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MONOFUNCTIONAL CITIES: PROBLEMS, SUPPORT PROVISION AND DEVELOPMENT

Introduction

The monofunctional (monoindustrial) cities are an integral element of industrial and raw materials regions. Such cities are characterized by the availability of severe dependence on the possibilities, rates and directions of development of all elements included into the city system, on the financial and economic state and stage of the life cycle of one or two city-forming enterprises that form the production base of the city. At the same time, the monocentrism in the city economic structure formation is characterized both by the low level of the branch structure diversification and small quantity of enterprises providing the existence of the given locality.

One should make an emphasis that the city mono-specialization does not only determine the directions of the city development, but also modifies the structure of all city subsystems forming the special integral generality of the community with the specific type of social organization connected with implementation of a definite socially meaningful function.

A monofunctional city represents a complex system, where economic and technological, and social and cultural relations form a relatively independent mechanism of reproduction of required production resources (man power), public goods (social infrastructure) and moral component determining the social and cultural unity of the local community. Herewith, the levels of urban population mono-specialization can be different. The Russian scientists outline the following forms of mono-specialization:

a monofunctional city, i.e. a city where a limited number of enterprises form the critical amount of activity that provides the city existence and development. At the same time, the usage of the “monofunctional” term underlines that mono-specialization can occur in the presence of several enterprises, which refer formally to different branches. In this case one can speak about mono-specialization if enterprises are interconnected within the unique production chain or serve one and the same market;

a monoindustrial city, i.e. a city where several enterprises of the leading, urban branch exist;

a monocentric city, where the city-forming branch is represented by a single enterprise [2].

In Ukraine the category “monofunctional city” is determined legally by the Resolution of the Cabinet of Ministers of Ukraine “About Main directions of provision of complex development of small monofunctional cities” dated 17.03.2000 No. 521. According to this document a small monofunctional city is a small city¹, in which the specialization of economically active population work is determined by enterprises mainly of one-two primary branches of economy that form the income part of the city budget, provide functioning of the social infrastructure and other objects of population life activity.

The city mono-specialization appears as an important instrument of spatial optimization of production forces’ arrangement and production management. It promotes minimization of transport costs and increase of investments’ efficiency. In a monoindustrial city the most powerful are the effects of localization economy occurring at the account of an enterprise’s production costs reduction in proportion to the growth of products volume manufactured by the branch, and urban economy due to the enterprise’s production costs reduction in proportion to the growth of the city economy scales.

Alongside with that, with the loss of public significance of needs that caused the city formation or upon termination of social organization activity the mono-specialized city structure appears to be the most sensitive to external influences.

It is the availability of deep internal structural disbalances that becomes the reason for sharp worsening of the monofunctional city’s social and economic state at the change of the public development priorities. Such monofunctionality, brought to some absolute, leads to isolation of the mono-specialized cities from regional subsystems, thus blocking the possibility of forming valid regional nets of cities providing their complementarity and interaction.

The main feature of the mono-specialization phenomenon is its objective, historically provided nature. Occurrence and mass circulation of the mono-

¹ Small cities — cities with population up to 50 thous. people.

specialization phenomenon is caused by the set of factors, which action promotes objectively the growth of the specific weight of city-forming and reduction of the specific weight of city-servicing types of activity.

In Ukraine there are 111 monofunctional cities, among which: of coal extraction — 32 cities, of production ore and nonmetallic feed — 7, power engineering — 9, processing industry — 27, chemical and oil refining industry — 6, agricultural centers — 18, transport — 9, therapeutic — 2, art field — 1.

The mono-industrial cities in Donetsk region have got the largest distribution, there are 27 of them here. Among them there are cities with the following specialization:

coal-mining industry: Artemovo, Biletskoye, Belozerskoye, Ugledar, Uglegorsk, Gorniyak, Dzerzhinsk, Dobropolye, Zhdanovka, Kirovskoye, Novogrodovka, Mospino, Rodinskoye, Ukrainsk, Yuzhnokomunarsk, Selidovo;

extraction of ore and nonmetallic feed: Komsomolskoye, Seversk, Soledar, Dokuchayevsk;

power engineering: Svetlodarsk, Zugres, Kurakhovo, Nikolayevka;

processing industry: Avdeyevka, Chasov Yar, Krasnogorovka.

