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Impact of COVID-19 on Ageing and Retirement System: Key Policy Considerations

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Abstract

The authors attempt to conduct interdisciplinary research in epidemiology demography and pension economics. A literature was selected upon its relevance to the following key words: COVID-19, ageing and retirement system. The following methods are used: Historical content analysis, information, and analytical, comparative analysis. The analysis part is mainly based on secondary data of Committee on Statistics of the Republic of Kazakhstan and world recognized institutions' reports such as World Health Organization, United Nations and World Bank. In the demographic analysis the traditional and alternative indices of population ageing such as Old Age Dependency Ratio (OADR) and Prospective Old Age Dependency Ratio (POADR) were widely used. By August 5, 2020, Kazakhstan has 94,882 registered cases of CVI, 67031 people recovered and 1058 deaths. Confusion in the demographic statistics of COVID-19 cases showed all the shortcomings. Even though the OADR and POADR ratios are rising in accordance with UN forecast, the global pandemic will adjust the population ageing, since the mortality of the elderly population from this disease is higher than in other age groups. The Kazakhstani retirement system has been suffered by the COVID-19 as well. Human losses, income poverty and increase in pension costs put a burden on state budget. The research presents recommendations on supporting measures in several directions that need to be taken by policy makers during post COVID-19 period in retirement system.

Keywords: COVID-19, global pandemic, ageing, risk of mortality, retirement system, social security, social insurance, post COVID-19

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Covid-19-дің қартаю тенденциялары мен зейнетақы жүйесіне әсері: саясатағы негізгі мәселелері

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Түйін

Әдістер мен материалдар. Авторлар эпидемиология демография және зейнетақы экономикасы бойынша пәнаралық зерттеу жүргізуге тырысады. Әдебиет келесі негізгі сөздерге сәйкестігі бойынша таңдалды: COVID-19, қартаю және зейнетақы жүйесі. Келесі әдістер қолданылады: Тарихи мазмұнды талдау, ақпараттық- аналитикалық, салыстырмалы талдау. Талдау бөлігі негізінен Қазақстан Республикасы Статистика комитетінің екінші деңгейлі мәліметтеріне және Дүниежүзілік денсаулық сақтау ұйымы, БҰҰ және Дүниежүзілік банк сияқты әлем мойындаған институттардың есептеріне негізделген. Демографиялық талдауда қарттықтың тәуелділік коэффициенті (OADR) және болашақ кәрілікке тәуелділік коэффициенті (POADR) сияқты дәстүрлі және баламалы қартаю индекстері кеңінен қолданылды. 2020 жылдың 5 тамызына дейін КВИ бойынша Қазақстанда 94,882 тіркелген, 67031 адамсауығып, 1058 адам қайтыс болды. OADR және POADR коэффициенттері БҰҰ болжамына сәйкес өсіп жатқанына қарамастан, ғаламдық пандемия халықтың қартаюына түзетулер енгізеді, өйткені егде жастағы тұрғындардың осы аурудан өлімі басқа жас топтарына қарағанда жоғары. Қазақстандық зейнетақы жүйесі COVID-19-тен де зардапшекті. Адам шығындары, кірістердің төмендеуі және зейнетақы шығындарының өсуі мемлекеттік бюджетке үлкен салмақ түсіреді. Зерттеу барысында саясаткерлер зейнетақы жүйесінде пост COVID-19 кезеңінде қабылдауы қажет бірнеше бағыттар бойынша іс-шараларды қолдау бойынша ұсыныстар берілген.

Түйін сөздер: COVID-19, ғаламдық пандемия, қартаю, өлімқаупі, зейнетақы жүйесі, әлеуметтік қамсыздандыру, әлеуметтік сақтандыру, пост COVID-19.

