Development of the cities: the Kazakh Case[1]

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Abstract—: The article is devoted to the development of Kazakh capital city Astana. The methodology of the research provides literature review on issues of urbanization and economic growth, comparative study, use of empirical and descriptive methods, and based on official statistics and statistical methods. The research confirms that status of the city and capital status of Astana ensure its competitiveness at the national level and in comparison with some leading regional Kazakh cities such as Almaty, Shymkent and Aktobe. The main indicators of the socio-economic situation in Astana are comparatively better. In particular, the capital city has relatively low rates of poverty and unemployment. Moreover, in Astana indicators of average life expectancy, average monthly wages and gross regional product per capita are higher. Also, considering dynamic growth of the population the article emphasizes the need to develop rural areas of the Astana agglomeration in order to provide the capital city with the basic foodstuff and construction materials.

Keywords : Kazakhstan, urbanization, economic growth, competitiveness, development

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Literature review

The development of the study of urban economics marks down four periods (Quigley, 1998). The first period, the first decade after WW1, covers the first empirical analysis of the factors affecting firms and households within cities. The second period, beginning in the mid-1960s, sheds a light on the intrinsic motivations of location within urban settlements. The third period in understanding of urban development is associated with the three-year study of New York City and provided a unique opportunity to examine the fundamental factors affecting industrial development and locations of economic activity. Finally, the fourth period, which began in the 1980s, is related to the study of the nature of economic growth.

On the issue of improving regional policy the million-plus cities were defined to be the backbone of the global competitiveness of Kazakhstan[3]. The economic growth researchers favor accelerated urbanization because they believe that large agglomerations contribute to economic growth. Empirical evis dence confirms that no country achieves a high level of GDP per capita without urbanization (OECD, 2017, p. 67). In OECD countries, megacities with a population of at least half a million represented 45% of the total population and generated 52% of GDP in 2018 (OECD, 2020, p. 60). Moreover, between 2001 and 2018, all megacities in OECD countries, with the exception of Greece, experienced GDP growth. Another example, between 2000 and 2012, Colombia's capital city accounted for 24% of the country's GDP (Sanchez-Serra, 2016, p. 17). China is one of the largest urbanizing countries in absolute terms (Kamal-Chaoui et al., 2009, p. 5), and its economy grew almost 20 fold between 1979 and 2009 (Tyurin and Tyurin, 2018, p. 228). The concentration of human, social and intellectual capital, and financial resources result in the leadership of cities at the national

3 *«UNITY OF THE PEOPLE AND SYSTEMIC REFORMS ARE A SOLID FOUNDATION FOR THE NATION›S PROSPERITY», State of the Nation Address by President of the Republic of Kazakhstan Kassym-Jomart Tokayev. September 1, 2021. [Electronic source]. Mode of access: URL: https://www.akorda.kz/ru/poslanie-glavy-gosudarstva-kasym-zhomarta-tokaeva-narodu-kazahstana-183048;*

and regional levels (Koshanov, 2019; Manaeva, 2021). Urban development is characterized by a positive relationship between the level of urbanization and per capita income, entrepreneurship development and innovation (Glaeser, 2010; Konovalova, 2020). For example, Colombia's three main cities generate more than 70% of the country's innovation (Duranton, 2015, p. 16). Moreover, other studies confirm a positive correlation between city size and productivity levels (Quigley, 1998). An assessment conducted in Germany showed that a 10% increase in city size increases productivity by 0.2% (Ahrend and Lembcke, 2016, p. 6). And one reason for this correlation has been attributed to the concentration of the skilled workers in cities (Glaeser, 2010).

