

**CHANGES IN POPULATION  
IN THE CONTEXT OF URBAN DEVELOPMENT OF UKRAINE  
THROUGHOUT THE 20<sup>th</sup> AND 21<sup>st</sup> CENTURIES**

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**Abstract.** With the return of Ukraine's independence, its settlement system has received the opportunity for self-formation within the national territory. The cities of various evolution, magnitude, and importance with a long historical development comprise the backbone of this system. In modern conditions the formation of regional settlement system takes place, changes in the functioning of individual cities and the formation of spheres of influence of major cities become more vivid.

**Key words:** settling, a network of cities, agglomeration, metropolization, the level of urbanization.

## **I. Introduction**

Historical development of the network of urban settlements has gone a long way: *“On the border of the forest belt and forest – steppe zone where agriculture had found good conditions and the communication was not difficult, Ukrainian population became more concentrated and the first Ukrainian state organisms emerged”* [1].

The most important impulses of urban development were caused by the development of trade relations, provision of protection of external borders, the establishment of power of the Kyiv Prince in each of the newly incorporated land and development of internal urban creating processes [2].

Analysis of changes in population density and cartography of the cities during the 19<sup>th</sup> century indicate the continuation of historical traditions of urban creation, the dominant of which is the latitudinal extension of the historic core of the density of population and cities in the forest-steppe zone due to the variety of natural landscape factors.

The most significant population growth is observed on the Livoberezhzhia (the Left bank of Dniپر river), where under the influence of Magdeburg law a dense network of urban settlements was formed. The late industrial revolution and political factors of the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> centuries led to the loss of identity of settlements.

## **2. Basic Theory**

Territorial and qualitative imbalance of the urban development of Ukraine took place throughout the whole 20<sup>th</sup> century and particularly it became evident in the period of socialist industrialization. The change of the demographic situation in Ukraine during the 20<sup>th</sup> century is closely tied to the processes that took place in countries that included Ukraine, first and foremost, in the Soviet Union: revolutionary events, civil war, world wars, famines and actions of the totalitarian regime. Only in 1959 the population of the republic reached pre-war level [3]. The end of the 20<sup>th</sup> century and the beginning of the 21<sup>st</sup> century is a period of the transition from urban dispersion to its concentration.

## **3. Results and Discussion**

The second half of the 20<sup>th</sup> century is a period of transition in the morphology of the urban creation of Ukraine and marks the transition from urban dispersion to its concentration (1950–1970). The Ukraine's

population, according to the census of 1959, reached nearly 42 million people. Compared to 1939, a high dynamics of growth of urban population in general and of urban settlements in particular is fixed. Only the urban population during this period was increased by 41.1 % [4], and in general, the urban population accounted for 45,7 % [4].

The specific feature of the urbanization processes in Ukraine in 1950–1970-ies was the functioning of a large number of small cities. At the same time the urban agglomerations with the centers – Kyiv, Kharkiv, Dnipropetrovsk (Dnipro), Stalino (Donetsk), Odesa, Lviv started to be formed. The East–Donetsk–Dniper economic area was the most dynamic and urbanized during this period.

In 1980–1990-ies the agglomerating phenomenon of urbanization development spread on a big scale. Compared to 1970, where the urban population rose to 54.5 %, the population census of 1979 recorded continued high dynamics of growth of urban population, in general and of urban settlements, in particular. At the same time, the population of the Ukrainian SSR increased to 49.8 million people. It was in the 1970-ies when for the first time in the Ukrainian SSR population became predominantly urban. The number of urban settlements in the Ukrainian SSR had grown, in particular, the number of medium-sized cities (50–100 thousand of persons) was increased. At the same time the population in the biggest cities had grown as well. They became the centers of large settlement systems, and in 1979, the urban population amounted to 60.8 % [4].

The Donetsk-Dnipro economic region where the urban population ranged from 71 to 89 % remained the most urbanized. Forced industrialization of the Donbass, the collectivization and mass repressions of the 1930s caused significant changes in the economic, social and demographic development of Donbass, including in the size and composition of the population of the region. Donbass was the main fuel and energy base of the country, constantly experiencing labor shortages [5].

For comparison, in the West of Ukraine, Lviv oblast was the most urbanized area (53 % of urban population). In Metropolitan region, Kyiv region, the urban population amounted to 45 %, however, in some areas, urban population ranged from 31 % to 38 %.

