

Territorial Availability of Social and Economic Infrastructure in Kazakhstan: Comparative Analysis of Urban and Rural Households

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Abstract—The market transformation in Kazakhstan during the last two decades has essentially strengthened a gap between development of urban and rural areas. Implementation of market institutes, transition from public financing to paid rendering of social services, change of forms of financing of social and economic infrastructure have led to strengthening of an economic inequality of social groups, including growth of stratification of the city and the village. Sociological survey of urban and rural households in Almaty city and villages of Almaty region has been carried out within the international research project “Livelihoods Strategies of Private Households in Central Asia: A Rural–Urban Comparison in Kazakhstan and Kyrgyzstan” (Germany, Kazakhstan, Kyrgyzstan). The analysis of statistical data and results of sociological research of urban and rural households allows us to reveal issues of territorial development, to investigate an availability of medical, educational and other services in the city and the village, to reveal an evaluation urban and rural dwellers of living conditions, to compare economic strategies of households in the city and the village.

Keywords—Urban and rural households, social and economic infrastructure, territorial availability.

I. INTRODUCTION

RURAL and urban private households in Kazakhstan have always had different life conditions, what was determined by the weak development of the economic and social infrastructure in rural areas, long distances between settlements, and existence of agricultural regions along with industrialization, which took place in the big regional centers. Even in Soviet times, despite the planning of territorial development, centralized development of roads, supply shops by goods, providing educational and medical facilities in all localities, there was still a gap between rural and urban areas. For rural youth it was prestigious to become a resident of the city, although migration to the city was strongly constrained by administrative barriers. With the collapse of the Soviet Union this gap was increased. The development of market institutions, decentralization of governance of territories and the reduction of financial support for unprofitable regions, moving from state funding to the paid social services,

changes in the form of financing of social and economic infrastructure have led to a significant strengthening of economic inequality in the society, including the growth of stratification of city and village.

The level of development of social and economic infrastructure depends on social policy realized by government in a particular locality. Under the socio – economic infrastructure of the region we mean a complex of sectors and activities, providing the life – sustaining activity households and population. This includes transport and roads, connections, medical, educational and socio – cultural institutions. Analysis of the literature showed a significant fact, that the theoretical study of the availability of infrastructure is not a prioritized for domestic sociologists. Up to the present moment, all studies of availability of social and economic infrastructure to the local population were just reduced to the statement of statistics of the quantity and the total cost of provided services.

However, more productive from a sociological point of view could be the considering of infrastructure as a resource in accordance with the theory of urban managerialism, developed by the English sociologist Paul Ray. He meant the city as an organized system of allocation of resources, resulting in an identifiable ways of organizing urban territory and inevitably leading to a systematic reproduction of social inequality [1]. The economic resources include land, different types of capital, buildings (commercial, industrial, residential), to social resources – infrastructure, recreation, medicine and education. The scientist has suggested that the way to understand the logic of the organization of urban territory lies on the way of learning motivation and ideology of the “city managers” – municipal workers, planners, investors, bankers, etc. Controlling access to the scarce resources, such as housing and education, they define the socio-space distribution of population. Thus, the subject of the research is the study of the binding between city population and resources of the city. Therefore the territory, providing better access to resources, are very attractive and prestige.

From these points the territorial accessibility of social and economic infrastructure is considered by us as an important criterion of quality of life of urban and rural households. Further, we will analyze the various components of social and economic infrastructure, the level of its development and

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accessibility in urban and rural areas on the example of Almaty as the country's largest city and Almaty region.

II. THE MAIN SOCIAL AND ECONOMIC INDICATORS OF CITY AND DISTRICT

A. Health and Health Care

In Almaty was created the largest infrastructure in the country for the delivery of health services: there are hundreds of specialized diagnostic, outpatient clinics and institutions, research organizations and sanatoria resorts and various treatment centres. Doctors' availability in the city is 2 times higher than in the country.

But in 2001 in Almaty city compared with 1991 based on 10,000 persons, the number of doctors decreased by 18.3%, nurses – 25%, number of hospitals decreased from 58 to 50, and this is during constant growth of the city's population [2]. In 2010, there were only 38 hospitals in Almaty, which is a comparable high number compared with other regions.

