

Theoretical and conceptual bases of new industrialization process in life support

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Abstract – In this article, the authors reveal the basic foundations of new industrialization, highlight the conceptual approaches of industrial development, particularly the financial component, which provides and characterizes the effectiveness of innovative processes within the sphere of high-performance technologies and production. The research rationale is determined by the need to form a model of innovative financial mechanism and tools for evaluating strategic decisions made at the stage of formation, development and implementation of the program-target objectives of the economy of industrialization. The purpose of the research is to examine the scientific foundations of the innovative developing of the financial instruments of the new industrialized economy. To achieve this goal, the Authors implemented the following tasks: 1) to set out the basics of the model of the innovation economy of Russia; 2) to look into the definitions of “new industrialization”; 3) to identify and characterize the types of sectoral economic systems in the forming process of new industrialization; 4) to identify trends in the development of the life support sector (trade) and determine the research methods in order to manage the quality structure of the consumer market; 5) to work out a conceptual model of the financial component of the economy of new industrialization; 6) to identify areas for the research in the field of scientific knowledge of the economy of the new industrialization.

Keywords- industrialization; innovative economy; life-support sector; economic subject; financial component; conceptual model of innovative development.

I. INTRODUCTION

The achievement of a high standard of living for the population of Russia is ensured by the innovative acceleration of economic development, which is integral to highly-efficient technologies, the most advanced technical means and working methods used in various areas of the new economy. The main provisions of the Socio-Economic Development Strategy and the National Security Strategy establish that at the present stage of Russia's development special attention must be paid to the possibilities given by strategies of territorial development.

Back in 2011 the Russian President V. Putin emphasized the importance of new industrialization, and today the direction of the innovation economy stands out within discussions. The challenge of materializing the new industrialization is the spatial-economic component of a separately considered region, which is characterized by the social and economic situation, climate conditions, resource base, institutional resources, and others. In the process of forming the strategically important tasks of the spatial development of the regions a

special attention is paid to industrial economic subjects that realise the key directions of economic activity.

Within the modern industrialization development the most successful and dynamically developing sector of the innovative economy is retail business. It has an active influence on social and economic processes and infrastructure of the Russian territories. The main problematic issue in the innovative economy in the context of the typology of the life-support sector of new industrialization is the lack of agreed conceptual and theoretical views on the process of financial management and on the assessment of its performance by the parties concerned. Drawing on theoretical and methodological research, and both local and foreign modern practical expertise in financial management of a retail participant in the consumer's market, the authors defined their conceptual positions, developed a model of innovative economy development applicable to industrial economic subjects, and formed their system of criteria and evaluation assessment methods.

The *practical significance* of the research is determined by the scientifically based positions of the new management within the innovative economy of the new industrialization process, and by *rethinking* the accounting and analytical functions. The research *methodology* is on the one hand based on an abstraction, which allows the authors to determine the causes and factors of its effectiveness, and, on the other hand, on the dialectical use of analysis and synthesis of the economic categories under consideration.

II. RESEARCHING THE FUNDAMENTALS OF INNOVATIVE ECONOMY: CONCEPT AND CONTENT

The basic model of the new industrialization is "... the top-priority development of high-tech production which is integrated with science and education" [4].

The created Concept of scientific-technological and industrial development is aimed at significantly improving the socio-economic situation, raising the level and quality of life of the population, ensuring political and economic security, which will promote the role and influence of Russia in global industrialization¹. The way to achieve the listed Conceptual positions is to create an innovative high tech, scientific, technical and industrial base. The main problem of the current state of industrialization in Russia is driving of its own pro-

¹ Article of the New Type Public Association "The concept of new industrialization of Russia. Ideas to discuss", 19.07.2017

duction facilities of the market and the industrial, technological and economic dependence. According to B.V. Drozdov, the Chairman of the Scientific, Technological and Industrial Development Council, the General Director of the Scientific and Research Institute of Information and Analysis Technologies (NII IAT) "... to put the scientific, technological and industrial development of the country's economy into effect, it is necessary to create an effective system of organization and management of the processes of new industrialization²".