At the same time, it is said that urbanization is a precondition for economic development, but not a guarantee of it (OECD, 2017, p. 17). Some countries have become highly urbanized without significant progress in terms of GDP per capita. And this is typical for many Latin American countries like Brazil (OECD, 2017, p. 67). The study of Western European cities with more than 200,000 inhabitants found that since 1960 there has been no direct relationship between city size and growth rates (Boussauw et al., 2018, p. 4). Urbanization in Zimbabwe and the Democratic Republic of Congo is a direct consequence of conflict and deterioration of rural living conditions, rather than national development (Nallari et al., 2012). Another factor that reduces the relationship between urban development and economic growth is population density. According to the OECD, cities in low-income countries have the highest population density in the world, whereas in high-income countries they have the lowest population density (OECD, 2020, p. 102). Moreover, some researches argue that urbanization in developing countries has led to an increase in urban poverty (MD. ASHIQ-UR-RAHMAN, 2012). One indicator of that is the lack of housing. Besides that, the ability of households to use housing as a productive asset provides opportunities for home-based entrepreneurial initiatives. Each state solves the problem of affordable housing within available economic resources, and there is no universal model in this matter. Urban development is also linked to infrastructure

development. Researches in India and Nigeria show a significant impact of city infrastructure on economic performance (Ghani et al., 2016; Osabonien, 2016). In turn, separate attention is paid to transport infrastructure. Inadequate transport infrastructure is acknowledged as the main cause of labor market contraction in Colombia and, accordingly, the need to increase the share of investment in transport infrastructure to improve connectivity between territories is emphasized (Sanchez-Serra, 2016). So that one hour is the limit of time that households are willing to spend on travel and the suppliers are able to deliver efficiently on a daily basis (Kamal-Chaoui et al., 2009, p. 35).

This research looks at the development of Kazakh capital in the framework that city development led to economic growth.

Kazakh case

Urbanization process in Kazakhstan is characterized by the growth of urban population in the largest cities due to migration from rural areas and small depressed cities (Nurlanova, 2016). Another study argues that urbanization in the former-Soviet republics was related to *"the nature, scale and spatial distribution of economic activities"* (Nallari et al., 2012, p. 42). The territorial development of Kazakhstan is characterized by uneven and sparse settlement of regions and, accordingly, the development of urban agglomerations is recommended to be planned as an integral part of the development of rural areas, small and monotowns (Koshanov, 2019). Also, the wage gap is the most important driver of interregional migration in Kazakhstan (OECD, 2017, p. 74). Another research shows that prospects for growth and low pay were described as major reasons for internal migration to Astana (Tibekov, 2010, p. 135).

For January 1, 2022, the population of the capital city Astana was 1,239,886 people[4], and following the UN classification it belongs to the medium-sized cities (Nallari et al., 2012, p. 18). According to forecast, the population of Astana will reach

4 *Bureau of the National Statistics. [Electronic source]. Mode of access: URL: www.stat.gov.kz;*

1,455,796 people by 2030[5]. Today Astana is not one of the top ten cities in the world in terms of quality of life neither according to Mercer nor to the Economist[6]. Moreover, some foreign researchers assert that Astana is a prosperous capital city, and that the relocation of the capital from Almaty to Astana was *"a symbolic resource offering alternative visions of nationhood"* (Alwehab, 2018, p. 220). A brief look at the development history of Astana is given by Tibekov (2010, p. 132).

Akmola was founded in 1830 as a Cossack fortification, and in 1862 acquired the status of a town. In 1954-1959, the policy of the development of Tselina (underdeveloped, scarcely populated, high-fertility lands) covered also Central Kazakhstan, and in 1961 Akmola was renamed to Tselinograd, as the center of Tselina. Tselinograd became a major agricultural center with developed research and educational institutions in this sector, famous for its dairy products and bread *"karavay"* (round loaf). Today Kazakhstan is among the world leaders in the export of the wheat. On December 10, 1997, the capital of Kazakhstan was moved from Almaty to Astana. In 1998, the city was renamed to Astana, which means «capital» in Kazakh language. Among the reasons for moving the capital city noted an economic development of the region and the country as a whole, its strategic location of being away from the boarders with the neighboring countries. Also, as Astana is located in the center of the country, it has an equidistant distance from all regions of Kazakhstan (West, North, East, South).