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Влияние Covid-19 на тенденцию старения и пенсионную систему: ключевые вопросы в политике

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Аннотация

Авторами предпринята попытка проведения междисциплинарного исследования в области эпидемиологии, демографии и пенсионной экономики. Литература была отобрана с учетом ее релевантности следующим ключевым словам: COVID-19, старение и пенсионная система. В исследовании применялись следующие методы: исторический контент-анализ, информационно-аналитический, сравнительный анализ. Аналитическая часть в большей степени состоит из вторичных данных Комитета по статистике Республики Казахстан и отчетов мировых признанных институтов, таких как ВОЗ, ООН и Всемирный банк. В демографическом анализе широко использовались традиционные и альтернативные индексы старения населения, такие как коэффициент зависимости пожилого населения (OADR) и предполагаемый коэффициент зависимости пожилого населения (POADR). В Казахстане к 5 августа 2020 года зарегистрировано 94 882 кейса КВИ, из которых выздоровели - 67031 человек, случаи наступления смерти - 1058. Путаница в демографической статистике официальной регистрации COVID-19 отобразила ее недостатки. Несмотря на то, что коэффициенты OADR и POADR растут в соответствии с прогнозом ООН, глобальная пандемия внесет коррективы в процесс старения населения, поскольку смертность пожилого населения от этого заболевания выше, чем в других возрастных группах. Казахстанская пенсионная система пострадала от последствий COVID-19. Человеческие потери, снижение доходов и рост пенсионных расходов являются нелегким бременем для государственного бюджета. В исследовании представлены рекомендации по вспомогательным мерам в нескольких направлениях, которые должны быть предприняты политиками в период пост COVID-19 в пенсионной системе.

Ключевые слова: COVID-19, глобальная пандемия, старение, риск смертности, пенсионная система, социальная защита, социальное страхование, пост COVID-19.

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Introduction

Until recently, governments considered ageing and the demographic challenges associated with as a burden on the state budget. At the same time a certain criterion of the social stability of the state was the prolongation of a person's life expectancy and the age of death. Besides, in the last decades, older people generate services and contribute to the country's GDPsince they continue to work and pay taxes. As recipients of services for chronic diseases associated with their age retired people already require the appropriate infrastructure.Despite some barriers of the eastern mentality, the urbanization is making its own adjustments. The urban society does not consider its parents and elderly relatives only as nannies for their children, but actively includes them in the life of society.All these were trends of recent years until in 2020 the need to deal with a global problem came.

The coronavirus is changing the world. We have to get used to the new normal.Here are the last slogans of several months, when for the first time the world learned about such a disease that would shake the world's foundations. The COVID-19 was presented by Chinese scientists in February 2020, and after a while World Health Organisation (WHO) announced the level of a pandemic for this disease.[1] Each state reacted in its own way and reconstructed its society and system.

In order to study the case of Kazakhstan in detail, the authors put the following research questions:

What an impact of COVID-19 on the elderly people in Kazakhstan?

How the social security (retirement system) of the Kazakhstan wasinfluenced in the context of COVID-19 in an ageing world?

What measures should be taken in retirement system of the Republic of Kazakhstan in post COVID-19 period?

Objective of the study. Identify impact of COVID-19 on social policy (retirement system) in the context of an ageing population in the case of the Republic of Kazakhstan

Literature review

Diseases with a global impact will affect the world economy as a whole and each country individually.The advantage of globalization and urbanization is in possibility to achieve universal coverage of the pandemic response and control in a short timehowever the disadvantage is a large overcrowding of people and rapid spread ofsevere infection.The impact of this COVID-19 pandemic was a great stress for the economy of each country, but first of all, a great burden fell on the health care system in particular and on social security in general. [2] In terms of social demographic indicators, the World Healthcare Organisation separately focused on the elderly population high risk of mortality. [1] It is necessary to pay attention to the measures taken for the period and post COVID-19 social policy, especially in the context of population ageing, which, according to the UN, is more or less expressed in each country. [3]

In empirical studies of recent years, the population ageing has both the negative and positive effects on national savings and directly correlates with pension policies. [4] It was identified about the crucial role of age dependence on the sustainability of pension systems.[5] Also, some researches revealthe direct relationship between ageing and fiscal policy.[6] It is becoming clear that an ageing is essential to a country›s financial performance. In the light of global pandemic COVID-19, the policy carried out in retirement system is very important. [7, 8] As well as trends arising in each household where interfamily relations are on the first line. [9] This is important not only because the country›s economy suffers, but also because the income of the population is at risk. [10] Thus, basic rights of elderly are also affected due to economic and social consequences of Covid-19.[11]

Methods

A literature review was initiated to collect peer-reviewed studies from the last two decades and was chosen based upon its relevance to the following key words: COVID-19, ageing and retirement system. The research is based on case study experience approach as it is limited to the Republic of Kazakhstan. The following methods are used: Historical content analysis, information and analytical, comparative analysis.