The concept of "new industrialization" has not yet been included into the vocabulary of modern domestic economists [12, p. 685]. New industrialization is a specific economic system, formed on the basis of new knowledge and economic thought.

The majority opinion states that the main feature of the new industrialization is the leadership of high-tech, innovative technical industries: according to S. Lyubimtseva, "the new industrialization suggests the existence of industrial production, in which the quality of the information space is given much attention, and new construction materials are used". B. Davydov and P.Evstratov suggest that under the process of new industrialization, there is a social leap to a higher stage of technological development based on the intellectual potential of the country [5]. O. Romanova and N. Bukhvalov [11] understand new industrialization as "... the active use of the most important domestic innovative tools of the country's industrial technological restructuring, which helps to create new high-tech economic sectors". The modern understanding of the concept in the context of innovative economy is associated with the identification of different types of new industrialization (Table 1).

TABLE I. TYPES OF "NEW INDUSTRIALIZATION" - ESSENTIAL CHARACTERISTICS

Industrialization type	Characteristics
Industrialization - 1 (<i>industrial production</i>)	machine-tool production, metallurgy, mechanical engineering, machine-tool construction, agricultural engineering, light and food industry, chemical industry, mining industry, oil and gas industry with a focus on deep processing of extracted raw materials, etc.
Industrialization - 2 (<i>life support</i>)	life support sectors: energy, transport and communications, housing, water supply and sanitation, construction, trade and public catering, domestic and public services, health care, education, children's training and education food and clothing
Industrialization - 3 (<i>logistics</i>)	activities for the operation, maintenance in working condition, repair, reconstruction and development of the entire life support system of industrial production and the production of works and services
Industrialization - 4 (<i>scientific thought</i>)	intellectual software, including research, development, design

The types of new industrialization establish new strategic development opportunities, which are based on the stream of innovations in various spheres of production and on applying strategic financial instruments used to assess quantitative and qualitative performance parameters. The relationship and interdependence between the innovative economy and the types of new industrialization determine the model of innovation development (Fig. 1).

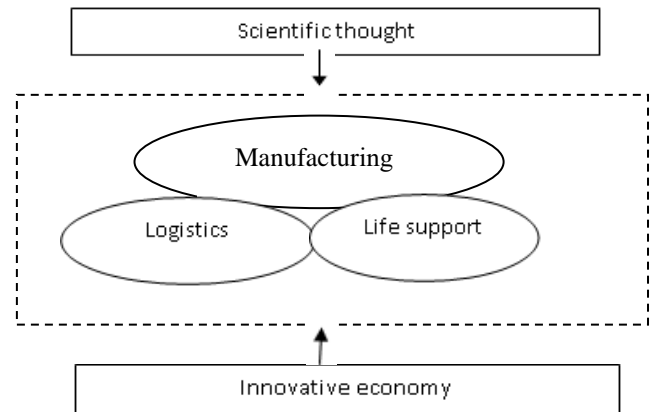


Fig. 1– An innovative development model of the process of new industrialization

Innovative economy is a new direction in the general industrialization mechanism, therefore there is a need to highlight its main essential characteristics and basic components that correspond to the integration process in the modern world:

- 1) any business is supported by the (necessary) production factors – means and objects of labor, labor resources – which at the present stage must comply with STP; the leading role here is given to innovation activity realized by innovating the labor resources;
- 2) the existing regularities of implemented business processes based on the law of increasing returns;
- 3) at the stage of search and development of mechanisms and tools for new industrialization process, priority should be given to small and medium-sized businesses, while large economic agents should contribute to the development of new markets and new technologies;
- 4) a comprehensive infrastructure of the economic space in which the integration of economic business processes is ensured with the help of the Internet and modern innovations that help to optimize costs;
- 5) innovative and communication technologies of feedback and promotion.

Objective and subjective conditions of Russian economic development lead to the need to develop the conceptual foundations of the new industrialization economy, taking into account the experience of other countries, as well as using financial instruments and mechanisms that provide a comprehensive assessment of integration processes in the context of micro, macro- and meso- economics of the process of new industrialization.