Despite the relatively satisfactory quantitative indicators of medical care compared with the national level (higher level of availability of beds in hospitals), quality of health of citizens in the city is at fairly low level. Mortality of working age remains high, as well as infant mortality, which in 2010 amounted to 16.54 dead per 1,000 born, whereas in 2007 it was equal to 14.57 [3]. In Almaty district also increased the infant mortality. In 2007 the index was 9.3, but in 2010 it became 13.4. As can be seen from the statistics, the infant mortality rate in the cities was higher than in the villages.

One reason for this phenomenon, as well as for other chronic diseases of the urban population, is the high degree of pollution of the urban environment, which is in excess of normal level several times. Almaty's population suffers not only from economic hardship, but also from the "diseases of civilization", which are caused by the urbiculture – the everyday stresses of living in a crowded city, which is not comfortable for life[4].

However, the rural population's risk of not getting timely and quality health care is much higher. In general, the marketization of services, low wages of medical personnel and the growth of «illegal» form of payment for their work led to the lowering of the quality and accessibility of health care, which leads to deterioration of health condition and lifetime of citizens[5].

B. Education

One of the major reasons for Almaty comparably better adaptation to new conditions has to do with the availability of developed sector of education and intelligence services, which became popular in the market conditions. One-third of the country universities and students are concentrated in Almaty city from the Soviet era [6]. This is reflected in the number of professionals and workers of intellectual activity, which is concentrated in Almaty city.

Education, like other areas of city life, has found its market value. Against the background of public funding reduction,

paid education in Almaty city equals to almost 40% of total expenditure on education. Almaty remains the leader in quantitative terms in education. Almaty has concentrated more than 35% of all institutions of higher education, 30.7% of the total number of university students across the country. Here, the share of students aged 6 to 24 years is the largest in the country and is equal to 103.4% as of January 1st 2011 [7].

In terms of education, there is a large difference between the city and the region, the rural young people are trained in higher education by 2 times less than the urban young people. However, there was a sharp decline in the quality of education, including the level of student's training. The higher education system, with few exceptions, is turned into a chain of diplomas issue, not to mention of the widespread practice of buying in higher education ratings, bribery to teachers [8]. Almaty city has the most powerful scientific and research potential in the country: it accounts for 46.6% of the country's scientific institutions, 52% of the total number of employees performing research and development, 53.7% of the total costs of research, 35% of the costs on information and communication technologies and 40.9% of scientific and technical papers[9].

In rural areas of the whole country there are some improvements in the sphere of education. According to the report of the head of the local municipality, the educational budget in 2011 amounted 73.4 billion tenge, also the 739 public schools are working. Using local budget funds was completed the building of five general educational schools for 1251 pupils, also 63 schools were repaired. In two years of realization the state program "Balapan" were opened 111 kindergartens and 160 mini – centers for 20.623 children were built and rehabilitated six kindergartens, 45 were returned to the communal property. Also there were opened 48 private kindergartens with the placement of government order. The coverage of children from 3 to 6 years by early childhood education reached – 51.1% [10].

C. Housing Availability

As a legacy of the Soviet past, housing is still very important social problem. Hardly any other issue blankets the general situation of the economy and living standards of population, the official ideology and stereotypes of society so comprehensively and clearly. According to M. Burawoy, the importance of the study of housing issues for social scientists is in opening of new possibilities for studying the processes of social stratification and changes in the social structure in time when economic and political foundations of the country are changing. Housing is an indicator of social and property stratification [11].

In the 1990s, as the result of policies of denationalization of state property and privatization, 97.7% of housing in Almaty has become private property. However, the price of real estate in the most expensive city in the country exceeds the purchasing ability of the majority. In the end, «the housing policy, dropped from the shoulders of the State to the family

and the market, leaves many people without affordable homes» [12].

In 2008, in Almaty only 34.1% housing were represented by apartment buildings, the remaining 65.9% – individual houses, the vast majority of them have a lower quality of construction, worst living conditions [13].

As it would seem, the appearance of the real estate market was to extend the possibilities to buy one's own home (families traditionally prefer to have private accommodation). However, housing is still a huge problem. Also, the demand for rented accommodation increased greatly due to the large number of visitors to the city, low income of young families. Housing through rents and mortgages took deformed shape and did not solve the problem in the whole.