The analysis part is mainly based on secondary data of Statistics Agency of the Republic of Kazakhstan and world recognized institutions' reports such as WHO, UN and World Bank.Some primary data obtained as a result of the questionnaire were also used.The survey was conducted among 518 people aged over 55 years (at pre-retirement and retirement age) as part of a student project where one of the authors of this paper was the project supervisor.These data are provided to explain the consumer behaviour ofKazakhstani population and are not collected for the purposes of this research.In the demographic analysis the traditional and alternative indices of population ageing were widely used.[12]

The conventional Old Age Dependency Ratio (OADR) is based on chronological age and calculated as:

$$\frac{Number\ of\ people\ 65+\ years}{Number\ of\ working-age\ population\ (\geq 15\ years - \leq 64\ years)}. \quad (1)$$

The alternative Prospective Old Age Dependency Ratio (POADR) is based on remaininglife expectancy (RLE) of 15 years and calculated as:

$$\frac{Number\ of\ people\ above\ the\ RLE\ of\ 15\ years}{Number\ of\ people\ between\ \geq 20\ years - < RLE\ of\ 15\ years}. \quad (2)$$

Allmonetary amounts in the study are shown in the national currency Kazakhstani tenge (KZT). Exch

ange rate on August 1, 2020 is USD 1=KZT 418

Results

Analysis of global pandemic from a historical content and its impact on Kazakhstan

The new pandemicis already causing huge deathlosses and lifestyle changes.The introduced quarantine and social distancing make the future uncertain and further exacerbates the situation. However, deadly pandemics are not new phenomena: they challenge human existence throughout history.

COVID-19, a respiratory illness caused by the SARS-CoV-2 virus, was declared a pandemic by the World Health Organization (WHO) on March 11, 2020.The latest data from May 20, 2020 shows that more than 5 million people have been infected with the virus, resulting in more than 330,000 deaths in more than 210 countries.For the first time, this disease was reported in Wuhan, China. Wuhan and other cities in the region were blocked on January 23, 2020. [13] Since then, the virus that causes the disease has spread to other regions of Asia, Europe, North America, South America, Africa and Oceania, transforming the world map into a “bright Red Map of the global COVID-19 pandemic”.A feature of this pandemic the risk of death is increasing with age.

This is the first global pandemic that the Kazakhstani people had to face in their new history after taking independence in 1991.In order to protect the life and health of citizens, a national lockdown was introduced throughout the Republic of Kazakhstan for the period from March 16,2020 to May 11, 2020. The government managed to bring down the simultaneous influx of patients and avoid a heavy burden on medical organizations. By May 11, 2020, there were 5090 infected people in Kazakhstan, 1941 recovered, 31 deaths and made Kazakhstan the country with the best «an anti-pandemic model for Central Asia”. After the weakening of quarantine measures, the population’s underestimation of the danger of a new virus, ignorance of social distancing factors, the congestion of people at large celebrations and funerals led to an outbreak of Coronavirus infection in July by 10 times.So Kazakhstan became the country that introduced the second lockdown 2 months after the completion of the first.According to the official portal coronavirus2020.kz, on July 14, there is a 61,755 cases of COVID-19, 35,911 recovered people, 375 people died. [14]Most of the cases of the disease were in Almaty (7 811; +220), Nur-Sultan (6 899; +211) and Shymkent (4 147; +80).Inadequate preparation at the central and local levels for effective functioning outside the lockdown led to massive contamination at the Tengiz oil and gas field, where 1,222 cases of COVID-19 infection were identified.In Almaty, by August 3, 2020, 8518 cases of infection of medical workers with CVI were recorded (confirmed cases).In addition,it was a shortage of hospital beds, medical personnel, medicines and medical equipment in the regions.Also, under the guidance of WHO experts, in accordance with the International Classification of Diseases (ICD-10), the accounting codes for pneumoniawere revisedin the country when a coronavirus infection was diagnosed clinically or epidemiologically (for example, “+” symptom of “frosted glass” of the affected lungs), but not laboratory confirmed (Test for COVID-19 “-”). Thus, from July 1, 2020, the combination of confirmed and unconfirmed cases of COVID-19 has led to a change in the statistics on morbidity and mortality from COVID-19.By August 5, 2020, registered cases - 94,882,number of recovered - 67031, and 1058 deaths.So confusion in the demographic statistics of CVI cases and corruption scandals related to health insuranceshowed all the shortcomings and imperfections of the social system as a whole.

