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# Analysis and assessment of Kazakhstan's social infrastructure development

The current stage in social policy development in the Republic of Kazakhstan is characterized by significant changes in defining approaches to the social policy. It is caused by changing society's social structure, new relations' emergence in this regard and changing its nature according to the worldwide trend in socially-oriented market economy development. The article is devoted to studying the state of provision with infrastructural objects in the Republic of Kazakhstan. Social infrastructure development tendency has been revealed, main directions of the social infrastructure development have been determined. The main ways of the region's social infrastructure effective development are shown. The author emphasized some important factors that have a significant impact on a sustainable development of social infrastructure facilities' functioning. Social infrastructure development is not only an urgent problem, but also a problem of a long-term nature that determines the need to implement reforms in the social sphere in the context of economic relations' transformation. In this regard, the solution of the problems in social infrastructure development largely determines its successful development, both at this point of time and in the future.

Keywords: social sphere, region, infrastructure, social infrastructure, living standards of the population, healthcare, education, social security, housing sector.

The main direction of economic reforms in Kazakhstan at the present stage of development as an independent state focused at market relations is a system of practical issues of improving organizational and economic mechanisms for social infrastructure development.

The urgency of the social infrastructure study is also caused by the special role it plays in the social and economic development of the regions. The effectiveness of territorial systems' functioning is determined not only by economic factors but also by social criteria. In this regard, the role of the social infrastructure is increasing. The social infrastructure on the one hand is a factor of socio-economic development, and on the other hand is a condition for ensuring normal life activity and population reproduction in various territorial systems. At the same time, problems of social infrastructure development require further theoretical and practical research in relation to the modern economy characteristics, rejection of established dogmas and stereotypes when considering its branches' place and role in the reproduction process. Creating favorable conditions for population's life increasingly depends not on material production sphere organization, but on the level of social infrastructure development.

The social infrastructure is understood as branches aimed at meeting region population's needs. These include healthcare, education, science, culture and recreation, communal services, social facilities and others. It is worthwhile to clarify that some objects can simultaneously refer both to production and social infrastructure.

Rapid development of infrastructure and availability of free capacities promote new enterprises' creation in the region which leads to the regional socio-economic system development. Also, competitiveness of the located production is affected by the degree of the region's economic infrastructure development.

One of the main tasks of the public management is forming conditions contributing to the regions' socio-economic development. Infrastructure is becoming a powerful factor for the region's effective economic growth and raising population's standard of living. The main trend of the modern development is provision of infrastructure processes' comprehensive extension, since without them country's neither economic nor social life's full-fledged support is possible.

In the modern society one of the most important places in the development of the country's regions and a country as a whole is social infrastructure and its accessibility (education, health care and housing provision).

The President of the Republic of Kazakhstan has identified a number of urgent directions for public resources' development, including schools, hospitals, medical posts, local roads, and clubs' reconstruction. The transition to a more efficient system of managing state resources should be the basis for consolidating positive results achieved by Kazakhstan in terms of social infrastructure development which allows us to assess not only the volumes of work carried out by state bodies but also their final results.

The social sphere belongs to the priorities of the Republic of Kazakhstan's state policy, as in particular President N. Nazarbayev said in his Missive to the people of Kazakhstan in January 2017: «... the role of the health care system, education, and social security should change» [1].

Social infrastructure occupies one of the most important places in the economy of any state, as well as in the regions' economies, since this infrastructure elements provide local communities' conditions and standard of living, satisfaction of needs and demands of specific people and households, and provide a basis for regions' stratification in terms of the development level.

One of the basic conditions of the modern society is the availability of high-quality medical care and treatment that is accessible to wide population. The level of healthcare development in the country directly affects all spheres of the society. The main medical and demographic indicators - fertility, mortality and life expectancy have stabilized and improved in the recent years. Infectious morbidity rate has been reduced. However, in general, qualitative characteristics of the health status of the country's population require serious and significant improvement.

At present, in Kazakhstan, the elderly people make 7.7 % of the total population, the proportion of people over 65 is one of the lowest in the Commonwealth of Independent States. In Russia, Belarus and Ukraine this indicator is about 12-13 %.