² Article of the New Type Public Association "The concept of new industrialization of Russia. Ideas to discuss", 19.07.2017

III. AN ANALYTICAL REVIEW ON THE CURRENT SITUATION IN LIFE MAINTENANCE: DYNAMICS, DEVELOPMENT PROBLEMS AND RESEARCH METHODS

The regional consumer market is a complex spatial-economic system which consists of three industry segments: trading, public catering and services. Trading takes an important place in the system of economic relations between regions, sectors of the economy, producers and buyers. The specific nature of trading is determined by "... uninterrupted and permanent communication between the population on the one hand, and the suppliers and manufacturers on the other" [6, p. 266]. The indicating factor (of the financial component) of the industry's livelihood in this sector is goods turnover. The dynamics of trade turnover across the state are presented in table 2.

TABLE II. DYNAMICS OF RETAIL TURNOVER IN RUSSIA, TRILLION. RUB

Year	2000	2005	2010	2011	2012	2013
Retail turnover	2352	7041	16515	19104	21394	23686

Year	2013	2014	2015	2016	2017
Retail turnover	23686	26356	27538	29741,04	30633,27

Note* The source is "Russia in numbers: 2016 – a brief statistical compilation./ Federal State Statistics Service-M., P76 2016 - 543 pp., supplemented by the authors on the basis of the analytical report of the Federal State Statistics Service of the Russian Federation as on December 31, 2017, the data are based on comparable prices

The aggregate commodity turnover of each territory is formed by the retail sale of goods by the market participant that work in a stationary retail network. In the rating of the Ural Federal District (2013–2017), the Sverdlovsk region consistently took the first place for the retail trade turnover, and the fourth place among all the subjects of the Russian Federation (after Moscow, Moscow region, Krasnodar Region and St. Petersburg) [9, p. 841]. The balance of the retail trade turnover in the Sverdlovsk region constantly shows 48.6% (food products) and 51.4% (non-food products).

Under the influence of scientific and technological progress, the building of agglomerations, the internationalization of the trading financial system, the merging of the retail and wholesale trade functions, a certain restructuring in the hierarchy of market zones and market centers can be seen. The tendency to increase the number of network commerce is due to the global economic practice of innovative development, increased competition, globalization, and an increase in economic entities operating in this segment of the consumer market. All this led to the transition from the pure competitive market where a large number of retailer players compete among themselves to the oligopolistic market, at which shopping units (stores) belong to several large companies.

To regulate the process of building the innovative consumer market in the retail segment properly, and to provide a high-quality, highly qualified management, it is necessary to

develop new (innovative) conceptual ways for retail turnover modeling and performance evaluation. The development of regional consumer markets was brought up in the works of such authors as N.N. Tereshchenko, E.V. Shcherbenko and I.V. Petrsknnya [14]; T.N. Cheremisin [13]; V.M. Timiryanova, A.F. Zimin, E.V. Zilina [15] and others. Most of the research covered the topic in the context of territorial consumer markets and their segments using statistical methods. This allowed to estimate the degree of heterogeneity, the range of variation, the oscillation coefficient, the standard deviation and the variation coefficient. Quantitative statistical methods were used to compare indicators of retail trade, per capita incomes of the population, price index, etc.

Speaking of retail trade segments and socio-economic effects it is possible to make a case for the structure of the consumer market of the municipality (territory) using the Moran index (formula 1):

$$I_m = \frac{N}{\sum_i \sum_j W_{ij}} \frac{\sum_i \sum_j W_{ij} (X_i - \bar{X})(X_j - \bar{X})}{\sum_i (X_i - \bar{X})^2} \quad (1)$$

in which N is the number of the considered municipal territories in the studied territory of the region; \bar{X} – is the average value of the analyzed indicator, and W_{ij} – indicates values of the matrix of weights.