On the eve of independence growth in urbanization is noted in Ukraine. Urban population grown mainly due to mechanical growth as a result of extensive development of the industry has led to a constant decrease in the rural population. The volume of migration of the rural population was always high. As a consequence, the urban population on January 1<sup>st</sup>, 1992 reached 68 % of the total population of Ukraine. The number of cities becomes almost stable, thus the number of large cities has increased and five cities have the population of one million people, the formation and development of agglomerations, primarily industrial, continues. In the 1980s the process of suburbanization i.e. the growth of settlements in suburban areas becomes more expressive. In Ukraine, there were already 19 urban agglomerations — monocentric, polycentric, protoagglomerations.

Urbanization processes in Ukraine were incomplete in nature as the most important task in this period was industrialization and the quality of the urban environment was low. Urbanization was characterized by the asymmetry of urban settlement, deformation of the functional structure of cities, the predominance of non-diversified highly specialized centers [4]. During the Soviet period the approach was formed in which economic and defense objectives were dominant in the implementation of population policies and, in particular, in addressing issues of urban development. The population of cities and urban-type settlements was seen as a labor resource, the parameters of which should be consistent with the structure of the industrial, military and transport complex [6].

The period of independence began against the background of the breakdown of social and economic formations of the early 90-ies of the 20<sup>th</sup> century, which has only accelerated the manifestation of the underlying processes, which were laid by the economic and social policies of the Communist regime during the 20<sup>th</sup> century [7].

The largest population was recorded in Ukraine in 1993 i.e. 52 244 million people, after that there was a steady trend of population decline due to the excess of deaths over births and emigration, including labour emigration. Moreover, Ukraine is in a demographic crisis since the 1980s due to high mortality, especially of working-age men and rural population, and low fertility of it [8]. A rapid population decline began in 1993, as a consequence of economic collapse [8]. During 1993–2013, the population of Ukraine decreased by 6.7 million people. Positive demographic trends appeared in 2002, when a slow increase in the birth rate was noted [8].

The total population of Ukraine in 2012 was more than 45.59 million, Ukraine remains a predominantly urban country, with a numerical predominance of the urban over the rural population: 68 % of the urban residents. Like the most of European countries, Ukraine has a high population density of 77 people per sq. km. The lowest density is in the North, in Chernihiv region – 39 persons per sq. km., the highest is in Donetsk region – 183 persons per sq.km. [9].

A qualitative change of the demographic situation in Ukraine in the last century (1913–2010) was mainly due to the rural inhabitants, whose number decreased every year since 1913. In general, in the villages the population decreased for 14.1 million. But the number of inhabitants in the cities of Ukraine, due to the relocation of the people from the villages, grew until 1993, and only since 1995 it began to decrease. Depopulation of Ukraine took place almost simultaneously over twenty years (1991–2010), the number of urban residents decreased by 3.7 million and the number of inhabitants of villages decreased by 2.5 million people [3].

Traditional urban forming factors undergo changes – their potential and importance in the urbanization process changes. The process of concentration of population becomes tangible. The analysis of the dynamics of the population share of largest cities of Ukraine had shown steady annual growth in the period of 1979–2009, the proportion increased from 20.66 % to 23.53 %. It happened primarily due to the increase of the population of the capital [10]. At the same time, the concentration of the largest cities in the East and the lack of them in the West leads to the deformation of the planning structure of the settlement system.

According to the General Scheme of planning of the territory of Ukraine, the centers of such systems should become the major cities and their agglomeration formations – Kyiv, Kharkiv, Dnipro, Donetsk, Odessa, Lviv. The peculiar features of contemporary urban growth, the differentiation of the territory from the point of view of its characteristics, demographic and economic zoning determine the allocation of another two planning centers – Vinnitsa at Podillia (geographic and ethnic region of the West-Central Ukraine) and Lutsk in the Volyn region (Nord-West Ukraine) [7]. Contemporary events in the East of Ukraine have destroyed Donetsk agglomeration, respectively, the other Central-Eastern agglomerations have been increased because of population movements. In the General Scheme of planning of the territory of Ukraine the system of measures has been defined that should contribute to the development of regional centres of settlement systems, which over the last 10 years has not reached its goal [10]. However, in recent years, the urban planning process becomes a compaction process of development of the territory of existing cities, which leads to lower cultural, ecological qualities of the environment and the increasing complexity of living conditions [11].