The factors that activated the development of the monoindustrial cities in Donetsk region were a historically formed orientation of the country economy to expansion of the extensive operation of natural resources and wide usage of a monofunctional approach in the period of planned economy as the instrument of regulation of national economic space's territorial proportions. As a result a special type of a mono-specialized city has been formed, which social and economic position is almost completely depends on functionality of a city-forming enterprise not sufficiently elastic to structural transformations, which life cycle is strictly limited due to non-produced resources' depletion. The formed mono-specialization is the reason for high sensitiveness of such cities to unfavorable environment changes. One can assume that their social and economic position depends on the state of minerals reserves, degree of their industrial development and competitiveness of enriched raw materials extracted by a city-forming enterprise.

In Donetsk region there are 16 small monofunctional cities, where coal industry is the main branch of economy. 31 mines function in these cities, 9 mines are in the process of liquidation, at 2 mines the physical liquidation is completed, 2 inoperative mines are planned to be liquidated.

The main problems of coal-mining enterprises are

chronic budget underfinancing, deficit of own current assets for technical re-equipment, which led to the decrease of coal extraction volumes. The situation in small cities is aggravated by the absence of a complex approach to solution of problems that accumulated in connection with the closure of unpromising mines. When implementing the project of mines' closure the advancing financing of actions for their physical liquidation takes place in the prejudice to solution of social problems.

The process of mass liquidation of unprofitable coal-mining enterprises is not always accompanied by the scientific and economic substantiation, forecasting and tracing of social and economic consequences. The situation worsens due to insufficient level of centralized financing of closed enterprises, actions in social protection of dismissed employees, corresponding social and economic programs of monofunctional mining cities' development.

All this reflects negatively on the social and economic state of the coal-mining regions and preconditions the depressive state of the significant part of monofunctional cities, where work at the coal-mining enterprises forms the basis of the population life activity. The social consequences of the undeliberate regional policy in the monofunctional cities are:

low level of wages and availability of wages and regress payments² debts;

growth of unemployment;

absence of new working places;

dismissal of employees with no further employment with the simultaneous weak motivation of miners to re-qualification and training;

low intrabranch and territorial mobility of manforce;

reduction of population buying ability;

unsolution of questions concerning the transfer of municipal housing and social and cultural facilities that belong to the liquidated mines;

severe unfavorable living conditions of miners and members of their families, abolishment of the therapeutic system of the branch;

unsatisfactory state of the municipal housing field and social infrastructure of the cities;

unsatisfactory environmental conditions;

growth of social strain.

Such state preconditions the danger of destruction of human potential in the small monofunctional mining cities.

Estimation of the Condition and Perspectives of Economic Development of Monofunctional Cities in Donetsk Region

Due to the limited statistic information only the values of development of the monofunctional cities of regional

² Regress payment — payment made by an employer to an employee as compensation for damage, maim or other injury to health connected with fulfillment of labor duties.