Life expectancy in 2016 was 72 years which is 6 years more than in 2006. There is a positive trend in infant mortality. In 2016 this indicator was 12.6 cases per 1000 births which is 2 times less than in 2006. An integrated model of medical treatment to obstetric and child care has been successfully implemented in order to reduce maternal and infant mortality. Measures taken have resulted in a steady decline in infant mortality. According to the Committee on Statistics, the maternal mortality rate in 2016 was 12.7 cases per 100,000 births, whereas in 2000 it was 48.0 cases per 100,000 births. In order to reduce mortality, the role and responsibility of specialized medical organizations in the coordination, monitoring, ensuring medical care effectiveness and quality at all levels has been strengthened [2].

For the year 2016, 11,104.264 screening surveys of adults and children target groups were carried out in the country. There is an increase in the rate of coverage by screening up to 90 % or more, an increase in the rate of cases' detection, a positive dynamics of identified patients' dispensary observation coverage.

Given that more than 40% of the population lives in rural areas, special attention is paid to increasing medical care accessibility to rural population especially of those living in remote and hard-to-reach regions. Transport medicine is developing - 49 mobile medical complexes, 40 medical rescue stations, 3 medical diagnostic trains are operating.

Priority attention is paid to the treatment of diseases most influencing the demographic situation in the country. For this, a step-by-step introduction of an integrated model in five areas is envisaged. A Coordination Council has been established in all areas. For each of the directions, the state of department-organizations of medical care, personnel support, material and technical equipment have been studied, and ways have been developed to solve the identified problems of the service state.

In 23 medical organizations of 7 pilot regions the Disease Management Program for three nosologies: arterial hypertension, diabetes mellitus, and chronic heart failure is being implemented. This program is aimed at teaching patients healthy lifestyle habits that contribute to reducing acute exacerbation of chronic diseases, emergency hospitalization and increasing citizens' joint responsibility for their health.

The main priority of health care is to protect mothers and children's health. For the first time in the post-Soviet space, Kazakhstan began vaccinating children against pneumococcal infection. To date, 2 regions of the country are covered by this type of vaccination, stage by stage, vaccination will be conducted throughout the country. Only these measures will reduce the death rate of children by 20 %.

Despite health indicators' positive dynamics, the life expectancy of Kazakhstanis is almost 10 years less than in the OECD countries. There is a significant difference between the life expectancy of men and women, the mortality rate among men of working age is 24% higher than that of women.

There are significant differences in the life expectancy between the regions of the Republic. Thus, in the northern and eastern regions of the country this indicator is lower than the national average, due to the high mortality rate, prevalence of elderly people and low birth rates.

The main problems are also ineffective structure of health personnel, low salaries and its disproportion. The number of hospitals, outpatient clinics, health facilities, specialized centers, diagnostic equipment should be increased in accordance with the growth in the number and qualification of medical workers.

Among the tasks that need to be addressed in the health sector for the forthcoming period, the following should be highlighted:

- 1) low level of doctors' provision. In the northern regions, the low level of doctors' provision is explained by their migration to other countries, and in the southern regions by the rapid growth of the population due to natural growth;
- 2) a high level of maternal mortality exists in Mangistau, Zhambyl, Akmola, Pavlodar, South-Kazakhstan oblasts and Astana;
- 3) the necessity to create equal opportunities for people with disabilities to have access to health services [3].

Thus, the population receives the quality of health services which corresponds to the average Kazakhstan indicators. The main aim of public health services modernization from the part of the state is to improve the quality of medical services, and the aim of private investors is to diversify these services. Specialization of the state activity (controls health organizations' functioning, partners' activities and tariffs' level) and private investor's activity (reconstructs, builds and equips medical institutions) will allow to provide the population with highly effective medical services.

Healthcare influences human capital quantitative indicators' formation, that is, it influences population, its growth, working age, etc. Along with the quantitative parameters, qualitative indicators are also important. The main source of their improvement is the education system. In our opinion, the education system forms economically active population capable to work effectively and increase the regional product.

The development of preschool education and training system is an important direction of the country's state policy. Various types of preschool institutions are provided for children, such as: pre-primary school, a kindergarten, a family pre-primary school, a sanatorium pre-primary school, a school-kindergarten complex, a preschool mini-center. The goal of preschool education and training is the formation of initial knowledge, and skills necessary for the formation of personality at this age. In 2016, 9,410 pre-school organizations operated, including 4,915 kindergartens and 4,495 mini-centers. Such a sharp increase was due to mini-centers opening, and new pre-school institutions construction.

The highest coverage rates for pre-school education are in Pavlodar, West Kazakhstan, Kostanay, East Kazakhstan, Kyzylorda, North Kazakhstan, Akmola, and Aktobe regions.