In 2021, the gross regional product (further GRP) of Astana amounted to 10.63% of the national value[7]. The structure of GRP is dominated by service sector (wholesale and retail trade,

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5 *World Population review. [Electronic source]. Mode of access: URL: https://worldpopulationreview.com/world-cities/astana-population;*

6 *Quality of living city ranking. [Electronic source]. Mode of access: URL: https://ru.wikipedia.org/wiki/;*

7 *Gross regional product of the Republic of Kazakhstan. Bureau of the National Statistics. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/official/industry/11/statistic/8;*

real estate operations, professional, scientific and technological activities). In 2020, the share of «*Transport and warehousing*» activity in GRP was 5,8%, and this performance is linked to plans for the construction of light rail transport (further LRT). The LRT was planned to build in 2008, but an active phase of construction started only in the autumn of 2017. In January 2022 the country's leadership decided to change the purpose of use of the unfinished LRT facilities. The decision was based on high costs and low return of the project as well as corruption scandals. Despite that, at the end of 2022, the construction was re-planned to continue in an optimized design. The project is scheduled to be completed within three years. However, given the chronology of the construction, it is difficult to assess the possible impact of the project on the development of Astana. While the unfinished facilities ruin the image of the city, international experience with the construction of LRT system shows that their implementation was largely not based on socioeconomic returns and cost recovery, but in order to create a positive image of public transport and urban renewal (Nicolaisen et al., 2017). Also, one of the key sectors of Astana economy is construction, and its share in GRP was 7%[8]. Since the capital moved to Astana, the volume of construction work performed in 2003-2020 has increased 9 times.

Table 1 – **Indicators of Astana development in dynamics**

Indicators	2018	2019	2020
GRP per capita, thousand tenge			
Republic of Kazakhstan	3 382,5	3 755,7	3 766,8

8 *Bureau of National Statistics. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/region/268012/statistical_information/publication;*

Astana	6 359,5	7 075,8	6 873,6
Average monthly salary, tenge			
Republic of Kazakhstan	162 673	186 815	213 003
Astana	240 320	266 796	302 504
Unemployment rate, %			
Republic of Kazakhstan	4,9	4,8	4,9
Astana	4,5	4,4	4,6
Share of the small and medium enterprises in GRP, %			
Republic of Kazakhstan	28,4	31,7	32,8
Astana	48,6	55,1	56,8
Innovation activity rate, %			
Republic of Kazakhstan	10,6	11,3	11,5
Astana	14,7	14,8	12,6
Ожидаемая продолжительность жизни, лет			
Republic of Kazakhstan	73,1	73,2	71,4
Astana	76,2	76,7	73,5
The level of digital literacy of the population (6-74 years), %			
Republic of Kazakhstan	79,6	82,1	84,1
Astana	85,4	88,7	91,3
Average prices for new housing, tenge/m²			
Republic of Kazakhstan	266 863	293 518	307 600
Astana	340 706	373 656	392 682
Note: compiled by the author on data of the Bureau of National Statistics			

Socio-economic indicators of Astana (Table 1) confirm its competitiveness at the national level. However, high housing prices confirm the assertions that urbanization is inevitably accompanied by an increase in demand for housing and prob-

lems in providing affordable housing. Despite the fact that the level of innovation activity in Astana was higher than the republican indicators[9], in 2020 the share of product innovation only amounted to 20%. The main reasons of limiting innovative activity of enterprises are lack of demand for innovation and lack of financial resources[10]. Also, calculation on the graduates from higher educational institutions[11] and the population aged over 24 years[12], shows that human capital coefficient for Astana equals to 0.02. This level was stable for the period 2018-2020, and is not enough for innovative breakthrough.

The next step in assessing the development of the capital city is a calculation of the competitive index for Astana as defined as (Manaeva, 2021):

I = (I economic + I socio-demographic)/2,

where I – competitive index, from 0 to 1 (the higher the better);

I economic – arithmetic mean of the sum of standardized indices of economic factors and I socio-demographic - arithmetic mean of the sum of standardized indices of socio-demographic factors (Table 2).