The positive phenomena of urbanization of recent decades are such as the population growth of individual cities: Kyiv suburbs; regional centers of the Western region (except for Lviv); towns with nuclear power plants (Kuznetsovsk, Netishyn, Energodar, Yuzhnoukrainsk, Slavutych); port cities (Chornomorsk, Yuzhne); centers of low urban areas where continued significant in-migration of the rural population takes place (Kamenetz-Podilskyi, Vinnytsia, Bila Tserkva etc.); some industrial cities (Novodnistrovsk, Ladyzhyn) [4].

Today, the formation of new approaches to the solution of urbanization problems in Ukraine takes place. As the researchers note, in recent decades, the formation of a national urban network occurs in conditions of increased spatial competition, underutilization of the existing capacity and significant differentiation in terms of economic development. In these circumstances, Ukraine needs a focused national policy for the development of the urban network, the goal of which should be the restoration of balance in the national hierarchical urban system, namely the transformation of large cities due to the growth of their economic potential to the centers of national and international development; the strengthening of regional centres as centres of economic development of the regions; the growing of the role of medium and small towns in intra-regional space [12].

Ukraine also declares the registration of the requirements of the guiding principles for sustainable spatial development of the European continent and other CEMAT documents that must refocus the development to ensure social cohesion of the country [14].

Urban development relies on the creation of the decentralization process of the regional and local management. The problem of overcoming of the considerable imbalance in socio-economic development of the regions i.e. “centre” and “periphery” in the European space, as a more balanced polycentric development can contribute to reducing of social tensions. One of the main principles – “achieving of more balanced and sustainable development of the regions and a better understanding between them” becomes relevant not only to

social and environmental aspects, but also in the political and cultural dimensions. For Ukraine, in overcoming of negative demographic dynamics of the past two decades, it is necessary, while maintaining the incentives of childbearing, to focus efforts on improving overall quality of life, social and economic security, living conditions and improved medical care for the population [3].

Urban planning and regional planning is the material expression of state policy. Now Ukraine has formed a new urban mindset, which is necessary to determine the priorities of regional development. These priorities include a proper physical and spatial realization of external and internal policy of the state. Reconstruction and strengthening of networks of the cities has to improve the complementarity between cities, to create their total growth, to change specialization and enhance the positive effects of competition.

Balanced regional development in Ukraine is possible thanks to the modernization of relations between regions, between small and medium-sized towns and rural settlements with transeuropean networks and existing transport hubs.

The presence of Ukraine on the border of two world areas, dissimilar in their political and ideological position between the West and the East, determines inter-regional relations, which are the legacy of the history of the formation of separate regions under the constant influence of their external environment. Now it becomes more and more clear that it is necessary to define a unifying national idea, which would have contributed to the consolidation of the Ukrainian people irrespective of the existence of objective socio-economic and ethnic-cultural regional characteristics. We think that only spatial definition of such a consolidating national idea could be a conceptual interregional project of the Lviv–Luhansk planning axis. Such idea was proposed by the research institute “Mistoprojekt”, and on the base of this project the interregional communication region was worked out. [15].

One of the strategic priorities of development of Ukraine and its economy is the formation of a balanced urban network. In this context, Ukraine would have to abandon the extensive pattern of urbanization. On the other hand, the inclusion of Ukraine into globalization processes, formation of post-industrial segments in the Ukrainian economy provides an unconditional monopoly of megacities as centers of basing and development of science and technology. A chance to become a platform for the development of new high tech companies have to get not only megacities, but also other regional centers that are able to offer an attractive investment climate and an appropriate level of infrastructure development and the quality of the workforce [16].