Applying for bank loans has become almost inaccessible because of high interest rates, far exceeding the financial possibility of most citizens (in average 15%–20% annually). Therefore, apartments rent by private individuals are the most common way to solve the housing problem.

Limited availability and legitimate solutions to the housing problem leads to an increase of illegal practices such as squatting on the ground and «self-construction», which has already led to the emergence of shanty or migrant towns. Construction of suburban zone was carried out unsystematically without regard to geological and environmental conditions, development of economic and social infrastructure. Uncoordinated actions of local executive bodies of Almaty city and Almaty region in the regulation of land use issues have become one of the causes of illegal mass suburbs settlement in Almaty. In addition there is no comprehensive urban project development of suburban area.

Separately should be mentioned development of urban agglomerations of Almaty. In the process of suburbanization more and more people leave the city apartments, moving to the suburbs, but retaining the acquired urban lifestyle. To solve the problems of Almaty, Kazakhstani Government initiated measures for the comprehensive development of Almaty agglomeration by forming a network of satellite cities in Almaty region, elimination of violations during building of the city and suburban areas, creation of the State Urban Cadastre Almaty, implementation of major investment projects.

III. THE RESEARCH AIMS

The main research object of the article is a comparative study of the availability of social and economic infrastructure for rural and urban households in the example of Almaty and Almaty's region. The object of the study is private households of the lower level of middle class.

Statistical analysis of the social and economic infrastructure of urban and rural private households and the sociological research of strategies of survival showed the main differences of territorial accessibility of the social and economic infrastructure to urban and rural residents. The research aims of the paper are to reveal issues of territorial development, to

investigate an availability of medical, educational and other services in the city and the village, to reveal an evaluation urban and rural dwellers of living conditions, to compare economic strategies of households in the city and the village.

For a perfect example was taken the largest city of Kazakhstan – Almaty. Almaty is the largest city with a population of 1.45 million people, what is about 8.6% of the population of Kazakhstan [14].

Researchers polled 100 representatives from urban households and 50 from rural households. Three rural settlements were selected. They are located in remote areas, far away from Almaty and Taldykorgan, the two major cities of the region. Such selection allowed us to study what possibilities for work and business exist and what kind of social services are available for residents living in urban and rural areas in Kazakhstan. The survey was conducted over three weeks. The researchers applied a standard interview as a method for this research.

IV. FINDINGS AND DISCUSSIONS

A. The Access of Households to Local Infrastructure

Local development and availability of social and economic infrastructure are some of the important indicators of quality of life [15]. According to scientists, these categories can be reduced to the following main characteristics, which make up the life-support system of the population: the "quality" of the population, integrating its ability to reproduce, the ability to form and maintain a family, educational level and qualification; prosperity, as a material aspect, is characterized by income, current consumption and savings of population, and also by such macroeconomic indicators as GDP per capita, consumer price index, the level of unemployment and poverty; the living conditions, which are characterized by housing conditions, by population's provision of health and educational services; informing of population, which is determined by the availability of telecommunication and information infrastructure; social security, reflecting the conditions of work, social insurance and social protection, physical and material safety; the quality of the environment, accumulating data about pollution of air, water, soil quality, biodiversity level of territory, etc.; climatic conditions, which are characterized by climate, the frequency and specificity of force majeure situation [16].

Infrastructure is a necessary condition for the existence of household in a particular locality. It is impossible to evaluate the living conditions of the population without considering availability or absence of the infrastructure.

In our survey we consider the access to the infrastructure by the studied households in all areas of life activity: access to health and education services, banking, transport, postal services, the Internet, etc. In general, at all points respondents noticed relatively high level of availability of the mentioned elements of the local infrastructure, in most cases they are available for more than 2/3 of the households. Some of them objectively cannot be represented in rural areas (universities,

theaters, cinemas). However, some of the respondents in rural responses have also implied infrastructure facilities that are available at a distance in the larger towns, including the city of Almaty. At the same time, residents of Almaty are more categorical in their assessments. The entire infrastructure is widely represented in the country's largest city, but the respondents consider both the territorial and to some extent the economic accessibility of different services.

