

Economic security of a city: conceptual role and diagnostics

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Abstract — Economic security of a city is considered as a set of characteristics, indices and conditions providing its good functioning as a complex territorial and economic object. A relevant task is here the diagnostics of the level of the economic security of a city which can be carried out on the basis of the set of social and economic indicators reflecting the capability of the economy of a city to sustainable development, improvement of quality of life for the population, investing into a municipal community. An important constituent of the economic security of a city is the quality and convenience of the environment for life of population considered as favourable conditions for living. This specific constituent of the economic security of the city is the subject of research of the authors.

Keywords — city, economic security, indicators of economic security, structure of economic security, city management, city (municipal) economy

I. INTRODUCTION

The issues of management of the economic security are the center of attention of government authorities, scientists and practitioners as they are directly connected with the perception and development of important problems of existence and survival of an individual, society and the state. The studies of the mechanism of management in the field of economic security of a city have recently got a special importance as the cities are the main centers of the population concentration and focus of economic activity.

The economic security of the country in the whole consists of the security of its regions and municipalities. In the modern economic science the conceptual aspects of the economic security at the national level are thoroughly studied. Herewith the problem of ensuring the economic security of the regions and specifically large cities is studied insufficiently.

Such a situation appeared due to some reasons. First, the economic development of large cities has its specificity which is reflected in the solution of the problems of ensuring the economic security of economic agents and population. In this respect a certain modification of the used approaches, techniques, indicators characterizing the economic security of cities in comparison with other territorial units are required. Second, the issues ensuring the economic security of cities are studied from various, even ambiguous methodological

positions which often contradict one another. In this respect there is a necessity of their comparison and synthesis into a common unit. Third, the system of statistical indicators which are used as qualitative indicators for the assessment of the municipal level of economic security is not sufficiently unified. The municipal level as the lowest level in spatial hierarchy of the economic security of the country has a significant limitation in the access to information but at the same time it is considered to be important as the social and economic development of cities influences the stability and sustainability of the development of the whole macroeconomic system.

The mentioned issues and peculiarities make it difficult to develop general principles of the assessment of the level of economic security and also to develop specific measures of its enforcement taking into account the specificity of the economic development of municipality. At the same time the need for the information of this type is necessary for government and local authorities for the provision, support and development of economic security of specific cities.

II. MATERIALS AND METHODS (MODEL)

The theoretical bases of the research of the economic security were made by the political economists. Thus, a serious contribution to the analysis of the issues of the economic security of the country from the point of view of the foreign trade was made by F. Liszt [9], P. Prebisch [15], I. Vallerstein [20]. The founder of the concept of the protection of the economy of the state from internal macroeconomic threats is J. M. Keynes [8]. The non institutional conception which connects the internal security of the economy with the efficiency of governmental institutional policy is presented by Hernando de Soto [3]. The issues of the economic security were studied by the Russian scientists in the field of economy L.P. Goncharenko [6], V.A. Savin [17], V.K. Senchagov [19]. The notion of the economic security at various management levels is analyzed in the scientific papers of the following scientists: S.Yu. Glaziev [5], A.A. Anishchenko [1], S.A. Potokina, O.N. Bocharova, O.I. Lanina [14] and others.

The essence and elements of the economic security of the regions are quite informatively presented in the papers of N.M. Kalinina [7], S.N. Mityakova [11], O.B. and I.O. Ganin

[4], G.V. Makhanko [10]. The researches of L.A. Borzykh [2], I.V. Novikova and N.I. Krasnikova [12], E.A. Orekhova, A.V. Plyakin, L.R. Kuzmina [13] and other scientists are devoted to the study of the assessment methods and mechanisms of ensuring the economic security of a city.

However the discourse about the city security concerning the determination of its elements, providers and understanding of ways and means of its provision are at a very early stage of development. The condition of the economic security of a city and the institutional structure of its development were not studied by the economists and this fact makes the topic of our research relevant as it reflects the aspects of the economic security of a city as an element of a convenient life of the population living in it.

In the research a set of methods of theoretical and empirical analysis (statistical, graphic, comparison, analogous, description methods) and also the analysis of documents devoted to the issue was used. During the analysis the materials were used which allowed identifying the essence and the elements of the economic security of the city, analyzing the security level, finding problems and threats of economic security ensuring and determining the perspective directions and measures for the improvement of the economic security of the city for the creation of a convenient life of city inhabitants and human potential development. The given research was carried out using the data characterizing the parameters of social and economic development of the city of Rostov-on-Don. Its informational basis are the official statistical data of Federal Statistical Service of Russia (Rosstat) and its territorial branch in the Rostov region (Rostovstat), specialized reports, monitoring and also authors' calculations and scientific researches of the authors.