Analysis of global population ageing in the case of Kazakhstan

Demographic analysis of population ageing is necessary to select effective social security policy. As a result of this analysis, it is possible to determine the retirement burden of people older than 65 years on the working-age population

and economy of the country.According to UN, the trend of population ageing continues and by 2040 the number of elderly population 65+ will at least double in comparison with 1950 in the world.[3] Despite the fact that in Kazakhstan this trend is not as sharp as, for example, in England and Japan, the population of Kazakhstan is also ageing.[15] In 2019, the number of people aged over 65 amounted to 1,377,571, 7.5% of the total population of Kazakhstan. The retirement burden of the elderly 65+ population was calculated using conventional and alternative approaches, since the traditional method based on chronological age does not provide a complete picture[16].

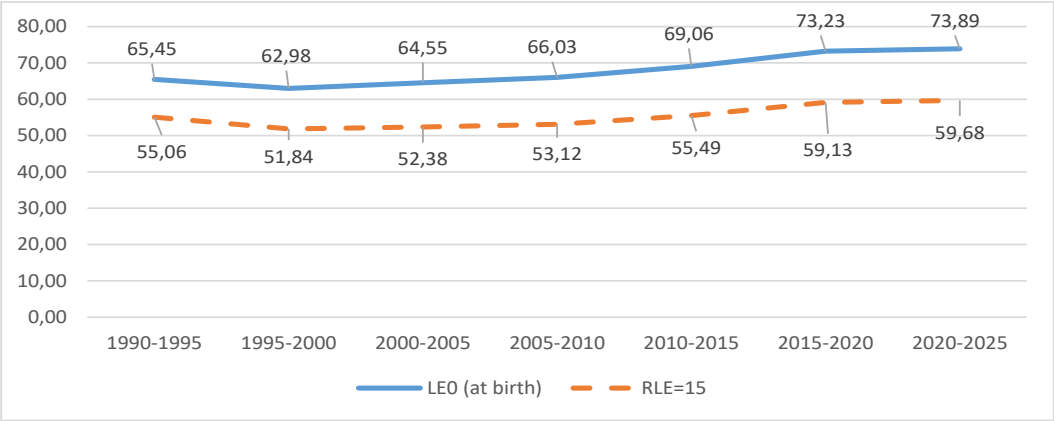
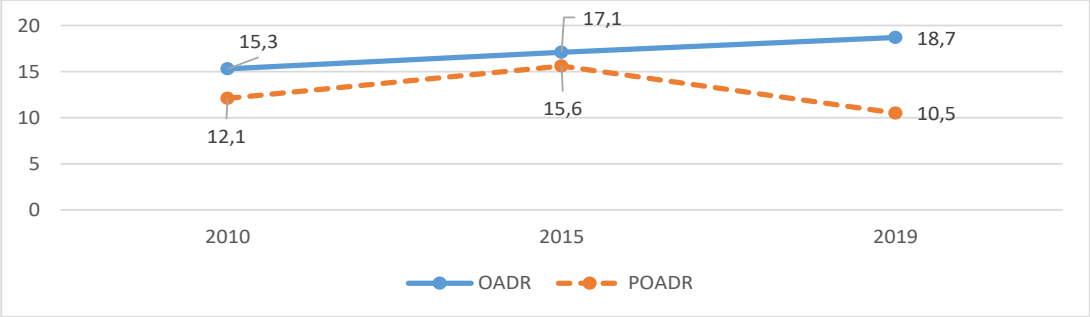


Figure 1 - Dynamics of changes in life expectancy at birth and retaining life expectancy of 15 years.Values for 2025, are calculated based on UN medium variant projections (World Population Prospects), in years[17]

As we see in the indicatorsof life expectancy at birth (LE0) and retaining life expectancy (RLE) that have values for the assessment of old age dependency ratio (OADR) and prospective old age dependency ratio (POADR), there is a similar increase over time.It is quite expected since UN predicts prolongation of the population's life over the world.The OADR evaluates the current burden of the elderly people 65+ while POADR takes into account prospective.



