

## Methodology of Management Innovation Hypercompetition

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### Abstract

The article presents substantiation of interdisciplinary methodological approach to the study of innovative hypercompetition, discloses its nature and analyzes the specifics of its manifestation. It presents the formation genesis of the categorical essence of hypercompetition in the theoretical insights of Russian and foreign authors of XX-XXI century. The preconditions of the innovative hypercompetitive markets formation, as well as enterprises, operating in these markets, are defined. Specific features of highly competitive products that serve the foundation of global innovation are identified. The role of scientific and research results in the process of innovative hypercompetition is revealed.

**Keywords:** advance dominant innovations, creative destruction, extended technological system, information economics, hypercompetition, sustainable innovative development, technological stalemate, theory of innovation development

### 1. Introduction

Globality of modern economy requires innovative approach to competition. The globalization of economic relations, production internationalization, permeability of national economies, liberalization of world trade and transfer of new technologies have given to competition a global nature. Aggravation of contradictions and increased competition is noted at almost all levels, all sectors and types of international and national markets. International competitiveness of products and services became the basic term providing the success of national innovation, as well as corporations, businesses and individual innovators. In the XXI century we are talking about the formation of a qualitatively new kind of competition namely an innovative hypercompetition (Dyatlov, 2010).

Its nature is a controlled hypercompetitive development of global markets in the age of advanced leading innovations, providing the new advanced methods of programmable controlled impact on the goals, motives, interests, needs and the economic behavior of people (partners, potential competitors, consumers, etc.) towards obtaining the target programmed benefits and effects by vertical-horizontal-network integration into the global structure.

### 2. Main Part

Totalizing globalization makes nations and companies to compete severely with each other, using various means, for acquisition of a new scientific knowledge, for the power of supervision and control the resources, information and financial flows, for a share of world markets, ownership of the intellectual and information capital and for the right to inspect and control the economic processes. This largely determines their leadership status and high competitiveness on world markets. On the other hand, new global (supranational) institutions and centers for management, coordination and monitoring of national and interregional organizations, as well as the world economy as a whole, are evolved. Basic concepts, models, methods, mechanisms and forms of economic regulation and competition in the global, national, inter-regional, industry-specific and local levels are qualitatively changing and becoming more flexible, active and total. In the transition to a global innovative and information economy, national governments should take into account in their macroeconomic, foreign and social

policy the priorities and requirements of the global markets development, as well as regulations, requirements and limitations of the global innovation hypercompetitiveness, recommendations of global (supranational) control, coordination and management institutions (Vasil'tsov & Vasil'tsova, 2013).

The total and comprehensive globalization, hypercompetition, informatization and net creation leads to a new type of vertical and horizontal net integrated companies with new integrative functions, tasks and techniques of hypercompetitive struggle in the information net economy which we call the global innovation hypercompetitive companies. The new notion of the global innovation hypercompetitive companies introduces into the scientific circulation discriminates the integrative comprehensive approach to competition and innovation. The main features of global innovation hypercompetitive companies are globalness, infonetting, innovationness, hypercompetitiveness, flexibility, mobility, integration. They are distinguished by large size, market domination, high capitalization, matrix net flexible structurally functional organization and efficient interactive management. It is particularly noteworthy that the global innovation hypercompetitive companies differ principally from large traditional companies (for instance, those of raw stock) whose business is based on traditional resources and traditional market technique, management and competition (Dyatlov, 2010).

The best strategy for global innovation hypercompetitive companies is that of aggressive innovation of technological leadership or the strategy of global innovation of hypercompetitiveness. Its main components are the intensive hypercompetitive struggle and innovation managerial leadership. In this sense, we introduce another notion of 'leading innovation hypercompetitiveness'. The target characteristics and main indicators of the notion are the global status and technological leadership, capture and retention of the world market considerable share, encouragement and stimulation of stable demand for the innovation products of the company. At the same time the global innovation hypercompetitive companies conducts the global capture and defense of rights and boundaries of intellectual property, ingenuity, brands trademarks, financial and net earnings and effects. The status of global innovation hypercompetitive companies is considered as indicators of public significance, power and role formidability at world markets. In these conditions the global innovation hypercompetitive companies acquire for a certain time and appropriate the global intellectual status rent having the nature of information. The information innovation rent is a global category of information economy which can be determined as the product of new scientific knowledge (innovation, research and development), obtained and appropriated by the hypercompetitive owner of capitalized new knowledge, information resources and technologies, advanced information leading techniques of competition struggle and creative leadership management of integral (distributed in time and space monetary and non-monetary) earning (profit, effect) resulting from innovation capitalization (development, adoption, accumulation, copying and implementation) at all levels and in all spheres of global economy. This rent has the information net nature. Its prolonged additional integral effect results from the ownership and utilization of information intellectual capital (nonmaterial assets), capitalizable innovations. It accounts for a quite significant share in the pricing structure of the capitalized innovation product (service).

