordings) of the competitiveness concepts, the competitiveness factor and some others; secondly, the complexity of the national economy competitiveness measuring and its management; thirdly, the presence of a large number of unsolved theoretical and applied issues of managing the countries competitiveness.

2. The concept of products' competitiveness, which is widespread in the theory of competition within the framework of the ideas presented above, is scientifically untenable. According to a competitor (a concept derived from the economic agent's concept) and a competitiveness (as an attribute of the economic agent) concepts, only an economic agent can be the carrier of the "competitiveness" attribute. The supply of a product (service) of a certain quality and at a certain price on a market by a particular economic agent leads to a change in the state of the external environment of other market participants and thus acts as a tool of competitive pressure imposed by one agent upon another economic agents – the market participants. Consumers' preference of a certain product from a certain set of identical purpose goods or substitute goods does not indicate a higher level of this product's competitiveness, but a higher product's quality.

3. Improving the competitiveness of the economic agent is possible due to a change in the set of competitiveness factors and such an impact on competitiveness's governable factors, that in aggregate leads to competitiveness's level improvement. At that, a term "in aggregate" is the key.

4. Within behavioral framework a competition (rivalry) is considered as a characteristic of economic agent's behavior, and in the line with the above mentioned, represents activities of economic agents to improve competitiveness. Therefore, the concept competition, understood as economic agent's behavioral characteristic, does not carry any additional content in comparison with the concept "improvement of competitiveness", "activity on competitiveness improvement".

Within structural framework, thanks to the use of the concepts and terms introduced above, a competition concept is strictly defined as follows: **competition** is a state of the economy when economic agents experience competitive pressure.

5. Assuming that the methods for measuring the competitiveness level of a single economic agent that satisfy the above-stated requirements are known, the problem of comparing different economic agents does not arise in terms of competitiveness. To compare such agents, it is sufficient to compare them by the values of the competitiveness level indicator. If measurement of certain properties of economic agents is difficult (for example, measuring the competitiveness level, which is a function of many factors of qualitatively different nature), the methods of comparative analysis based on a pair-wise comparison of factors are frequently used. Within the framework of the above concepts' system of the theory of competitiveness and their interrelations, the emergence and widespread use of the competitive advantage concept can be considered as a response to the difficulties of developing perfect methods for measuring competitiveness, as one of the ways to avoid the fundamental difficulties of measuring this attribute, which inevitably goes along with a decrease of feasibility level and accuracy of competitiveness assessments. As a rule, such methods relate to the second and third approaches of measuring the economic agents' competitiveness with their own strengths and weaknesses.

Conclusion

The logical approach is an effective tool for developing an internally consistent key concepts system of theories that have not yet reached a sufficiently high level of formalization in their development. This approach is based on the requirements of logic to scientific concepts and systems of scientific concepts and assumes, with reference to the theory of competitiveness, the formation of a concepts system by their logical deduction from a set of basic concepts and statements of economic theory.

Such a basis for the theory of competitiveness can be an economic agent's concept and the basic properties of the economic agents, where availability of immanent objectives and target behavior as key features of their vital activity takes central place, as well as the economic agents' typology generally accepted in economics, which supposed all agents to be divided into four classes: households, firms, governors and other.

Consideration of the economic agent as a system, which inherits aspirations for long-term existence makes the ability for a long-term existence as the most important attribute. Thus, the concept of economic agent viability reflects the fundamental property of economic systems and is one of the key concepts of economic management theory.

The definitions formulations of the enterprises and national economies viability proposed in the article are fairly general and unambiguous, based on a minimum number of concepts commonly accepted in economics. These explicitly specify the nature of the corresponding attribute (this is a certain ability of economic agents), its properties as an object of measurement, predetermine the range of tasks traditionally required to solve the problem of

measuring such attributes and general requirements for the results of its solution, as well as the range of additional concepts to describe the problem and its solutions.

The logical basis for the methodologically correct definition of the economic agent competitiveness's concept can be a clear definition and logical interconnection of such concepts as the viability factor concept, the internal and external environment of the economic agent, including main components of the external environment, environmental pressures and the competitor's concept. At the same time, the concept of the competitor is a key one, allowing to introduce routinely the concepts of competitive environment and define the competitiveness as an economic agent's viability in competitive environment.

Competitiveness as a concept corresponding to an attribute derived from viability, inherits all the properties of viability and generates a range of tasks similar the ones that related to the problem of measuring and managing the economic agent viability. At that, properties of competitiveness as a certain attribute of an economic agent predetermine possible methodological approaches to its measurement, as well as problems (difficulties) related to these approaches.

From the standpoint of the logical approach and the key concepts system of the competitiveness theory proposed as a result of its consistent application, there is an opportunity to take a fresh look at some of the theories' provisions, assessment of its development state and actively discussed topics.

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