III. RESULTS AND DISCUSSION

A. Notion and essence of the economic security of the city

In modern conditions of dynamic changes in the economic situation the most important researches become the studies of the economic security level of cities as one of the most important subsystems of the economy. The cities are centers of population concentration, production and infrastructural facilities and also points of economic growth. In modern market conditions the cities are the places of population living. In this respect the problems of the study of the economic security of cities is relevant. The study should be carried out both from the point of view of social and economic system and risks' reductions which accompanies the work of an economic system.

The economic security of the city is determined as the absence of threats and risks for an efficient development of city economy. At the same time an important constituent becomes the influence of the economic security on everyday conditions of population life what is especially important for cities as the stability of the development of municipal economy, minimization of risks of people movement in city space create favourable conditions for life of population in total. Thus, the economic security of a city can be considered

as an indispensable element of the convenience of life of its population, an integral part of quality and standard of living of urban residents and a factor of the city attractiveness.

The notion "economic security" is multi fold and includes a set of elements and factors determining various characteristics of the development of social and economic objects. As a result the ambiguity of interpretation of the mentioned term arises having in mind various approaches to its definition. So, a number of researches connect the economic security with the security of the international economic system including into its definition such performance as the inequality of economic development, indebtedness growth, cyclical fluctuations and some other parameters of general destabilization of economy [11, 10, 4]. Other economists when analyzing the economic security place heavy emphasis on the creation of favourable conditions for a more efficient development of a specific national economy including a free access to foreign sources of raw materials and energy, stability of foreign investments and guarantees of free good exchange [5, 18, 6]. Thus we find the differences in the interpretations of the term under analysis judging from the object of research, as it can be the world economic system, national economy, regional economy or one of its municipalities.

The construct of the notion "economic security of a city" in the authors' opinion can be developed similarly to the definition of the economic security of the country in the whole, its specific regions but taking into account the specificity of the city as a complicated territorial and local economic system. This fact permits us to present the following definition of the economic security applied to the city as the opportunity of conserving the existing development ways of social and economic development at the appearance of internal and external threats in the nearest future. Herewith the economic security of the city is a potential preventing the appearance of situations of achievement by the municipal social and economic system of the main characteristics of life of social and economic system of a city beyond which the threats of problems and negative consequences of development appear.

Having studied the definitions of the economic security at municipal and national levels the following three basic elements being the universal criteria of the assessment of the condition of the economic security of a city and the country as the whole can be mentioned:

1. Economic independence which is seen as an opportunity of control of executive authorities over their own resources which is expressed in the creation of the conditions for production of goods which will be competitive beyond the city economy.
2. Stability and sustainability of economic development includes the protection of all forms of entrepreneurial activity, creation of secure guarantees and conditions for entrepreneurship development, struggle with economic breaches of law and balanced distribution of incomes and expenditures.
3. Capabilities for self development and progress as creation of a favourable environment for investments,

modernization of production facilities, constant growth of professional and educational level of population, social and cultural sphere of the city [1, 11].

B. Constituent of economic security of a city

When analyzing the economic security of cities in a more detailed way it is worth mentioning its main structural elements in terms of spheres and industries of the city economy. In the scientific researches devoted to the study of the economic security of the city, eight structural elements are identified i.e.: technological, technical and production, food supply, monetary, inflationary, power producing, environmental and informational ones [5, 17]. In respect to the municipal level the mentioned constituents can be transformed and presented as follows:

1. The technical and production constituent reflects the opportunities of the city to provide and support the economic relations of economic agents located in its territory, to react to internal and external social and economic shocks and threats due to a sustainable reproduction satisfying the social needs of the urban dwellers.

2. The food supply constituent of the economic security of a city is the basis for a stable provision of the population with necessary food products and is directly connected with the work of food processing enterprises localized in the city and in the rural area in the suburbs. The mentioned firms have a city servicing function for the municipal economy and are connected with the nearest rural municipalities providing it with necessary agricultural raw materials for reprocessing and food production.

3. The financial constituent of economic security of a city is the opportunity of the municipal budget of getting, directing and using investments (both private and governmental) for the provision of a sustainable functioning of the financial system and satisfaction of public needs.