The mechanism of appearance of information innovation rent is nontraditional, linear; it is a combination of integral interrelated polyfunctional net effects. The information innovation rent appropriation is based on the implementation and reproduction status brand, polyfunctional net interactive right of new knowledge, information, status brand intellectual property and polyfunctional service brand of innovations by the owner innovator. The mechanism of implementation of this property relates to the interactive right establishment of the owner innovator assuming the assurance of institutional legal protection (Bruhn, 2014).

The global information economy of the innovation hypercompetitive companies results from use of advanced innovations, application of techniques of leading programming and manipulation by the management of economic behavior of competitors and consumers using the hypercompetitive creative marketing, management, logistics, etc. to produce various information net effects: multiplication and synergic net (integral) effects. Varian C. R. identifies two main types of net effects: direct network effects and indirect network effects (Varian, 2005).

Economy is a subject-object driven system, which today has an extremely complex structure, where individual subsystems and elements are increasingly gathering features of integral whole that requires a global and integral control, monitoring and inspection. In the context of totalizing globalization, the comprehensive development of information and communication technologies (ICT), as well as aggravation of competition, the global competitiveness becomes a major feature of advanced economy. Its elements include multiple-level nature and multidimensionality, new knowledge (competences), manageability, etc. They define globalization benefits of the world's leading countries and technologically advanced multinational companies that are strengthening under the new paradigm of innovative development.

### 3. Methodological Approaches to the Analysis of Innovation Competitiveness

Methodological approaches to the analysis of innovation competitiveness are developed since the beginning of the XX century, when in 1911 J. Schumpeter discovered innovative nature of economic development. We believe that hypercompetition in terms of its characteristics within Schumpeter's terminology is close to the concept of "creative destruction or the creative destruction of the market" at the national and global levels (Schumpeter, 1942). According to his theory of "creative destruction", economic development "revolves" around innovations, new combinations of factors make it possible to reduce production costs. Profit goes to those, who are the first in using innovations. When the innovations become fairly common, production costs align and profit disappears. Old products and old forms of production are displaced. We face a process of "creative destruction." Prosperity is replaced by depression. New combinations of factors are implemented and companies specialize to new conditions. The main impetus comes from the new consumer goods, new production methods and commercial distribution of goods to new markets, as well as new forms of economic organization of the enterprises.

Significant contribution to the theory of innovative development was made by G. Mensch (1979), who proved that the exhaustion of the basic innovations resource leads to "technological stalemate", characterizing stagnation in economic development (Mensch, 1979). In 1982 English economists C. Freeman, J. Clark and L. Soete introduced the concept of "extended technological system", involving such elements as technical and social innovations (Freeman, Clark, & Soete, 1982). German economist A. Kleinknecht in 1987 noted that the production clusters of innovative products are emerged in the phase of decay, while those of innovative processes appear in the upward phase of the long wave (Kleinknecht, 1987). Innovation factors have a significant impact on economic growth and competitiveness, and are defined by the formation, development and aging, i.e. by lifecycle of technological systems. The ideas of mentioned authors, as well as a number of other contemporary researchers, provided the basis for the development of the concept of hypercompetitiveness.

The concept of "hypercompetition" was studied in detail by R. D'Aveni, who has associated this notion with the "ever-increasing rivalry in the form of rapidly emerging product innovations, reduction the time needed for R&D, aggressive price and competencies competition and experimentation, as well as with new approaches in serving the customer needs". Scientist uses the term "hypercompetition" to describe the industry-specific environment, where contestants must act with lightning speed to get market leadership and destroy the advantages of their competitors (D'Aveni, 1994).

Professor of Basel University M. Bruhn understands under the term of "hypercompetition" "a situation, where businesses are increasingly subjected to the cumulative effects of the competitive factors, previously isolated from each other, that lead to a multidimensional, dynamic and aggressive competition. Author identifies several distinctive features of hypercompetition. First, it simultaneously covers multiple areas, the most important of which are costs, quality, timescales, "know-how", creation of market barriers and strengthening of financial status. In a hypercompetitive environment, management cannot concentrate efforts on just one of the competitive parameters; they all need to be considered simultaneously. Secondly, companies should take into account the multidimensional nature of hypercompetition. It can occur at different levels, such as the commodity markets, resource area, between different entrepreneurial concepts, as part of a business combination, when the company is struggling against rivals not alone, but allying with other manufacturers, suppliers, cooperation partners and resellers. Multidimensionality of hypercompetition manifests in the fact that the company responds differently to the situation in the various markets. Application of the concept of so-called multi-point competition allows diametrically opposite market behavior of enterprise in various key areas (offensive, defensive, etc.). Third, dynamic market development is a attribute of hypercompetition. Competitors' positions and placement of forces change with increasing speed. Market dynamics is characterized by the continuous penetration of new competitors into the market and exit of old ones from the market, the emergence of new types of services, a large number of mergers and purchases of enterprises, etc. Forecasting the economic situations becomes more and more problematic and the forecasts period is getting shorter. Fourth, a growing aggression of market rivalry is another indication of the hypercompetition. Direct attacks to weaken competitors and infringement of rights are attempted in increasing frequency. The purpose of such aggression is to overturn the equilibrium in the competitors' power outlook. To that end the aggressive pricing policy is used most often (Bruhn, 2014).