Over the previous 3 years, the state built 186 kindergartens for 40,000 seats, the private sector has opened more than 1,300 kindergartens for 100,000 seats. The most number of private kindergartens has opened in South Kazakhstan, Almaty, Kyzylorda regions.

But, despite the increase in the number of pre-school organizations in the country, there is a low proportion of their coverage of children, especially in rural areas (75.6 % - 3-6 years old, 50.1 % - 1-6 years old).

In the regions, active measures are taken to increase secondary education accessibility and quality. Currently, there are 7,450 schools in the country. Only in 2016, 103 schools were put in. It is encouraging that since January 2017 the Republican Data Bank of Orphans and Children Left without Parental Care and Persons Wishing to Take Children for bringing up in their families is functioning. As of today, 28.4 thousand children and 1,400 persons who want to take them to families have already been registered.

Currently, there are 817 colleges functioning in the republic, of which 473 are state-owned, and 344 are private. Starting April 1, the unemployed are trained by «Free VET» Project. It is planned that in five years 674 thousand people will be covered by free VET.

Nevertheless, the existing infrastructure and material and technical equipment of the VET system do not ensure the training quality. There are no educational institutions in 23 regions of the republic, 30% of students need a hostel. Over the past three years, only 6 modern educational institutions have been introduced. 60% of VET educational institutions are using outdated equipment.

130 universities are operating in the system of higher and postgraduate education today. The state order for training higher education specialists amounts to 31.7 thousand grants, of which, there are 3.2 thousand grants for «Serpin» program, 7,400 grants for Master program, 628 grants for PhD Program, 43 of them are for Nazarbayev University [2].

In view of the identified problems in the social sphere, it is first and foremost necessary to improve the material and technical base of education and health care, as well as to increase the country's provision with highly-qualified pedagogical and medical personnel.

Currently, a multi-level model of the social security system is functioning in the country. It mostly corresponds to the market economy principles and provides for the responsibility allocation for social security between the state, the employers and the employees at the basic, joint obligatory and voluntary levels.

The minimum retirement pension amount with a full length of service is 28 148 tenge. The basic pension payment is 12 802 tenge. Since January 1, 2017, there has been an increase in pension payments by nine percent.

Also from January 1, 2017, the amount of social payments that are calculated on the basis of the minimum living wage and monthly calculation index has increased: state basic social disability benefits, on the occasion of loss of the bread-winner and by age, state special benefits for Lists No. 1 and No. 2, special state benefits, state benefits for child care on reaching the age of one year.

In 2018, a number of changes will be made in the social and labor sphere.

First, since January 2018, the size of the minimum living wage is supposed to be brought into line with the new conditions for socio-economic development. There will be a step-by-step revision of the methodology for calculating minimum living wage which assumes, at the first stage, a change in the structure of the minimum living wage by changing the ratio of food and non-food items.

Secondly, the social assistance system will be reformed through the introduction of a new format of targeted social assistance. It will be implemented by transforming the current three types of payments for low-income citizens. Payment will be appointed subject to the social contract conclusion for obligatory participation of all family members in the employment program.

Thirdly, additional obligatory five-percent pension contributions from the employer will be introduced as a new funded component of the pension system.

Fourthly, from July 1, 2018, the standard pension payment will be calculated according to the length of service. The calculation of the basic pension will be carried out in the following order: if the citizen has less than 10 years of service or no experience, the amount of the basic pension will be equal to 50 percent of the living wage (LW). For each year of service in addition to 10 years, the size of the basic pension will increase by two percent and if the service period is 35 years or more, the basic pension will amount to 100 percent of the PM. To implement this rule, from July 1, 2018, basic pension will be recalculated for retired pensioners based on the documents available in the pension file.

Housing is still one of the most important indicators characterizing the population's standard of living. At present, housing availability is one of the basic needs of the modern society, so the state always pays special attention to this problem.

The RK has not managed to cardinally solve the existing problems in the housing sphere. Most of Kazakhstan's people, except for the rich and top middle class, are still unable to improve their housing conditions by with mortgage lending.

Market institutions are more developed in the housing sphere of urban areas and practically do not exist in rural areas where they are replaced by subsistence farming. Citizens build their own individual housing themselves.

The provision of housing for Kazakhstani people increased from 18.4 sq m per person in 2010 to 21 sq m by the beginning of 2017. Nevertheless, this indicator is still less than the UN standard by 9 sq.m. The index of housing level availability increased by 12% compared with 2015.