Figur 2 - Dynamics of changes in Old Age Dependency Ratio (OADR) and Prospective Old Age Dependency Ratio (POADR), in %. Values are calculated based on data of Committee of Statistics of the Republic of Kazakhstan[18]

As follows from the picture 2, the POADRratio is less than the OADR and tends to decrease. It is explained by the increase in life expectancy at birth by 5 years in 2019 compared to 2010.POADR calculates a prospective increase in the proportion of the elderly population and according to the indications of this ratio it can be assumed that the consequences of the economic demographic burden are not so dire. Besides, as the statistics shows, older people in Kazakhstan tend to do their own business in retirement, which leads to the development of entrepreneurship in the country.

But this trend may change when it comes to the impact of COVID-19 on the demographic situation in Kazakhstan.As shown above, Kazakhstan is currently going through a second quarantine, the country had to introduce due

to the unprecedented burden on the health care system and high human losses.By the preliminary statistics of the dead, this affects mainly the elderly population of pre-retirement and retirement age, it can presumably change the demographic situation in the country.The life expectancy at birth has declined significantly from 73.18 to 71.37 years. The mortality rate of the population in 2020-21 increased by about 25% compared to the previous year. If we take into account that the remaining categories of mortality tend to decrease, there is a reason to assume that this increase refers to mortality among the population 60+.As the disease is new and unexplored approaches to its treatment are changing we can sum up the final results only at the end of the year.

Retirement system of the Republic of Kazakhstan

In 1998, with an increase in the pension burden on the working-age population and the unstable economic situation, it was decided to introduce a funded pension system.The followingshortcomings such as low investment income of pension assets and ignorance of seniority determined changes in pension legislation in 2013. At the present stage, the pension system of Kazakhstan comprises the following levels: basic, solidarity, funded and private.

In 2020, the retirement age for women is 59.5 years, for men is 63 years. In accordance with Pensions Law, both male and female retirement agewill be equal in 2027.

The obligatory social insurance system is represented by the following main parties:

1. The National Bank of the Republic of Kazakhstan is regulating the financial markets and institutions including pension market;

2. Unified Accumulative Pension Fund (later UAPF) isaccounting pension savings from the funded system.At the beginning of 2020, the UAPF accumulates almost 10 trillion KZT. [19]

3. State Social Insurance Fund is working based on social contributionsin order to support citizens by unemployment, injuries at the workplace and maternity benefits.It also provides payments of the basic pension through tax redistribution.

Analysis of Kazakhstan's social security (retirement system) in response of COVID-19

Although the pension system is long-term in nature and does not tolerate abrupt and spontaneous decisions, it requires quick responses as global pandemics such as COVID-19 directly affects to the activities of at least three generations and to the economy as a whole.

First of all, describing the situation in the retirement system, the huge human and professional lossesare incurred. These are irreplaceable for a country that deliberately chose quarantine to save human life.

Secondly, this is the loss in population income. According to the World Bank an increase in the level of poverty of Kazakhstani people is forecasted from 8.3% to 12.7%.[20] A decrease in income is leading to pension contributions reduction, which is undesirable in a funded pension system.

Under the existing retirement system, the working-age population is not only contributing to their future retirement income, but also supporting basic pension payments of the retired people.Also, by redistributing social contributions, the able-bodied population not only insures their health but also provides free services for pensioners through state insurance.

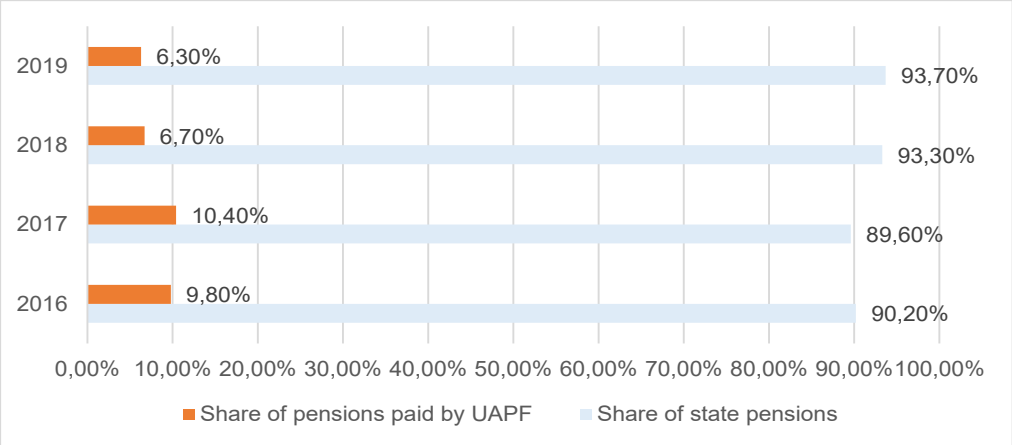


Figure 3 – Share of state and funded pensions in total pension payments[17]