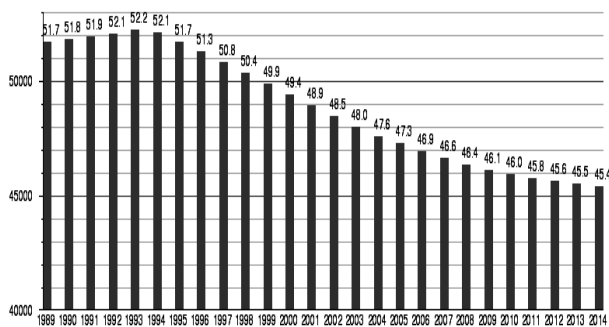


Fig. 1. Depopulation of Ukraine since its independence [8]


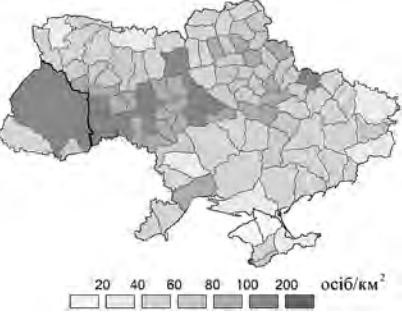
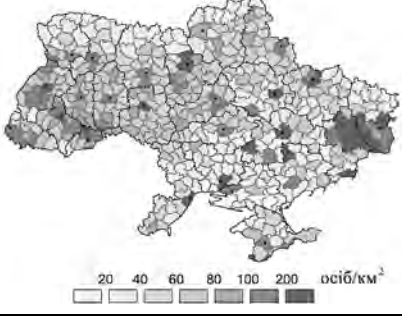



Fig. 2. The losses and displacement of the population because of military actions in Ukraine [21]

The turn of 2013–2014 was marked by the abrupt withdrawal of Ukraine from the former Soviet Union. As the result of Russian aggression Ukraine suffered significant demographic losses in the East. Because of the war 2.3 million inhabitants left Donbass [19], nearly one million of which left Ukraine [20]. From the occupied Donbas and Crimea nearly 1,3 million people escaped and dispersed throughout Ukraine [21]. The urban population of Crimea in 1.01.2013 was 1233135 persons. [22]

Mortality of the population is increased due to the decrease in social standards and reduced fertility. Industrialized regions have actually stopped working due to the loss of productive infrastructure [20].

**Characteristic features of urbanization in Ukraine**

Maps of population density on the territory of Ukraine [8]	Characteristics of urban changes
<p>1887</p> 	<p>1 – in the resettlement the latitudinal historical strand plays a major role (at the junction of forest and forest-steppe zone); 2 – the creation of industrial zones in the West and North East: Carpathian region, Kharkiv region.</p>
<p>1913</p> 	<p>1 – in the resettlement the latitudinal historic strand plays a major role; 2 – the territory on the left bank of the Dnipro river is developing more dynamically.</p>
<p>1970</p> 	<p>1 – the historical latitudinal density of the population is hollowed out; 2 – the powerful industrial regions are formed: the Carpathians region and Donbass region; 3 – sparsely populated areas in the steppe zone; 4 – the weak role of the central integration core (the capital city is a low-power).</p>
<p>2013</p> 	<p>1 – there has been loss of the historic latitudinal core of density of the population; 2 – the power of industrial zones (Carpathian zone, Donbass zone) are reduced; 3 – the population is concentrated around large cities; 4 – the “wasteland” appears i.e. sparsely populated areas (with population density less than 20 persons per square kilometer) in the South, in the North (“Chornobyl zone”); 5 – the polarization of the density of settlement to the East West; 6 – the absence of a central integration core i.e. the developed capital region becomes noticeable; 7 – a new urbanization strand of latitude oriented metropolital centers and large cities is outlined.</p>

**4. Conclusions**

– The development of a network of the cities of Ukraine is influenced by several factors, the main of them are geopolitical factor, energy factor, level of development of productive forces and socio-demographic factors. Under the influence of political factors Ukraine has always been inherent in territorial and quality imbalance of urban development. The concentration of urbanization and polarization of settlement in the last

century in the background of equally favourable conditions for resettlement in Ukraine is a consequence of the introduction of models of ideological orientation and operational approach to society.

– Significant amounts of migration of the rural population was supplemented by frequent changes in the administrative and territorial organization, administrative transformation of rural settlements into urban and new cities and towns did not create a full-fledged urban environment. Among the new cities that arose in Ukraine in the second half of the twentieth century, industrial cities composed the largest number as well as the centres of local importance and agro-industrial complexes (mainly the centres of agricultural districts), and transportation hubs [4].

– Urbanization in modern Ukraine takes place against the background of depopulation in combination with the economic crisis, and contemporary urbanization due to migration is a threat to the existence of rural settlements [7].

