THE ASSESSMENT OF THE POPULATION’S LIVING CONDITIONS IN THE UKRAINIAN BIG CITIES

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Abstract. The research is based on a combination of objective (statistical data) and subjective (questionnaire) assessment of population’s living conditions. There is performed integrated assessment of living conditions of the population of large cities in Ukraine with a population of over 100,000 based on the author’s original technique. Series of maps using data interpolation method are elaborated.

Modern society becomes more demanding to the environment in which it lives. Changes are taking place in the demographic situation; economic, social, environmental, social and cultural living conditions are modifying; new needs and interests of the population are emerging. In the cities this process is in especially intensive progress. Ukraine is highly urbanized country in which the part of the urban population increased from 45.7% to 68.5% during the period since 1959 until 2010. Many scientists (I. Gukalova, G. Pidgrushnyi, A. Treivish [1, 2, 3]) emphasize the exceptional role of the big cities (more than 100 thousand inhabitants) in the central and Eastern Europe from the economic point of view. Big cities are the final "protection barrier" against the mechanical and natural population decrease in our country. Worthy living conditions are the basic cities attractiveness for the population. At present, not enough attention is paid to the assessing of the population’s living conditions in the big cities, especially in Ukraine. But such studies are demanded both by the society and by the viewpoint on the further development according to principles of the Social Geography and Geourbanistics.

The living conditions of the population are social category, and so the optimal basis of the research is formed by the synthesis of objective and subjective assessments. Each of the assessments takes into account four main components - economic favorable development of the big cities, the state of their social and environmental situation and favorable social and cultural development. Ranking method was chosen for benchmarks valuation. According to this method, measurements of specific rank correspond to a value of empirical data or the place of the respondent’s position about the life conditions in specific city among other cities. For visual representation of the integral rating life conditions method of inverse distance weighting (IDW) was used. This mapping method by interpolation of data allows us to see certain geographic trends, namely territorial differentiation in population’s living condition in the Ukrainian big cities (Figure 1.).

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Objective (statistical) rating of living conditions in the big cities. For this assessment of living conditions 83 statistics were applied with over 60 different institutions. According to the objective index of favorable economic conditions for the formation of life, which was formed on the basis of the arithmetic mean index reduction of production potential, small business development, export-import potential and investment attractiveness, income and budget towns, cities with populations over one million were in top positions, and cities under 100-250 thousand people in the last positions. Objective index of social life support was calculated on the basis of seven indices, namely consumer goods and services, housing, home improvement and state of housing and communal services, education infrastructure, state of health, state of medical sphere and the state of the labor market. It is typical that when a significant differentiation level of individual indicators for each city is observed, large differences in the index of social services are not visible. The highest index value received Kyiv, Uzhgorod, Poltava, Ivano-Frankivsk, Chernivtsi; low indices observed mainly in the eastern cities, and in the Vinnytsia. Objective index of favorable ecological situation consists of three components: condition of air pollution, the state of waste management and state of water resources. According to this index certain geographic trends were revealed: the group with low values were mainly eastern and central old-industrial cities (with the worst situation in Mariupol), and western and some coastal cities of Ukraine (Evpatoria, Berdyansk, Melitopol) belong to the cities with favorable ecological situation. Objective index of favorable socio-cultural development are based on six
indices: the age of major cities, infrastructure and cultural tourism potential of higher education, family welfare, criminogenic situation and social insecurity. Changes in indexes from highest to lowest values are notable in the direction from the west to the southeast: high indices are typical for western cities and Kyiv, Zhytomyr and Simferopol; low indices are observed mainly in the southern and eastern cities (Kerch, Sevastopol). The lowest index of favorable socio-cultural development was recorded in Sieverodonetsk.

In objective rating four main components was estimated: index of demographic potential in the big cities (based on the summary indicator of their population), and three intermediate indices - natural and mechanical movement of population, state of sex-age harmony, potential economic activity and efficiency. This index was calculated to establish the "weight" of economic, social, environmental, and socio-cultural living conditions indices. It turned out that most of the mathematical significance in shaping the demographic potential were due to sociocultural and social components, while economic and environmental factors were of the lower significance. This indicates that the reproduction of the population in the big cities and regions as a whole is bound more to the tradition and to the cultural and religious backgrounds, than to wages and the level of emissions. Objective evaluation result was an integrated index of favorable living conditions, as the combination of the 4 intermediate indexes based on their weights (1):

\[ I_{\text{objective}} = 0.144I_{\text{econ}} + 0.361I_{\text{soc}} + 0.091I_{\text{envi}} + 0.404I_{\text{cultur}} \]  

\( I_{\text{objective}} \) – objective index of the living conditions in big cities; \( I_{\text{econ}} \) – favorable economic situation index (0.144 – weighting); \( I_{\text{soc}} \) – social development index (0.361 - weighting); \( I_{\text{envi}} \) – Index favorable environmental situation (0.091 - weighting); \( I_{\text{cultur}} \) – sociocultural favorability index (0.404 - weighting).

Kyiv, Uzhgorod, Ivano-Frankivsk, Lviv, Ternopil, Simferopol, Chernivtsi, Poltava, Rivne, Cherkasy are the top ten cities. Kryviy Rig, Nikopol, Berdyansk, Lysychansk, Dneprodzerzhynsk, Gorlivka, Sieverodonetsk, Mariupol, Pavlograd, Makiyivka are characterized by the lowest indices.