Thus, the state risks to have a deep deficit at the current oil price, the budget of Kazakhstan is very dependent.

According to the Consumer Behaviour Survey of People over 65 years in Kazakhstan, their sources of finance are mainly pensions and their own assets, rather than family assistance and labour income.Considering theretired peopleconsumption above, the state is doubly responsible.

To support the population and business, the President of Kazakhstan introduced a moratorium on the payment of corporate taxes until October 2020. Other support measures were also provided, including the payment of 1 minimum wage per month (42,500 KZT) to those who have lost income and people below the poverty line.In total, more than 2million people were paid. Based on the analysis of the Central Asian countries, Kazakhstan supported the population in three directions.[2]

Table 1 -State social policy supporting programmes during COVID-19 quarantine in Central Asian countries

Program		KZ	KR	UZ	TJ	TU*
Social assistance	Cash-based transfers	+	+	+	+	
	Public works			+		
	In kind school feeding	+	+	+		
	Utility and financial support	+	+			
Social insurance	Paid leave			+		
	Health insurance support			+		
	Pensions and disability benefits			+		
	Social security contributions		+			
Labour markets	Work subsidy			+		
	Activation training			+		
	Labour regulation adjustment			+		
	Reduced work time subsidy					

KZ Kazakhstan
KR Kyrgyz Republic
UZ Uzbekistan
TJ Tajikistan
TU Turkmenistan* - There is no available data

In terms of social insurance all social funds should work according to the established algorithm but the pandemic revealed systemic errors in their activities, among the highest is corruption had an impact on the health and life of the population. The Unified Accumulative Pension Fund reacted more effectively than State Social Insurance Fund and Obligatory Medical Insurance Fund, apparently because of its 22-year experience.Taking into account the mistakes passed,it is necessary to be careful using the assets of social funds and investing them, since the country has to save money and various unnecessary expenses should be abandoned.

Social policy measures needed in post COVID-19 period

Considering all the given above, there is need to provide following policy measures:

1. To put more clearand transparentdemographic statistics, especially on mortalityas it helps to plan the necessary support resources during a pandemic. It also adjusts pension policy as human resources are one of the most important indicators.

2. Community support measures are needed: testing for infection of all those at risk, especially the elderly. Family support is also particularly important in keeping physical distance not social therefore the younger generation should try to support the older people both socially and financially.

3. To exempt pensioners from paying taxes in order to stimulate their active longevity. Companies try not to hire retiredbecause social tax is paid by employers for a pensioner in full.In addition, this motivates the elderly in Kazakhstan to do their own business even more.

4. To understand that in post COVID-19 period, the main burden will fall on the pay-as-you-go pension system. In this regard, it is crucial to estimate the possible costs from the National (stabilization) fund for at least future 3 years.

5. State economic support in the form of payment of temporary unemployment during quarantine considering the overdue work of the social insurance fund.

6. To make information platforms of all social funds active to increasetransparency in the spending of budget funds.

Conclusion

A disease that has swept the whole world changes the lifestyle of people and affects the country's economy. Demographic adjustments are possible and the phenomenon of population ageing will be viewed from a slightly different angle in pension policy.

The declining life expectancy and the reducing share of the elderly in the total population will undoubtedly bring changes to the demographic situation. It will influence on economic environment respectively. Kazakhstan's case on the impact of a pandemic to the retirement system is generally similar to the global scenario, but at the same time has some peculiarities.For instance, the structure of the pension system in particular and social protection in general as well as market conditions before and after pandemic.

Within the main objective of the paper the authors made an analysis on economic and demographic impact of COVID-19 and provide some policy recommendations.

There is no doubt that pandemic is ongoing and the impact of COVID-19 on ageing and retirement system is still developing.

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