Standardized indices for each relative indicator (per capita or share) of economic and socio-demographic factors are determined as:

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9 *Statistics of Innovations. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/official/industry/23/statistic/5;*

10 *Statistics of Innovations. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/official/industry/23/statistic/5;*

11 *Information and analytics system «Taldau». [Electronic source]. Mode of access: URL: https://taldau.stat.gov.kz/ru;*

12 *Publications. «Demographic Yearbook for 2016-2020». [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/region/268012/statistical_information/publication;*

Xi = (Xif – Xmin)/(Xmax – Xmin),

where: Xi - standardized i indicator of the city; Xif - actual i indicator of the city; Xmin - minimum value of the i indicator in the sample of cities; Xmax - maximum value of the i indicator in the sample of cities. The sample of the cities include Astana, Almaty (former capital and the biggest city), Shymkent (the South Kazkhstan) and Aktobe (the West Kazakhstan), all of which recognized as centers for economic growth.

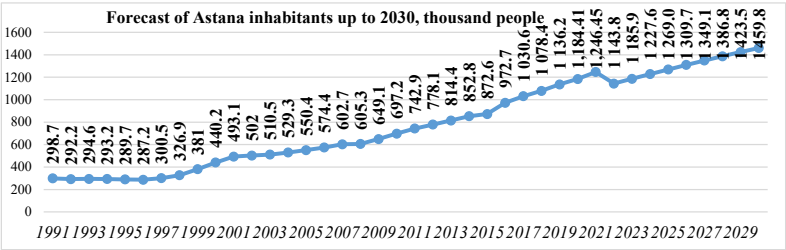
Table 2 – **Competitive Index calculation**

	Astana	**Almaty**	**Shymkent**	**Aktobe**
Index of the gross regional product per capita	0.99	1	0	0.21
Index of the level of activity in the area of product and process innovations	0.93	1	0	0.51
Index of the expenses on innovations per capita	0.77	0.50	0	1
Index of the share of people employed in SMEs	1	0.86	0	0.95
Index of the volume of retail trade per capita	0.55	1	0	0.46
Index of the volume of investments into fixed capital per capita	1	0.34	0	0.29
Index of the volume of manufacturing industry per capita	0.70	0	0.14	1
Median index of economic factors	**0.85**	**0.67**	**0.02**	**0.63**
Index of the natural increase rate	0.98	0.12	1	0
Index of the life expectancy at birth	0.82	1	0	0.23
Index of the share of poor to the total number of poor in the republic*	1	0	0.54	0.83
Index of the unemployment rate*	1	0	0.17	1
Index of the volume of main types of healthcare services per capita	0,62	0,23	0	1
Index of the volume of main types of educational services per capita	1	0,59	0,11	0
Index of the share of employed people with higher education	0,83	1	0,69	0
Median index of socio-demographic factors	**0,9**	**0,4**	**0,5**	**0,4**
Competitive Index	**0,87**	**0,54**	**0,25**	**0,53**

Note: compiled by the author. ** - indicators of the indices of share poor to the total number of poor in the republic and unemployment rate were defined as: Xi = (Xmax - Xif)/(Xmax – Xmin)*				

Calculation of the Competitive Index illustrates that Astana is more competitive city in Kazakhstan as its indicator equals to 0.87 (Table 3). Including, the index of economic factors equals to 0.85 and the index of socio-demographic factors is 0.9. Herewith, it should be noted that the competitiveness of Astana is ensured by the support of the state for the development of the new capital.

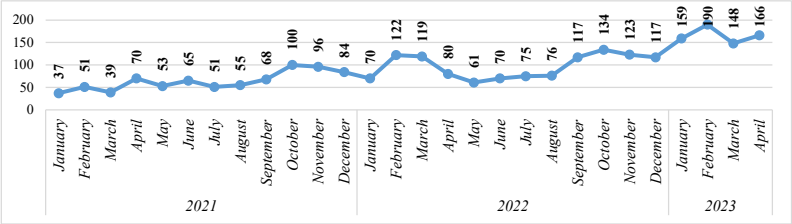
Since the structure of GRP is dominated by service sector, the further development of the capital city's economy will depend on the population number. In this connection, a forecast of the number of inhabitants of Astana was made for the period from 2021 up to 2030, by the use of data on population movement[13] and statistical methods (Graph 1).