The anticipated value of the Moran index is determined by the following formula (formula 2):

$$E(I) = \frac{-1}{(N-1)} \quad (2)$$

A local Morano index is used to identify municipalities with general trends of socio-economic development within the studied territory (region) (formula 3):

$$L_{imi} = \frac{(X_i - \bar{X}) \sum_j W_{ij} (X_j - \bar{X})}{\sum_i (X_i - \bar{X})^2} \quad (3)$$

The indicator gives individual estimates for each municipality in the studied area. This will allow to predict the expected turnover in a territory and the consumer market structure in the retail segment both for the total population and per capita, as well as to determine the direction of acceleration of reproduction processes in the course of the new industrialization for a single territory and or the whole country. Spatial analysis and its results are an objective theoretical and practical basis for predicting the development indicators of a single territory (municipality and region).

IV. THEORETICAL AND PRACTICAL BASES OF THE ELEMENTS OF THE FINANCIAL COMPONENT IN THE MANAGEMENT PROCESS

Today, to ensure the effectiveness in building and managing the innovative economy in the process of new industrialization in Russia within an economic entity, innovative approaches must be applied. A special place here is given to the financial component, which has its own features at different stages of the life cycle of an economic entity. At each of these stages financial goals are determined by the expected financial criteria: increasing income and expanding the structure of activities at the stage of formation and growth, reducing costs and increasing productivity at the stage of sustaina-

ble development, asset utilization and strategy at the maturity stage. At the same time, it is necessary to remember the financial goals of business owners.

According to Robert S. Kaplan and David P. Norton [7, p. 51-52], the financial component allows not only to form indicators for bringing the long-term plans to life, but also to take into account and evaluate all those magnitude variables that can have an impact on the achievement of strategic goals.

Historically, financial indicators have always been the criteria for any business, business process and management decision. Thus in the process of managing the production and business activities of an economic entity in the retail segment of the consumer market, there is a need for information support of management functions.

“The accounting function is designed to provide the management and decision-making processes with reliable information about the state of the controlled object. And analysis here becomes a mean of substantiating management decisions and allows you to close (connect) the information management processes. It is necessary at all stages of preparation and decision-making” [3, p. 945].

Therefore, accounting and analysis as management functions create an information space in which the characteristics of current production and economic activity are given and financial indicators are assessed. The system of financial indicators was formed and justified by the end of the twentieth century. The financial result is determined according to accounting data based on the accounting and analytical information collected at different stages of management. Revenues and expenses are the two fundamental economic categories that form the basis of the financial result – the increase in the amount of profit and the own capital of a commercial organization [16]. As part of the economy of new industrialization process, the definitions of income and expenditure were considered from different perspectives: economic, accounting and tax, and legal (Table 3).

TABLE III. THE FRAMEWORK OF INCOME AND EXPENDITURE ASSESSMENT [10]

Framework	Income	Expenditure
Economic	Receipt of funds at the disposal	Disposition of funds at the disposal
Accounting	Increase of cost benefits (Russian Statutory Accounting 9/99)	Decrease of cost benefits (Russian Statutory Accounting 9/99)
Tax-accounting	Revenues included in the tax base (from sales and extraordinary acc. to Article 249, 250 of The Russian Tax Code) Revenues not included in the tax base (Article 251 of The Russian Tax Code)	Revenues included in the tax base (from manufacturing and sale and extraordinary acc. to Article 253, 265 of The Russian Tax Code) Revenues not included in the tax base (Article 270 of The Russian Tax Code)
Legal	Creation of right	Creation of obligations

To ensure the transparency of the formation of the financial component of the economy in the new industrialization of an economic subject of the life-support sector, it is necessary to use innovative tools. And this tool here is the account-

ing and analytical system (AAS). In modern methodology, there are two approaches to the formation of AAS.

The first approach is based on the allocation of an independent information structure. I.P. Ulyanov and L.V. Popova put the creation of an integrated economic system on the basis of the reference and information fund consisting of a multitude of data: financial accounts, planning records, established norms and standards, and financial statements used to calculate analytical indicators. Yu. A. Mishin says that accounting and analytical information is an integral part of AAS, while L.I. Horjij examines various types of systems through information and analytical functions.

The second approach determines the need to isolate the strategic accounting from the set of types of accounting as the most innovative and strategically strong. Many economic scientists (researchers) support this position. O.E. Nikolaev, and O.V. Alekseeva, T.B. Kuvaldina, S.A. Boronenkova, V.B. Ivashkevich, V.E. Karimov and others claim that using the AAS provides the information needs for strategic accounting.