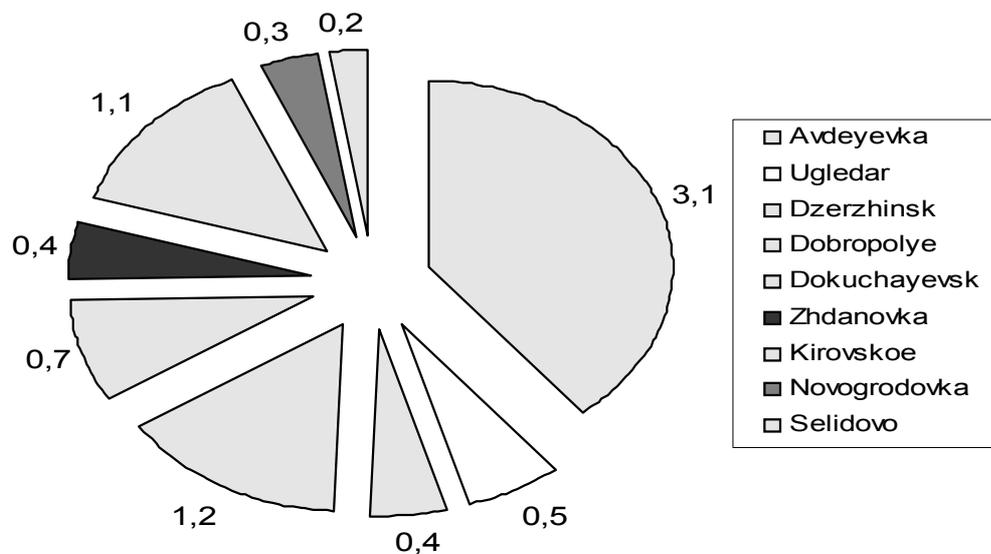


Fig. 1. Share of Monofunctional Cities in the Total Volume of Sold Industrial Products (Works, Services) in Donetsk Region, % [3,48].

subordination were analyzed, in seven of which (Ugledar, Dzerzhinsk, Dobropolye, Zhdanovka, Kirovskoye, Novogradovka, Selidovo) the profile branch is coal extraction, in one (Avdeyevka) — coke and chemical production and in one (Dokuchayevsk) — coal mining represented by flux and dolomite extraction.

The industrial production of the examined monofunctional cities occupies a small part in the regional volume of sold industrial products (works, services) (Fig. 1). So, on the whole, the monofunctional cities in 2009 sold 7.9% of the total volume of sold industrial products in Donetsk region. Among them Avdeyevka is a leader (3.1%). This is confirmed by the value of the industrial products sale per capita (Fig. 2). In 2009, in Avdeyevka this value was 4 times higher for 9 months than on an average in the region and amounted to 95,485.5 UAH. However, because of the world financial crisis the volumes of sold industrial products in Avdeyevka reduced in January-November as compared with the similar period of 2008. It is explained by the decline in the demand for metallurgical products which caused the decline in the demand for coke that is the main product produced by the city-forming enterprise OJSC “Avdeyevka by-Product Coke Plant”.

The least specific weight in the total regional volume of sold industrial products is possessed by Novogradovka and Selidovo (0.2% each). Herewith, Selidovo had the least volume of sale, where the value of industrial products sale amounted to 4,147.8 UAH per capita in 2009.

The main share of products manufactured in the monoindustrial cities in Donetsk region is occupied by raw materials, what is preconditioned by their branch specific character (fig. 3). In Ugledar raw materials

comprise the whole volume of sold products, in Zhdanovka and Kirovskoye — 99.9%, in Dokuchayevsk — 99.7%, Avdeyevka — 99.4%, Dobropolye — 98.5%, Dzerzhinsk — 96.0%. The most diversified production is in Novogradovka and Selidovo, where the share of raw materials is the least — 90.6 and 81.4% correspondingly. In Novogradovka 9.4% of the total volume of sold products are occupied by the group of durable goods usage, and in Selidovo 9.8% — investment products and 8.8% — consumer goods. Thus, CJSC “Mashzavod” functions in Novogradovka; it specializes in production of domestic gas appliances. Orienting itself to the modern requirements to consumption and strengthening of competition in the market, the plant introduces into production new models of appliances, renews and updates large turnout. The availability of investment products and consumer goods in Selidovo production structure is connected with the activity of CJSC “Donetsk-Kurakhovo Machine-Building Plant”, which is specialized in the release of products for such leading branches of industry as coal-mining, metallurgical, coke-chemical and electric power engineering. Moreover, production of construction materials and polygraphic industry are also developed in this city. The dependence of the major part of monocities in Donetsk region on coal mining connects closely the perspectives of their development with the life cycle of specific fields. To reduce the dependence of the cities’ economy on the coal mining industry, it is necessary to develop enterprises of other branches located in the cities.