As is noted in the works of American researchers B. Allred and K. Steensma, the impact of innovation on competitiveness and economic growth is a general objective law. Important role in this process is played by the willingness of companies to implement innovations under risk and uncertainty of the results. Innovative behavior of companies is affected by factors of innovation at the company level (the scale of the company, capital structure and the level of diversification), at the industry level (rate of technological change, fluctuations in

demand and intensity of competition), and at the level of the national economy. Increase in agility and global scale of competition requires a deeper understanding of the innovation factors and behavior of the companies (Allred & Steensma, 2005).

#### **4. The Factors Influencing Suppression of Innovations**

Uncertainty level of future results and high risks inhibit innovations, whereas competition and expected benefits drive them. Unlike industries with monopoly or oligopoly features, the industry sectors, experiencing increasing competition and reduced product life cycle, require timely and effective innovations. These factors are most strongly manifested in global industries, where companies solve the problems of global integration and the organization of international operations in order to achieve efficiency and compete at the global level.

Significant contribution to the study of the influence of innovation factors on economic growth was made by the famous American economist W. J. Baumol, who attempted to integrate entrepreneurship into the market economy model by allocating special role of competition created by new enterprises within the industry. He concluded that the creation of conditions and encouragement the emergence of new innovative companies by reducing market entry barriers may serve as an effective instrument of antimonopoly policy and promotion of competition. According to W. Baumol, in a capitalist economy, product innovation, rather than price, becomes the primary means of ensuring the competitiveness of the leading companies. Product innovation has turned the free market economy into the mechanism of successful growth.

Borrowing and copying of businesses by companies-imitators, who make improvements related to market localization, have a particular importance in the innovation reproduction process. To effectively use this source, one needs to be both successful innovator and successful counterfeiter (Baumol, Eliasson, & Henrekson, 2004).

Renowned expert in the field of management P. Drucker noted that today business is embodied in new forms, whose origins lie in the rapid evolution of modern technology and modern management that itself turns into a new technology. According to him, a new technology is not only advanced materials, electronics and biotechnology, but also a new entrepreneurial management, often providing even a greater impact on progress than new inventions (Drucker, 1985).

The general idea that grounded the development of a new concept of sustainable innovative development by providing hypercompetitive benefits of business entities is that hypercompetition is characterized by ever-increasing rivalry in the form of rapidly emerging technology, managerial and product innovations.

The time needed for R&D in hypercompetitive environment is reduced and an aggressive competitive price and competencies strategy is employed along with the experimentation based on new approaches in servicing the customer needs and buying preferences. Hypercompetition assumes intense and fast actions of leading companies against their competitors towards gaining market superiority and destroy the advantages of their competitors.

#### **5. Conclusion**

Hypercompetition is caused by globalization processes, as well as emergence of qualitatively new successful competitors, called hypercompetitors, on local, sectorial, national and international markets (both conventional and virtual-network markets). In our opinion, hypercompetitive companies (corporations) offer innovative products, services, as well as maintenance and management services that are characterized by global innovative nature.

Global innovation is characterized, above all, by offering highly competitive leading innovative products and services with a qualitatively new, largely universal, multifunctional features and consumer attributes, having stable demand in the global markets and receiving the status of global innovations and brands (differentiated by types and trademarks), as well as forming and widening new niches in the global markets and forming and developing new consumers needs and preferences in most countries. The innovations result in the efficient application of production factors when the law of growing earnings leaps under the effect of research and development. R. Wiber notes that, unlike the industrial net, direct net effects and positive response dominate in the information net economy, rather than the law of receding extreme profitability, yield the leaping extreme profitability (Wiber, 2003). While the law of receding extreme performance acts in the industrial market economy (printability), the information net economy enjoys the law of increasing extreme performance. This law is due to a number of factors: innovations, grows of general performance, business integration, appearance of net mollification effects, and others.

Global innovation hypercompetition is a dynamic totalizing process of innovative (intelligential-ideological, scientific-educational, utility-technological, as well as organizational-managerial) competition in global markets

among the leading high-tech companies, representing as a rule, the most developed countries in the world. The works of scientists, who studied over the past 100 years, both in Russia and abroad, the effect of innovations on economic growth, serve a methodological basis for the management of innovative development of various business entities in a hypercompetitive environment.

At present, in the 21st century, the total globalization and world market hypercompetitive progress require the theoretical and methodological justification and gradual transition to new ideology, concept, model of business progress and economy in general. It can be determined as the information net economy with the dominant progress of information net economy based on new knowledge, research and development, techniques of active hypercompetitive struggle and innovative management leadership the basic components of which are the global innovation hypercompetitive companies.

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