Subjective rating of the living conditions in the big cities (by means of questionnaire). The next study stage was dedicated to the subjective rating of the living conditions of the population in the big cities, which was conducted by means of questionnaire among 375 students of geographical departments of Taras Shevchenko National University of Kyiv, Dragomanov National Pedagogical University of Kyiv, Yuriy Fedkovych Chernivtsi National University, V.N. Karazin Kharkiv National University, Taurida National V. I. Vernadsky University. The developed questionnaire contained three blocks of questions. Answering the first question, "In which categories among represented settlements of Ukraine you want to live?" more than 50% of respondents prefer big cities in the choice of residence. Answering the second question of the questionnaire: "What factor does determine your choice to live in Ukraine?" votes were divided as follows: 51% chose the economic component, 12% - social and environmental factors, 11% - socio-cultural component and 14% – other factors (the last part was proportionally distributed between the four components). The distribution of votes has been used in
determining the "importance" weight of each of the life conditions components in their subjective rating. Accordingly the largest weighting factor was assigned to favorable economic conditions of life, and the smallest – to the social and cultural.

The most difficult but also the most informative was the third question: respondents were asked to rank the presented major cities of Ukraine from the best to the worst relating the four components of living conditions – economic, social, environmental and socio-cultural. It was revealed that the survey results were not significantly different from those obtained by analyzing statistical data with an objective rating. According to the subjective assessment of the economic situation in the big cities, the capital was almost unanimously elected as a leader; the greatest by the population Ukrainian cities also appeared on the forefront. Group of cities with low indices proved to be quite powerful (23 cities) with a clear outsider Kamianets-Podilsky. In assessing the social and socio-cultural situation students preferred cities with the largest population. Environmental situation was positively seen by respondents in two regions – great cities of western regions and Crimea. The cities of east old industrial regions occupy the worst positions in environmental favorability.

The result of subjective rating was subjective index of favorable living conditions, as the combination of the 4 intermediate indexes based on their weight (2):

\[ I_{subject} = 0.545I_{econom} + 0.155I_{soc} + 0.155I_{envir} + 0.145I_{cultur} \]  

\[ I_{subject} \] – subjective index of the living conditions in big cities;
\[ I_{econom} \] – favorable economic situation index (0.545 - weighting);
\[ I_{soc} \] – social development index (0.155 - weighting);
\[ I_{envir} \] – index favorable environmental situation (.155 - weighting);
\[ I_{cultur} \] – sociocultural favorability index (0.145 - weighting).

The top ten sities by subjective rating were Kyiv, Lviv, Odesa, Kharkiv, Donetsk, Dnipropetrovsk, Simferopol, Sevastopol, Zaporizhia, Ivano-Frankivsk. The top ten outsiders were Makiyivka, Berdyansk, Melitopol, Kramatorsk, Pavlograd, Slovyansk, Alchevsk, Sieverodonetsk, Lysychansk.

### Integral rating of the living conditions in the big cities.

Using the method of construction of the objective and subjective indices arithmetic mean, integral index of favorable living conditions were calculated (3):

\[ I_{integr} = \left( I_{objective} + I_{subject} \right) / 2 \]

\[ I_{integr} \] - Integral rating of the living conditions of the population in big cities;
\[ I_{objective} \] – objective index of the living conditions in large cities;
\[ I_{subject} \] – subjective index of the living conditions in large cities

According to the integral index, the list of cities with the best living conditions includes Kyiv, Lviv, Simferopol, Kharkiv, Odesa, Ivano-Frankivsk, Uzhgorod, Dnipropetrovsk, Poltava, and Donetsk. The list of towns with the most unfavorable living conditions includes: Sieverodonetsk, Lysychansk, Makiyivka, Pavlograd, Horlivka, Berdyansk, Mariupol, Alchevsk, Slovyansk, Kramatorsk, that are mainly representatives of eastern old industrial regions.
Conclusions. A direct dependence was established between the integral index of favorable living conditions and the big city population: the integral indexes increase, on average, from the cities with 100-250 thousand of inhabitants to cities with the population counting over 1 million. Search for geographical trends allowed to conclude about the deterioration of living conditions in big cities in the direction from western to central Ukraine and from central to south-eastern Ukraine. The best living conditions were found in big cities that have been historically established for more than five centuries, while in relatively young cities the living conditions were among the worst. This may be explained by the fact that older cities developed around the typical functions of the city–life, while new cities were built to settle populations for mining and mineral enrichment production.

REFERENCES

CHANGES OF MIGRATION TRENDS IN BRATISLAVA AND KOŠICE FUNCTIONAL URBAN REGIONS AND THEIR IMPACT TO THE REGIONAL DEMOGRAPHIC STRUCTURE CHANGES

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Abstract. The paper shows changes in migration trends in the functional urban regions (FUR) of two largest Slovak cities – Bratislava and Košice during the transformation and post-transformation period. The most significant is changing pattern of intraregional migration where the moderate centralization of population from the early 1990ies changed into the very intensive decentralization after 2000. While economically strong Bratislava FUR records concentration of population which means positive migration balance during whole monitored period, economically weaker Košice FUR is balancing between concentration and deconcentration of population. The impact of these processes can be seen in changing demographic structure of both regions, mainly in age and educational but the national (ethnic) and religious as well.

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