Notwithstanding that in 2001-2008 in Ukraine one observed the growth of investments in the economy, the

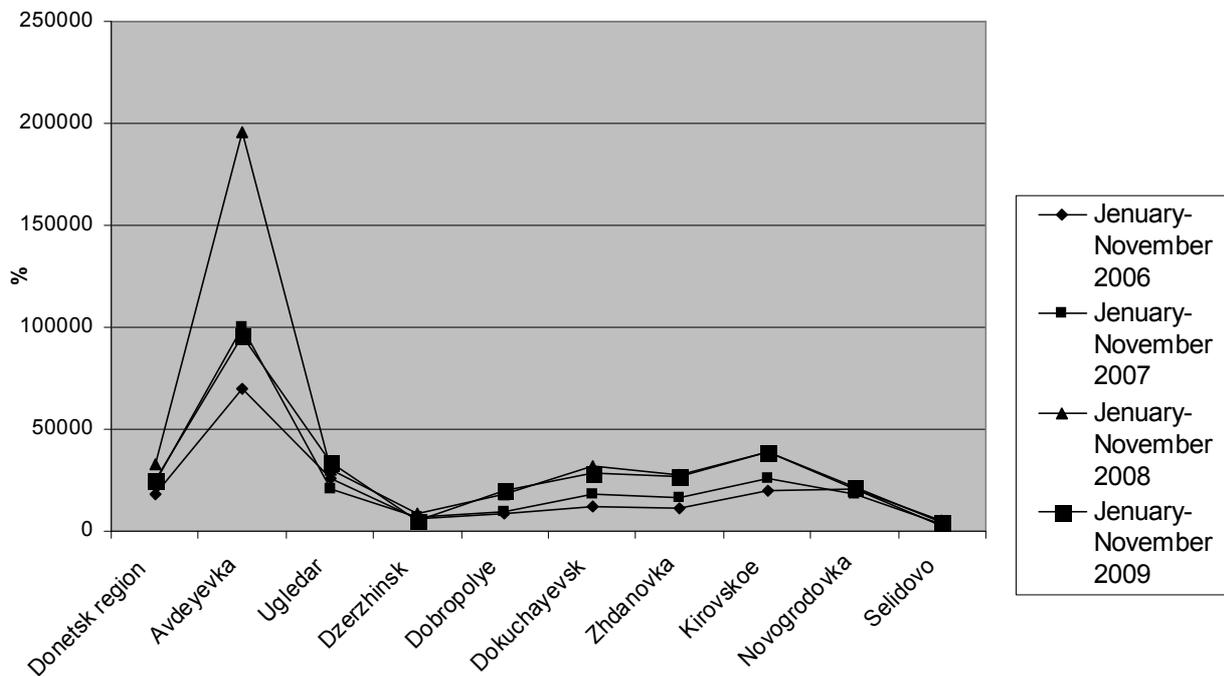


Fig. 2. Volume of Sold Industrial Products per Capita in Monoindustrial Cities in Donetsk region [3, 49].