Graph 1. Compiled by the author on data of population movement Bureau of National Statistics for the period 1991-2021 and statistical methods to forecast population number

13 *Demographic Statistics. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/official/industry/61/statistic/5;*

However, actual number of residents of Astana in 2022 exceeded the forecast data (Graph 1) by 14.3% and as of January 1, 2023 amounted to 1354.5 thousand people[14]. The geopolitical situation had an impact, among other things, on the population of Astana. An obvious increase in the number of immigrants was noted in February 2022 and has continued since September 2022 (Graph 2). In 2022, share of the immigrants from the Russian Federation was 33.8%. This situation could be related to the start of the Special military operation and mobilization in the Russian Federation. Therefore, in Astana, the inflation rate in December 2022 amounted to 23% (for comparison, in December 2021 - 8.8%, in 2020 - 7.7%)[15]. In January-February 2023, compared to January-February 2022, the consumer price indexes amounted to: food products - 126.5%; non-food products - 131.3% and rental housing - 121.4%.



Graph 2. External immigration flow to Astana by month, people.

Source: Bureau of National Statistics. [Electronic source]. Mode of access: URL: https://stat.gov.kz/ru/industries/social-statistics/demography/;

14 *Bureau of National Statistics. [Electronic source]. Mode of access: URL: https://stat.gov.kz/ru/industries/social-statistics/demography/;*

15 *Bureau of National Statistics. [Electronic source]. Mode of access: URL: https://stat.gov.kz/ru/industries/economy/prices/;*

The impact of this trend in the long run is not the purpose of the article. It is obvious that the population number of Astana will depend on further developments in the neighboring Russia, as the total border area is more than 7000 km². Considering multinational and multi-confessional composition of Russian population, not only the total number, but also the structure of the population of Astana will change. Moreover, the immigrants from Russia mainly educated people of working age, which will also have an impact on the local labor market.

Furthermore, the capital city is the first in implementing the «Smart city» concept. Various initiatives are being implemented within the Project, including situational center, which receives data from video surveillance systems, photo and video recording of violations, the intelligent contact center of Service 109 and chat bots in social networks that all allow the local executive bodies automatically to communicate with the residents[16]. According to the «Digital Kazakhstan» State Program's implementation data, 99.2% the households of Astana had access to the Internet in 2020, and only 37.2% of them used e-government services[17]. As regards to the Astana agglomeration, 71-98% of the households had access to the Internet, and only 1 to 37% of them used e-government services[18]. The highest rates were noted in the Tselinograd district, which is the closest to the capital city. Thus, the development of Astana and the close proximity to it have a positive impact on the digital development of the surrounding areas.

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16 *Decision of the Maslikhat of the city of Astana dated November 15, 2019 No. 450/57-VI «On the development strategy of the city of Astana until 2050»;*

17 *Statistics of Information and Communication Technologies. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/region/268012/statistical_information/industry/7129;*

18 *Statistics of Information and Communicationsion Technologies in regions. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/region/247783/statistical_information/industry/1129;*

The impact of the COVID-19 pandemic on socio-economic situation is clear (Table 3). In particular, in 2020 compared to 2019 and 2021, the share of the unemployed has noticeably increased. Life expectancy, the volume of industrial production, the real money income index and the passenger turnover of all modes of transport have decreased. Moreover, in 2020 in Astana, the proportion of deaths from respiratory diseases, influenza, acute respiratory infections and pneumonia was 16.58%, which is 2 times higher than in 2019. And for the period 1991-2021 the highest mortality rate in Astana is also observed in 2020-2021, 6.17 and 7.0 thousand people, respectively.