4. The infrastructural constituent of the economic security of cities implies a stable functioning of transport, informational and communicative, engineering and communal, social infrastructure facilities and servicing sphere. This element provides an interrupted supply of the city with necessary set of communal, commercial, communal, social (a wide term meaning the structure of non productive sphere) services and it directly influences the quality of life of urban dwellers, their satisfaction with city environment, filling of the city with infrastructural facilities and quality of their work.

5. The environmental constituent of economic security of cities is the state of the economic environment when the arising contradiction between the environment and society are prevented or are solved in a timely manner without damaging both economic potential of the city and life, state of health of its inhabitants.

C. Indicators of economic security assessment of a city as an element of convenient life of the population

Despite a considerable number of scientific papers devoted to the issues of economic security provision of various level of administration, the suggested approaches and conceptions of

economic security of cities do not take into account their peculiarities. The cities and in particular mega polices significantly vary in the structure of production, labour, innovative and financial potentials. Herewith the demographic characteristics and specialization have various development as well as a number of parameters which are chosen as criteria at the choice of specific instruments and target indicators of the economic security. Moreover the theories of economic security of specific cities of the Russian Federation under analysis significantly vary one from another. Herewith the characteristics and statistical data used for the assessment of the economic security of a city are insufficiently standardized. These circumstances significantly complicate the process of development of synthetic methodic approaches and instruments of the economic security assessment of cities.

By means of the generalization of the main parameters of the economic security of a city a system of indicators for its analysis can be presented which are expressed in the qualitative indices reflecting the most important elements of its functioning in the authors' opinion (Table 1).

TABLE I. INDICATORS OF THE KEY ELEMENTS OF THE ECONOMIC SECURITY OF THE CITY OF ROSTOV-ON-DON, IN AVERAGE IN 2014-2016

Indicators of the economic security of a city	Factual value	Threshold value
<i>Box 1. Capability of city economy to a sustainable development</i>		
Annual growth rate of population number, %	-0.11	0.19
Natural population increase (decrease) per 1000 of population, %	-2.03	0.16
Annual growth rate of economy, %	13.74	9.94
Annual average number of workers in firms per 1000 of population, persons	264	306
Turnover of retail trade per one inhabitant, thousand rubles	374	187
<i>Box 2. Satisfaction of population with conditions of life in a city</i>		
Annual average monthly wage (per year), rubles	30221	34411
Total surface of living premises per one inhabitant (by the end of the year), m ²	24.3	24.9
Share of completely worn fixed assets (in the total number of fixed assets), %	18.5	16.9
Number of doctors of all specializations per 1000 of population, %	76.4	46.9
<i>Box 3. Investment activity</i>		
Investments into fixed capital (in actual current prices) per 1000 of population, thousand rubles	82.2	96.6
Weight of investments into fixed capital financed from the budget (in the total volume of investments), %	24.3	17.2

^a. Calculated and compiled by the authors according to the data [16], [19]

Let us analyze the content of the presented boxes of indicators reflecting the key components of the economic security of a city (Table 1). The first box of indicators includes the data about the economic stability of a city which is determined by financial, economic and demographic indicators which allow assessing the capability of a city to provide normal life conditions for the population despite possible external and internal changes in the country. The second box determines the standard and quality of life of population which are characterized by a number of social and

economic indicators and which reflect housing conditions of population life, social insurance by means of servicing sphere development (healthcare in particular as it directly influences the population health and lifetime as important elements of standard and quality of life), and also the income level obtained from the production of goods what is reflected for the working population by average monthly wage. The third box of indicators characterizes the investment attractiveness of a city which is determined and directly depends on the attraction of funds of businesses and the use of budgetary allocations of various levels (federal and regional ones) spent on the city and also own funds of the city for the expansion of fixed assets.

The given boxes of indicators of economic security assessment of the city do not take into account all the elements of the given phenomenon and that's why they cannot be considered as comprehensive ones. They can be completed by the formation of new groups of indicators at the analysis of a specific city taking into account its peculiarities. Nevertheless the suggested set of indicators allows finding the specificity of the economic security of a city by means of the analysis of main constituents (industrial development, trade, social sphere, income level and housing conditions of its population).

At the same time it is possible to use as the threshold values of indicators the average values of the national economy in the whole, in the set of cities or in a region (entity of the Russian Federation) which is being analyzed.

D. Diagnostics of the level of economic security of the city of Rostov-on-Don as a constituent element of convenient life of the population

For the approbation of the suggested technique the assessment of the level of the economic security of the city of Rostov-on-Don as the largest city in the South of Russia was carried out (Table 1). This assessment is made for the identification of the degree of manifestation of mentioned indicators in comparison with their national value (selected as a threshold one) what allowed determining the sustainability of development of its social and economic system.