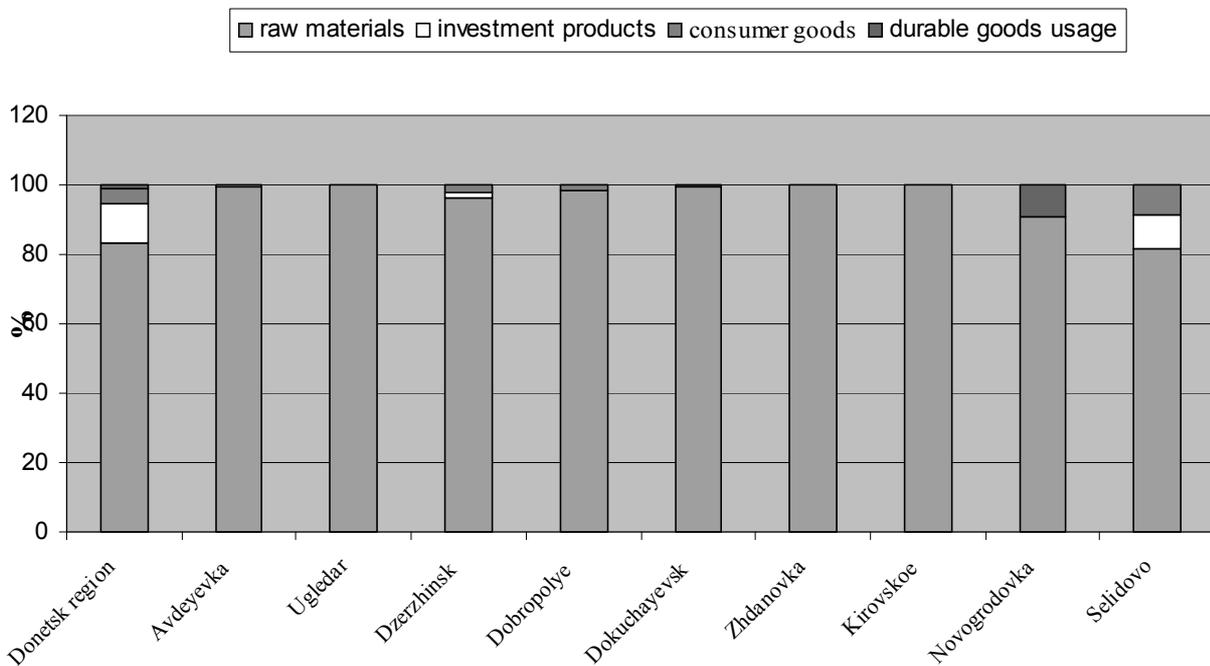


Fig. 3. Distribution of the Volume of Sold Products of Mining and Processing Industries in Monoindustrial Cities by Groups in 2008 [3, 51].

investment climate in small cities remains unsatisfactory. The wear-and-tear of fixed assets, deficit of own current assets at enterprises, growth of accounts receivable and accounts payable, including arrears, wages arrears and as a result the growth of population debts in community charges, problems of ecological nature connected in general with the consequences of the mines' closure and current

ecologically dangerous productions, have a negative impact on the investment image of the monoindustrial cities. Such cities as Dzerzhinsk, Dobropolye, Kirovskoye, Selidovo have the status of territory of priority development, but foreign investment came only to Kirovskoye. Among other monoindustrial cities the foreign investments were attracted only to Avdeyevka.

Table 1

Investment in the Capital Stock in Monoindustrial Cities in Donetsk Region
[According to the Data of Central Administration of Statistics in Donetsk Region]

(in actual prices, thous. UAH)

Places	2006	2007	in % till 2006	2008	in % till 2007	2009	in % till 2008
Avdeyevka	81081	120970	149,20	157287	130,02	100158	63,68
Ugledar	77586	95439	123,01	101659	106,52	15970	15,71
Dzerzhinsk	35423	54095	152,71	72729	134,45	35728	49,12
Dobropolye	118904	123087	103,52	151064	122,73	123177	81,54
Dokuchayevsk	34537	28415	82,27	294939	10 - fold.	8860	3,00
Zhdanovka	11570	11056	95,56	20639	186,68	2910	14,10
Kirovskoye	57981	109549	188,94	211562	193,12	312965	147,93
Novogrodovka	31257	71144	2,3 - fold.	64280	90,35	44571	69,34
Selidovo	114093	93229	81,71	97891	105,00	32369	33,07

One of the values that characterize the investment potential of the territory is the volume of investment in the capital stock. The analysis of the corresponding data showed that this value is influenced mainly by the branch factor, in particular capital-output ratio of the main city-forming enterprise in the locality. The growth of investment volumes in the 2008 in comparison with the 2007 in monoindustrial cities in Donetsk region was preconditioned by different reasons (Table 1).

Thus, in Ugledar this value increased due to construction of the second turn of the mine "Yuzhnodonbasskaya No. 3", in Dobropolye SOJSC "Mine Belozerskaya" and mine of SE "Dobropolyeugol" continue the reconstruction and construction of new objects. The significant growth of this value in Dzerzhinsk is connected with the implementation of the innovation development plan approved by the resolution of the City Council session. According to the plan the introduction of the investment and innovation project of gas methane extraction from coal fields by SE "Dzerzhinskugol" will be implemented (the project is accepted in 2006).

A significant growth of investments in OJSC "Dokuchayevsk Flux-Dolomite Plant" (Dokuchaevsk) in 2008 is explained by introduction of the management system on the basis of the industrial decision for mining companies SAP for Mining [4]. In 2008, in CJSC "CE "Mine "Zhdanovskaya" (Zhdanovka) there was a reequipment of one of the faces with a mechanized high-technology complex. In 2010, a new face having high-technology equipment was put into operation in one of the largest mines in Ukraine "DTEK Komsomolets

Donbassa" (Kirovskoye) as a result of investment projects carried out in 2008-2009.