Table 3 – **Dynamic of socio-economic development indicators of Astana**

	2017	**2018**	**2019**	**2020**	**2021**
Death number, thousand people	3,9	4,2	4,3	6,2	7,0
Life expectancy at birth, years	76,21	76,21	76,75	73,49	72,87
Index of real income, % to the previous year	98,2	99,6	104,2	99,7	106,2
Share of the population with incomes below the subsistence level, %	0,8	0,9	1,1	1,5	2,2
Share of registered unemployed in the economically active population, %	0,5	0,5	0,5	0,7	0,3
Number of people registered with employment agencies as unemployed, thousand people	2,4	2,7	2,9	4,0	2,1
Volume of industrial production, % to the previous year	106,4	101,5	101,1	91,4	110
Passenger turnover of all types of transport, % to the previous year	107,0	105,3	111,1	36,9	112,3

Note: compiled by the author on data of the Bureau of National Statistics «Dynamic of main socio-economic indicators». Mode of access: URL: https://www.stat.gov.kz/region/268012/dynamic					

The development of Astana has been envisaged in the concept of entering the capital into the world's top 10 cities by 2050[19]. The development of Astana until 2025 and 2050 also reflected in the respective development programs. In particular, the Astana Development Program until 2025 addresses such key issues as housing affordability, lack of places in school and pre school organizations, and growing food costs[20]. The latter amounted to 51% of the households spending in 2020[21]. The program for the development of Astana until 2050 provides solutions for the following key tasks[22]. *Firstly*, the development of small and medium-sized enterprises (SME) and increasing their share to 74% of GRP. It is noted that at present the sector of SME is mainly represented by the headquarters of mining and state-owned enterprises. *Secondly*, the development of the ICT sector that accounts for 1% of the total gross value added and 1.5% of the total number of employees. *Thirdly*, ensuring affordable housing, which is the main problem for 49.4% of the

19 «*On approval of the Concept of entering the capital into the ranking of the 10 best cities in the world by 2050», Government Decree of the Republic of Kazakhstan dated December 29, 2014,* №*1394. [Electronic source]. Access through the Information and Legal System «Adilet»;*

20 *Decision of the Maslikhat of the city of Astana dated December 30, 2021 No. 129/18-VII «On the development plan of the city of Astana for 2021 – 2025»;*

21 *Monitoring of the standard of living of the population in the Republic of Kazakhstan 2020. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/official/industry/64/statistic/6;*

22 *Decision of the Maslikhat of the city of Astana dated November 15, 2019 No. 450/57-VI «On the development strategy of the city of Astana until 2050»;*

residents. In turn, the housing market in Kazakhstan has some peculiarities. First, due to the underdevelopment of the stock market, housing is the most common means of investing savings. As a result, the population with savings have several dwellings, while others have none. Secondly, the legislative right to individual housing construction in Astana is currently not being implemented, despite the increase in the number of applications for the provision of land plots. Moreover, according to the OECD, in Kazakhstan, only 4% of the housing stock is social (OECD, 2017, p. 13). The housing ownership rate is 97%, and thus the housing rental market is underdeveloped, with the exception for Astana and Almaty, where the rental housing market is 26% and 8%, respectively (OECD, 2017, p. 57). Also, the OECD review mentions repeated accidents caused by poor construction quality; high mortgage rates; the unsatisfactory condition of up to 80% of heating systems; high losses during heat distribution; the need to repair or replace 64% of water and sewer networks (OECD, 2017, p. 14, 133). In general, the Astana Development Programs until 2025 and 2050 have one significant drawback, which is the lack of development issues for the Astana agglomeration. Therefore, the issues of providing the capital city with foodstuff and construction materials have not been considered.

The territory of the Astana agglomeration includes Astana (the core of the agglomeration) and 4 districts of Akmola region[23], where 74.8% of settlements are 30-60 km from the core of the agglomeration. A sociological survey made in the agglomeration area showed that more than a quarter of respondents (27%) make daily trips to Astana (Abilov et al., 2017, p. 77). The purposes of travel are labor for 27%, leisure for 28%, and shopping for 34%. According to the structure, the agglomeration is monocentric, formed around the core city Astana. Research argues that the monocentric structure of agglomerations is characterized by a further shift to a polycentric structure,

23 *«On approval of the Interregional scheme of the territorial development of the Astana agglomeration», Decree of the Government of the Republic of Kazakhstan dated November 8, 2017,* №826. *[Electronic source].*

Accessed through the Information and Legal System «Adilet»;

which in turn is the optimal form of spatial organization for the realization of the agglomeration effect (Kuricheva and Kurichev, 2018, p. 92). The Astana agglomeration belongs to the largest type by size, with more than 1 million people. In terms of the rate of development, it belongs to the type of particularly dynamic (the average annual growth rate of the urban population over 20 years is more than 5%). And in terms of the coefficient of urban agglomeration development, it is the most developed, with a coefficient equal to more than 50[24]. The main goal of the Astana agglomeration is to provide the capital with food and construction materials. However, current production of the basic food does not meet the needs, calculated according to consumption rates[25] (Table 4).