The analysis of the obtained results (Table 1) allows determining that the economic security of the city of Rostov-on-Don is at an average level in comparison with the national data as for the period under analysis 2014-2016, six indicators out of 11 have values lower than the threshold values of the indicators and consequently are situated in the risk zone (economic security). The largest threat for the economic security of Rostov-on-Don has a narrowed reproduction rate together with the natural population decrease and insufficient investments which have been observed during latest three decades. At the same time it is worth mentioning that a positive dynamics of the indicators of the economic security of the city in a number of spheres of analysis is observed. Thus an annual growth rate of the city economy significantly accelerates the similar national indicator and a double excess of the turnover of the retail trade per one inhabitant in Rostov-on-Don in comparison with an average Russian (national) value is observed and it evidences a high development of the retail trade and significant consumer activity of the population (Table 1).

In the group of indicators, characterizing the satisfaction of the population with the conditions of life in the city, only one out of four indicators (average monthly wage) was significantly lower than the threshold value (Table 1). For the period 2014-2016 the average monthly wage was stably increasing and the number of doctors per 1000 of population is practically twice higher than the normative value (Table 1) what gives ground to determine the standard of life of the population of the city as a relatively high one with minimal risks in this respect. It should be noted that the health of the population and mortality reduction together with the growth of population incomes are one of priority tasks of the improvement of life quality of the population.

A positive indicator of life quality of the population in Rostov-on-Don is the provision with housing premises. It is determined through a total area of living premises calculated per one city inhabitant. The dynamics of this indicator speaks about the growth of this parameter due to an active development of the construction industry in the city and the introduction into operation of large residential areas in new micro districts of the city. This fact allowed exceeding the normative value of the indicator which coincides with the average Russian (national) value (Table 1).

IV. CONCLUSION

By means of the generalization of the carried out analysis of the indicators for the period 2014-2016 an average level of the economic security of the city of Rostov-on-Don can be determined as only five out of eleven (45,5%) correspond to a threshold value and one more (area of housing premises per one inhabitant) is close to a normative indicator. This conclusion confirms also the use of a large scale of the identification of the class of the economic security of the city presented in Table 2.

TABLE II. SCALE OF DIAGNOSTICS OF THE CLASS OF ECONOMIC SECURITY OF ASSESSMENT INDICATORS

Class of economic security	Number of indicators corresponding to threshold values
High	≥ 9
Medium	$\leq 5 \geq 9$
Low	$\leq 0 \geq 5$

^b Made on the basis of data [5]

According to the results of the performed analysis it can be stated that the current state of the condition of the economic security of the city of Rostov-on-Don is characterized by a possible appearance of threats and losses of social and economic sustainability in demography, employment rate, characteristics of quality of life and in particular of average monthly wage. A special attention should be paid to investments which influence the development of municipal economy in the future. Due to the fact that the development of a city is located in the zone of the existing risks and threats it is recommended to develop and to implement a set of measures in monitoring and management of the economic security of the city at the regional level with the identification of problematic zones. The given measures should be fixed in

organizational and directional documentation of municipal authorities and if necessary they should be written into the legal acts of the Rostov region.

Summarizing the above the economic security of the city can be defined as a set of measures directed to the support of a sustainable development of municipal economy which includes the improvement of the struggle mechanism with external and internal threats. The structure of the economic security of a city includes three important elements: economic independence, stability and sustainability of economic development, capability to self development and progress. The most important distinctive feature of the provision of the economic security at the municipal level is a constant dependence on the changes in regional, national and world economy what leads to the appearance of a large number of threats including the limitations in self development and economic independence.

The management of the economic security of a city includes the opportunity of an efficient control from the part of municipal executive authorities over the use of available natural, labour, financial, material and other resources and also over the growth of production quality, competitiveness of enterprises and acceleration of the economic growth. But still the main constituent which face all inhabitants of the city and guests of the city are the quality and convenience of city environment seen as a presence of favourable conditions for living and movement in city space. This special constituent of the economic security of the city is the standard and quality of life of city population [52].

In the process of city management a special role should be given to a strategic planning as the taken decisions directly influence the well being of the city, industrial development, trade, business, science, social sphere and in total determine the rate of the economic security of a city. In this respect the analyzed qualitative indicators of the economic security of a city can and should be taken into account at the development of documents of strategic development of cities, municipal programs of specific industries' development and sectors of the municipal economy.

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