We believe that as an independent type of accounting, strategic accounting cannot be much of a value, since all information is accumulated by financial accounting, management accounting and tax accounting.

However, as an independent area strategic accounting becomes a platform for the development of strategic directions of development in the innovation economy in new industrialization period. Information base of such development is the data presented in the financial and management statements. Consequently, strategic accounting is a component of an innovative AAS.

Generally the AAS is viewed as: "... a complex of interacting and interrelated elements, providing a process of continuous and targeted collecting, processing and assessing of the information necessary for planning and preparing effective management decisions" [1]; as well as "... an ordered set of interacting, interrelated elements, allowing to form the accounting and analytical support for business processes in a commercial organization by collecting, registering, summarizing, analyzing information and performing the key actions in order to assess the risks of its material distortion" [2].

Summarizing the Authors' positions, we can conclude that the AAS is a set of interrelated and interdependent factors that ensure the process of innovative management of the new industrialization economy within an economic subject in the livelihood sector (trade), by means of targeted collection, systematization, processing and analysing of information using innovative financial schemes and means. The significance and necessity of AAS is determined by modern economic conditions and the adoption of innovative management decisions that facilitate strategic development in the new industrialization policy.

V. RESEARCH RESULTS: CONCEPTUAL BASES

Any targeted activity within the innovative process implies an improvement in the qualitative and quantitative results that are determined by the financial criteria of any business.

From this point of view, the functioning of economic systems of any level is characterized by economic efficiency

and by getting the specified results while using the optimal amounts of resources.

AAS is an innovative product, which includes support systems; means applied within accounting, analytical, planning, control and controlling systems; technical and economic criteria (TEC) and methodological support (table 4).

TABLE IV. CONCEPTUAL BASES OF THE INNOVATIVE ECONOMY AAS IN THE PROCESS OF NEW INDUSTRIALIZATION

Elements	Conceptual bases			
Fundamental propositions	Terms and definitions	The industrial structure of an economic agent	Industry features of technological processes	The way of forming financial results
	Methodical thoughts and theories of forming AAS			
Conceptual bases	Conceptual bases of the new industrialization economy			
	AAS conceptual bases			
Support systems	Accounting	Analysing	Planning	Controlling
	Regulatory of the support system			
	Interrelation Methodology and interdependence of the AAS support systems			
Accounting toolkit	Financial accounting	Management accounting	Tax registration	Strategic accounting
	Statistical accounting	Actuarial methods	IFRS	
Analytical toolkit	Horizontal analysis	Vertical analysis	Comparative financial analysis	Ratio analysis
	Integrated analysis	Multiple comparative analysis	Matrix analysis	Trend analysis
Planning toolkit	Strategic financial planning	Current financial planning	Practical financial planning	Budgeting
Controlling toolkit	Preliminary strategic controlling	Current financial controlling	Practical financial controlling	Controlling information base
Technical and economic features (TEF)	Capital economic profitability	Degree of financial leverage (rational loan policy concept)	Degree of financial leverage (financial risks concept)	The break even point and the financial stability margin of production and economic activity
Methodological support	Implementing the AAS forming concept			
	Sample benchmarking	Equity EVA ³ ,	Balanced Scorecard	Process-based

³ EVA – Economic Value Added

	analysis	VBM ⁴ , DCF ⁵	models	revenue and expense management
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The Author's proposed concept of AAS in the innovative economy in the process of new industrialization is an integral element of modern innovative financial management, which will improve the quality of accounting and analytical work, evidence-based foundation for strategic management decisions taken from the business owners and financial management perspectives; and contributes to the improvement of its scientific and economic basis.

VI. DIRECTIONS FOR FURTHER RESEARCH

In order to expand the evidence-based and scientifically-grounded base of the conceptual positions developed in the article, the Authors' further research is aimed at finding alternative views on the existing instruments, as well as at methodological support and practical testing of the proposed tools in the real economic environment of managing the new industrialization innovative economy in the life-support sector (trade) within economic subjects.

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⁴ VBM – Value Based Marketing

⁵ DCF – Discounted Cash Flow

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