For comparison, let us give an example of the average housing in different countries (Table).

Average housing in different countries (sq.m. per person)

USA	70
Germany	43
France	39
Poland	25
Russia	24
Brazil	19.4
Turkey	17
Japan	15.8
Hong Kong	14,2
China	8,25
Singapore	6,4

Note. Based on source [4].

Nevertheless, Kazakhstan's parameters in global comparison are rather insignificant against 70 square meters in the US, 43 square meters in Germany and 24 square meters in Russia. On the surface the situation with demographics looks optimistic, the country's population approached 18 million at the end of the last

Table

year, but at the same time there was a tendency of young population decrease. This is due to the birth rate fall in the early 90's, as a result, in the coming years the decrease of population aged 20-30 years by about one hundred thousand a year is expected. The increase in household consumption since 2014 shows unsatisfactory real growth of only 1-2%, while in the previous years it confidently showed double-digit growth rates. This was affected by a decrease in real wages by 2% and by 1% in 2015 and 2016, as well as almost complete stoppage of banks loans - in 2016, the loan portfolio of banks decreased by 0.3%.

In 2017 it is planned to hand over 10.1 million square meters of housing including 5.1 million square meters of multi-family housing and 5 million square meters of individual housing according to "Nurly zher" program for the account of co-financing. This year, KZT 168.8 billion will be allocated from the state budget for the program (the amount will be adjusted during the year).

Expenditures of the state budget to support housing and communal services increased by 14 % in 2016 and amounted to KZT 507 billion. A further increase is expected this year. As early as January 2017, KZT 5.2 billion was spent, which is 40% more than in January 2016.

KZT 25 billion will be allocated under "Nurly Jer" program to commission 150 thousand square meters to create a regional rental housing fund without purchase right.

As a result of 2016, the leaders in increasing expenditures on housing and communal services were Aktyubinsk oblast and East Kazakhstan Oblast. 28.5 billion tenge was allocated to the Aktyubinsk oblast, and 34.2 billion tenge to East Kazakhstan oblast.

Under the plan for 2017, a strong increase in expenditures will take place in Pavlodar oblast (+ 84 %) and in Karaganda oblast (+ 40 %), due to the large number of allocated transfers for water supply and sanitation development in rural settlements.

Regionally, the highest housing provision is observed in Astana and Almaty (due to active housing construction), as well as in the northern and eastern regions (due to population decline).

The lowest housing availability is observed in the southern regions. The gap in the average republican level is due to the fact that the pace of housing construction does not keep up with the high level of population growth in these regions.

According to the social and economic development monitoring results, there are 6 672 rural settlements where 7,7 million people live. Of the total number of rural settlements, 1 229 corresponds to high, 4 938 to average, and 478 to low development potential. At the same time, more than half of rural settlements are small and only 8.9 % of rural residents live there.

79 % of the rural population has access to centralized water supply, and 27 % of local roads require capital repairs.

Solution of rural areas' development problems is provided in the framework of various policy documents, but the lack of the complex approach in this direction does not allow achieving the desired results.

In this regard, along with the common problems' solution in the development of rural areas, it is necessary to embark on a new stage in the complex development of basic rural settlements (RS) alongside with the provision of a higher standard of living for the rural population. In general, the main problems in this area are insufficient rates of housing construction and its high cost. A significant part of the population cannot afford to buy their own housing, especially young people and socially vulnerable population.

According to the new state program concept in the field of housing construction, it is supposed to invest KZT 16 trillion in housing construction, of which 10 % - at the expense of the state. During 15 years of program implementation (2017-2031), the volume of investments corresponds to approximately KZT 1 trillion a year, which is higher than KZT 830 billion in 2016. If the program is successfully implemented, we can expect an annual increase in housing construction by 10 million square meters (10.5 million square meters in 2016).

At the same time, the level of housing provision for the population is estimated to increase from the current 21 sq. m. to 25 sq. m per person after the program end in 2031. Based on population's declining incomes (-4.5 % in 2016 in real terms) and lack of grounds for their rapid recovery, it is expected that a small negative dynamics of residential property prices will continue this year. As the situation improves in the economy and bank lending activation, the increase in property prices is estimated to be 4-5 % per year on average until 2020. In this regard, it is necessary to accelerate the construction of modern housing in Kazakhstan.