The crisis has worsened greatly the investment climate and conditions for fulfilling technical reequipment programs started by the enterprises. The programs have been corrected in the time of performance, and their implementation depends on the rates in overcoming economic crisis situations and financial abilities of investors as well.

Thus, the amount of the investment volumes to the capital stock and their dynamics depend on competitiveness of an enterprise located on the city territory, its investment attractiveness or availability of own assets for investment.

Provision of Support and Development of Monofunctional Cities

The directivity of the monoindustrial cities in Donetsk region to the release of raw materials leads to the situation in which their social and economic condition in a long-term period will be determined by the condition of raw material base of the city-forming enterprise. In the short-term period the market relations in foreign and domestic markets will be topside; their formation takes place under the significant influence of state macroeconomic (money-credit, currency, foreign economic) policy. Sudden changes, herewith, of environment can both increase significantly and decrease significantly the competitiveness of the city-forming enterprise's products and by this determine the vector of the city development on the whole. This requires the review of approaches to planning the social and economic development of monindustrial cities. It is efficient to make

several scenarios of the plan, which will provide for an estimate of possible direction of the city development depending on the demand for extracted raw materials and manufactured products in the domestic and foreign markets, with the development of actions as to the possible unfavorable situation stabilization. Experience of such plans' preparation exists just in Donetsk region — i.e. the Strategy of Donetsk development till 2020. The social and economic development of monofunctional cities also assumes the increase of the specific weight of such cities' production in the region economy.

One should note that in the monofunctional cities in Donetsk region, where one observes the highest growth of industrial production and the best financial result among such cities, the city-forming enterprises belong to SKM Group. One can assume that their development is determined not only by the business climate in the foreign and domestic markets, but also by SKM Group position. This makes necessary to optimize the organizational structure of productions functioning in the monoindustrial cities, create their associations and clusters, and also cooperate with enterprises in other cities, including the large ones. Activation of the diversification processes in the monoindustrial cities' economy can promote arrangement of medium and small highly-skilled and technically equipped enterprises of different branches of industry, as well as intensification of production on the basis of technical re-equipment and reconstruction of operating enterprises. One of the efficient directions for production diversification in conditions of this group of cities can be considered the development of raw materials of technogenous origin, for example, industrial dumps, i.e. increase of the level of original raw material processing complexity. To implement such direction of the economic base development, different associative structures can be formed; they solve, along with the production problems, the problems of the cities' ecology.

Conclusion.

The modern problems of economic development of the monofunctional cities in Donetsk region are conditioned by their branch specialization. Reduction of production volumes in the metallurgical branch caused the worsening of the condition almost at all enterprises of main branches of industry in the region. Such tendency is confirmed by the investigations of the production volume dynamics and products, services sale in the monofunctional cities. The process of overcoming the crisis for these cities is complicated by the raw material orientation of products. In some monoindustrial cities such products comprise the whole or almost the whole production volume. That is why, when solving complex problems of stabilization and development of the cities' economy, renewal and usage of their industrial potential is of great importance; for this

purpose production diversification and intensification are required, as well as coordinated actions in small cities' support at the level of state, regional and city management.

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Kuzmenko L. M., Soldak M. O. Monofunctional Cities: Problems, Support Provision and Development

The paper considers the peculiarities of industry in the monoindustrial cities in Donetsk region. The actions for solving the problems of the social and economic development are proposed here.

Key words: monofunctional (monoindustrial) city, development, industry, state management, regional policy.

Кузьменко Л. М., Солдак М. О. Монофункціональні міста: проблеми, забезпечення підтримки та розвиток

У статті розглянуто особливості промисловості моногалузевих міст Донецької області. Запропоновано заходи, що стосуються вирішення проблем їх соціально-економічного розвитку.

Ключові слова: монофункціональне (моногалузе) місто, розвиток, промисловість, державне управління, регіональна політика.

Кузьменко Л. М., Солдак М. А. Монофункциональные города: проблемы, обеспечение поддержки и развитие

В статье рассмотрены особенности промышленности моноотраслевых городов Донецкой области. Предлагаются мероприятия по решению проблем их социально-экономического развития.

Ключевые слова: монофункциональный (моноотраслевой) город, развитие, промышленность, государственное управление, региональная политика.

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