– For today the largest urban settlements have the best conditions for further growth. The greatest socio-economic changes occur in them [7]. In conditions of socio-economic crisis, such cities become centers of progressive changes in the restructuring of the economy, and their inhabitants become carriers of new social relations [20]. The absolute majority of medium and small towns are unable to retain the existing population. The purely agrarian regions are not the exception, the rural population is actively migrating to the cities from there [7].

– The process of post-industrial metropolization takes place replacing in this way the industrial agglomerating. Despite the quantitative loss of the urban population, the process of pulling of the population into the largest urban centres continues, resulting in the strengthening of ties between the largest cities and their surrounding areas on the basis of labour migration, common markets of labour, land, financial resources, etc. (Kyiv and Kharkiv regions, to a certain extent, Odessa and Lviv regions). Suburbanizing outflow of wealthy population into a suburban areas, construction of cottage townships, and reorganization of the surrounding villages contribute to the emergence of agglomerating forms even near much smaller cities in traditionally rural regions (Vynnytsia, Ternopil, Zhytomyr). In the industrial regions of the East the beginnings of a new post-industrial agglomerating are combined with the traditional industrial agglomerations [7].

– In the future the restoration of urban growth is predicted, especially in the Western and Central parts of the state because of the inevitable growth of labor productivity in agriculture to the level existing in the developed countries. In this case the released labor force will be free to flow to the cities. Thus, the urbanization levels of the regions of Ukraine with time will level off. The development of existing agglomerations and the formation of new will continue, in particular in the coastal part of Ukraine [7].

– Large cities of Ukraine play a leading role in the economic, cultural and political life of the country. Their economic development has a decisive influence on the economic growth of the country. If in 2001 in Ukraine there were 5 cities with population over 1 million inhabitants, but, despite the migration of population to the largest cities and the government's attempts to improve the demographic situation, in 2012 there were only three cities left with the population over 1 million.

– Number of inhabitants in Kyiv (2,8 million inhabitants) by a considerable margin (about half) is ahead of other cities – Kharkiv (1,4 million inhabitants) and Odessa (1 million inhabitants). Two cities during this decade have come down below the milestone of a million inhabitants (dnipro and Donetsk). In the major cities, where the number of inhabitants has fallen in the last decade, under the influence of migration from the Eastern regions threatened by the war, there was an increase frequencies residents. Risk because it moved the business, it was observed even at present construction boom in the housing sector. In three Ukrainian cities (Zaporizhzhya, Lviv and KryvyiRih) the population exceeds 500 thousand inhabitants.

– Now, economic, financial, cultural, historical, political, scientific, spiritual values and resources are concentrated, first of all, in the capital and to a lesser extent in the regional centers. If you compare the sizes of the budgets of the largest cities of Ukraine, as of incomes and expenses, there is a significant gap between the capital and other cities (its indicators are almost equal to the sum of the other 7 largest cities) [17].

– During the years of independence the gap in socio-economic indicators between Kyiv and other major cities of Ukraine has increased. Mainly in the capital financial resources are accumulated, political developments take place there, the places of cultural and spiritual values are situated there as well. The specified disparity, with its tendency to increase on the background of ecological and man-made threats of life of residents of the capital can only be considered as an example of extremely bad management of regional development. If you look at the situation that has developed as a result of urbanization in the Ukraine, from the

point of view of the need to diversify risks to national security, we shall come to the obvious conclusion about expediency of transfer of resources from the capital to other major cities of Ukraine [18].

– It is the more important for Ukraine to achieve the coherence of strategic development plans of major cities of Ukraine with the strategy of regional development [18]

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### **ЗМІНИ В НАСЕЛЕННІ У КОНТЕКСТІ МІСТОБУДІВНОГО РОЗВИТКУ УКРАЇНИ ВПРОДОВЖ 20–21 ст.**

*Анотація.* Із прийняттям незалежності України її система розселення отримала можливість самостійного формування в межах державної території. Каркас цієї системи становлять міста різної еволюції, величини та значущості із тривалим історичним розвитком. У сучасних умовах відбувається формування регіональних систем розселення, зміни у функціонуванні окремих міст та формування сфери впливу найбільших міст.

*Ключові слова:* розселення, мережа міст, агломерація, метрополізація, рівень урбанізації.