Based on the above, we identified the problems of social infrastructure branches' functioning and defined the most important directions of development. Regarding education system, it is necessary to increase the number of seats in preschool institutions by upgrading and building new schools. The healthcare system needs skilled personnel, diagnostic and therapeutic equipment, specialized medical and health facilities. So-

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# Анализ и оценка развития социальной инфраструктуры Казахстана

Современный этап развития социальной политики в Республике Казахстан знаменуется значительными изменениями в определении подходов к ней, обусловленных меняющейся социальной структурой общества, возникновением в этой связи новых отношений и изменением ее характера, согласно общемировому тренду развития социально-ориентированной рыночной экономики. Статья посвящена исследованию состояния обеспеченности РК инфраструктурными объектами. Выявлена тенденция развития социальной инфраструктуры, определены ее основные направления развития. Показаны основные пути эффективного развития социальной инфраструктуры региона. Выделено несколько достаточно важных факторов, оказывающих весомое воздействие на формирование устойчивого развития функционирования объектов социальной инфраструктуры. Развитие социальной инфраструктуры является не только насущной проблемой, но и проблемой перспективного характера, определяющей необходимость осуществления реформ социальной сферы в условиях трансформации экономических отношений. В этой связи решение задач по развитию социальной инфраструктуры во многом определяет успешное ее развитие, как на данный момент времени, так и на перспективу.

*Ключевые слова:* социальная сфера, регион, инфраструктура, социальная инфраструктура, уровень жизни населения, здравоохранение, образование, социальное обеспечение, жилищная сфера.

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cial service covers social relations in social funds distribution to meet the needs of citizens and members of their families in cases of housing sources' loss or in cases when they are deprived of the necessary minimum living wage. Social service comes in the form of additional socially important means, and medical assistance provision, helping families to maintain and educate children, providing other social services and identifying benefits [4].

Thus, social infrastructure is, first of all, the category of the regional economy, since it is the region that provides complex services to the population by its branches. On the basis of complexity, social infrastructure is transformed into a life support system for population. As this sphere is formed and functions at various levels, sectoral and territorial interests of property and business entities' subjects meet here. Hence, social infrastructure, being a system of branches, creates necessary conditions for full life of population and human potential development. In turn, each of the social infrastructure branches is a complex socio-economic system with its inherent characteristics, properties, principles and features of formation and functioning. At the same time, social infrastructure can and should be viewed as a high order independent system uniting well-defined branches (systems) with a single common goal which is to provide the livelihoods of the population and create conditions for socio-economic development. These branches are also connected to each other by corresponding relations of different complexity and degree of mutual influence. Studying functioning conditions, internal connections and external factors of each of the systems and the entire infrastructure as a whole is extremely important and necessary for developing effective means of full-fledged functioning of Kazakhstan's economy and social sphere.

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## Қазақстанның әлеуметтік инфрақұрылымының дамуын талдау және бағалау

Қазақстан Республикасының әлеуметтік саясатының қазіргі уақыттағы кезеңі әлеуметтік бағдарланған нарықтық экономиканың дамуының әлемдік үрдістерге сәйкес жаңа қатынастардың пайда болуымен және оның сипатының өзгеруінен туындайтын едәуір өзгерістермен айрықшаланады. Мақала ҚР-ның инфракұрылымдық нысандармен қамтамасыз етілуі жай-күйін зерттеуге арналған, әлеуметтік инфракұрылымның даму үрдісі, әлеуметтік инфракұрылым дамуының бағыттары анықталған. Аймақтың әлеуметтік инфракұрылымының тиімді даму жолдары көрсетілген. Автор әлеуметтік инфракұрылым нысандарының тұрақты қызмет атқаруына қатты ықпал ететін аса маңызды факторларды көрсеткен. Әлеуметтік инфракұрылым дамуы өзекті мәселе ғана емес, сондай-ақ ол экономикалық қатынастардың трансформациясы жағдайында әлеуметтік дамуды реформалау қажеттігін анықтайтын болашағы зор мәселе екендігі айтылған. Осыған орай әлеуметтік инфракұрылымды дамыту бойынша міндеттерді шешу қазіргі кезде де, болашақта да оның сәтті дамуын білдіретіндігі көрсетілген.

*Кілт сөздер:* элеуметтік сала, аймақ, инфрақұрылым, элеуметтік инфракұрылым, халықтың өмір сүру деңгейі, денсаулық сақтау, білім, элеуметтік қамтамасыз ету, тұрғын үй саласы.