TABLE I
THE ACCESS TO INFRASTRUCTURE IN THE LOCATION OF LIVING (PER CENT)

		Urban	Rural	Total
Health services	Doctor	70	96	78.7
	Medical Center	81	94	85.3
	Polyclinic	87	96	90
	Hospital	76	98	83.3
Educational Services	Pre-primary	89	84	87.3
	Primary	91	98	93.3
	Secondary	96	98	96.6
	Vocational	80	66	75.3
	University	74	2	50
	Banking services	98	66	87.3
	Market, shops	100	100	100
Cultural Services	Transportation service	100	90	96.7
	Library	88	90	88.7
	Cinema	83.8	0	55.7
	Theater	80	0	53.3
	Music entertainment	91	12	64.7
	Sports facilities	87	58	77.3
	Internet	85.9	66	79.2
Internet	Internet cafe/shop	90	50	76.7
	Post office	94	94	94
	Access to phone	99	96	98
	Gas	98	76	90.7
	Regular Electricity	100	100	100
	Free access to safe drinking water	89	66	81.3

Regarding access to health services, rural populations indicate that have equal access to the services of this kind (all answers above 90%). Under the health care we mean territorial availability of the government clinics and hospitals, private medical centers and doctors. These results are not surprising, because the studied villages are regional centers with a large population with the local clinic and hospital. The urban population, in contrast, rated lower access to and use of health services (70–87% in different categories). In the sphere of early children education urban residents are better provided with the preschool education (89% urban and 84% rural). After transition to a market economy many public kindergartens were privatized and then not used for its intended purpose. However, many private kindergartens have been opened in the city, which helped to relieve to load on child seats in the public kindergartens. In the rural areas kindergartens were opened not long ago. But because of the low female employment, wider kinship and the necessity to

pay at least partially for the services of a kindergarten, the demand for kindergartens is lower among rural residents below. So, apparently, there is no large gap in the estimates. Due to the state program of compulsory secondary education in Kazakhstan, all the children attend high school. Virtually all respondents noted access to primary and secondary education in the community (89–98%). However some respondents in the city are dissatisfied by travel distance to school, congestion or quality of nearby schools. In rural areas, the situation is more complicated with a professional college and higher education. Thzaus, only 66% of the rural populations are able to obtain a specialized secondary education and only 2% higher (respectively 80% and 74% in urban areas). Almost every large village has its own college. However, one who wishes to get higher education has to move to Almaty and Taldykorgan cities. This increases the migration, including the pendulum. Banking system of Kazakhstan increases every year. Now rural inhabitants are also active users of banking services – they use bank cards to get salaries, make money transfers, open deposits, take loans. However, not all banks have offices in regional centers, even in the Almaty region. As Almaty is the biggest financial center of the country. Thus, only 66% of the rural populations have access to banking services. 98% of the urban populations use banking services. Shops, markets and supermarkets are not new to the people of Kazakhstan. 100% of respondents note that they do not have any difficulties with the markets and shops. Moreover, for many people, especially in rural areas, business in shops, markets is a major source of income, as it brings daily income.

Transport plays one of the most important roles in the infrastructure of any area, because it is responsible for the mobility of the movement of area's residents. Both in the city (100%) and in rural areas (90%) almost the absolute majority hasn't got any difficulties with transport service. However, the situation with access to public transport is different. In the city public transport is available for people, but in the villages almost all public transport is abolished. The main transport is the private taxi-driving, which is also the main source of income for villagers. In terms of access to cultural services, the countryside is inferior to the city. In the researched villages only 90% of people have access to the libraries. Almost in all villages of the country there are no cinemas and theatres. Only 12% of rural residents have access to the musical public places, like dance disco clubs. Typically, such public places are organized by young people, who live in these villages and are more spontaneous than sustainable. More than 90% of urban residents have noted the accessibility to different kinds of cultural services.

Slightly more than half of the respondents have access to sport services (58%), because in the villages there are no specialized sport clubs and groups. 13% of the urban population also don't attend sports clubs.