24 *The indicator was calculated as: K=P(Mm+Nn), where P – is the population of the agglomeration, number of people; M – is the number of cities in the agglomeration; m – is the share of urban population in the population of the agglomeration; N – is the number of urban-type settlements in the agglomeration; n – is the share of urban-type settlements in the population of the agglomeration;*

25 *«On approval of scientifically based physiological norms of foodstuffs consumption», Order of the Minister of National Economy of the Republic of Kazakhstan dated December 9, 2016,* №503. *[Electronic source]. Accessed through the Information and Legal System «Adilet»;*

Table 4 – **Food availability in Astana in 2020**

№ №№	Indicators	Consumption rate, kg/person/year	Demand, kg	Production, kg[26]	Provision, %
1.	Bread	42	49 745 262	15 547 000	31,25
2.	Potato	100	118 441 100	78 700 000	66,45
3.	Vegetables	149	176 477 239	17 300 000	9,8
4.	Meat of all types	78,4	92 857 822	21 604 500	23,27
5.	Milk and dairy products	301	356 507 711	95 300 000	26,73
6.	Eggs, units	265	313 868 915	363 468 600	115,8
	Note: compiled by the author.				

Besides that, there are also a high share of import for construction materials, the absence of innovative construction materials and the materials with higher value added costs[27]. Moreover, a comparison of the forecast data for 2020 with the actual data for 2020[28] shows that while exceeding most of the projected indicators for livestock, there was a significant underachievement of the projections by 60% or more for the production of potato and vegetables (Table 5).

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26 *Statistics of Industries. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/region/268012/statistical_information/industry/*71151;

27 *Decision of the Maslikhat of the city of Astana dated November 15, 2019 No. 450/57-VI «On the development strategy of the city of Astana until 2050»;*

28 *«On approval of the Interregional scheme of the territorial development of the Astana agglomeration», Decree of the Government of the Republic of Kazakhstan dated November 8, 2017,* №26. *[Electronic source]. Accessed through the Information and Legal System «Adilet»;*

Table 5 – **Assessment of the achievement of forecast indicators**

	Forecast for 2020	**Fact for 2020**	**Execution, %**
Cattle, animal units	46400	66297	42,9
Including cows	20751	31286	50,8
Horses, animal units	20500	34897	70,2
Sheep and goats, animal units	52800	43256	-18,1
Forage crops, hundredweight	3791846	5562200	46,7
Potato, hundredweight	1231550	485220,4	-60,6
Vegetables, hundredweight	660938	110729,8	-83,2
Note: compiled by the author on data of the Bureau of National Statistics[29] and Decree of the Government of the Republic of Kazakhstan «On approval of the Interregional scheme of the territorial development of the Astana agglomeration»			

Concluding remarks

The development of Astana as the city and capital shows that urbanization is related to economic growth. Furthermore, this research confirms competitiveness of Astana at the national and regional levels. In particular, at the national level, Astana has relatively low rates of poverty and unemployment, the higher rates for life expectancy, average monthly wages and gross regional product per capita. Also, the main indicators of the socio-economic situation for Astana are comparatively better than for some leading regional Kazakh cities such as Almaty, Shymkent and Aktobe. The development of the capital city and proximity to it have a positive impact on the development of nearby agglomeration territories. At the same time, there is a necessity to

29 *Main indicators on districts of the Akmola oblast. [Electronic source]. Mode of access: URL: https://www.stat.gov.kz/region/247783/dynamic.*

make amendments and changes to the Programs for the development of Astana until 2025 and 2050 in order to provide the citizens of Astana with an adequate foodstuff, ensuring housing and job securities, taking into account the influx of the people from Russian Federation due to the current geopolitical situation.

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