In our days Internet is one of the most powerful communication networks, which units the millions of people around the world. Our survey showed that 85.9% of urban and

66% of the rural population have access to the Internet at home. The low percentage in rural areas can be explained by the fact that not all Kazakhstan's Internet providers have the technical capabilities to provide the Internet in the villages. Only half of rural residents have access to the Internet cafes and Internet shops. In rural areas of Almaty's region the public access to the Internet is gaining momentum now.

The national postal operator "KazPost" is represented in all the towns and cities of Kazakhstan (94% of respondents have noted it). Also fixed phone services are provided for 99% of urban and 96% of rural population. The fact that not all urban respondents have access to the landline is connected with building the new residential compounds and the expansion of the boundaries of Almaty. 76% of the rural population use gas. However, gasification still has not reached all the villages of Almaty's region. In the city 98% of respondents said that they have the access to gas. Free accesses to safe drinking water have 89% of urban and 66% rural respondents. Not all villages have a central water supply, they use the wells. Sometimes the situation is worse, for example, when the water is imported. All respondents have access to a regular electrical supply – 100%. Thus, we can conclude that the Almaty is more attractive in terms of access to infrastructure. Also the infrastructure is quite good developed in the Almaty's region, although there are still strong differences.

B. Subsistence/Natural Revenues of households

It is necessary to note the availability of urban and rural population to natural and subsistence income, which are not monetary. These incomes can help households to reduce their costs. This category does not include products or resources, which can be used to sell.

One of hypothesis of the study states that not only wages are important for the economic survival of households, but also income from business or other gainful activities. Households reduce their costs through the usage of natural resources for food, self-sufficiency, improvement of the living conditions, reduction the necessity of the market goods. Among them it has been identified: a) livestock and poultry, meat and dairy products; b) agriculture produce grown in the own garden; c) access to drinking water (pipeline / from the well); d) natural products such as fish, mushrooms, honey, wood, coal, etc.; e) access to grazing fields; f) other resources. This subsistence/ natural income are particularly important for the rural inhabitants, who partially reserve subsistence farming. Urban residents also can have access to these resources. They can grow vegetables and fruits in the cottages, breed poultry and livestock, use natural resources.

Now we will consider the difference between town and village in this matter. Own animal products are not important /not available for 52% of urban and 28% of rural households; their fruit and vegetables – for 50% and 10%, respectively, access to drinking water – 39% and 16%, products of nature – 53% and 22 % access to grazing land – 83% and 74%. These data together reflect the significance for the families of so-called subsistence farming, provision with the basic goods.

However, these activities require more labor and time costs and due to paid work or school, family members may abandon them. In addition, the way of living has changed significantly as in the city so in the village, there is extension of consumer culture, which refuses the values of labor and additional activity within home/ subsistence farming. There is a situation when the household consider natural revenue to be too expensive and non-profitable even within limited financial resources. For now it is difficult to assess whether world economic crisis will influence on the strengthening of the role of subsistence/natural incomes in Kazakhstan.

However, natural resources continue to play important role for many families with low level of income. Our survey confirms this fact. Access to animal products is an important and very important for 62% of rural and 40% of urban households, agricultural products – 70% and 46%, respectively, of natural products – 66% and 26%. Access to drinking water is important and very important issue for 70% of rural and 56% urban households. Access to grazing fields is relevant only for 12% of the respondents.

Overall, these data indicate significant dependence of rural households on natural and natural resources, as well as the fact that the city's residents also use them or recognize their importance to the life of the household.

V. CONCLUSION

As was shown by the above analysis, the study of the level of socio-economic infrastructure and the coverage of population by social services allows giving the comprehensive assessment of the territorial aspects of the quality of life of households. Their indicators are the availability of necessary social and economic resources – education, medicine, communication, transportation, trade and financial networks, cultural and recreational places. Also the households to improve their prosperity, safety, and quality of life use the local benefits, which are given them by nature and place of residence. The research found that getting the subsistence and natural incomes is a successful strategy for the survival of many rural and urban households. They are given by farming (garden, personal livestock, etc.), by seasonal harvest of original goods and by using the other natural resources (water, pasture, etc.).

Thus, improvement of territorial availability of socio-economic infrastructure and natural resources for the household in respects the problems of inequality and differences between urban and rural areas will contribute to better social standards of living.

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