

# “SILVER ECONOMY”: ANALYSIS OF WORLD TRENDS AND FORECAST FOR UKRAINE

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## ABSTRACT

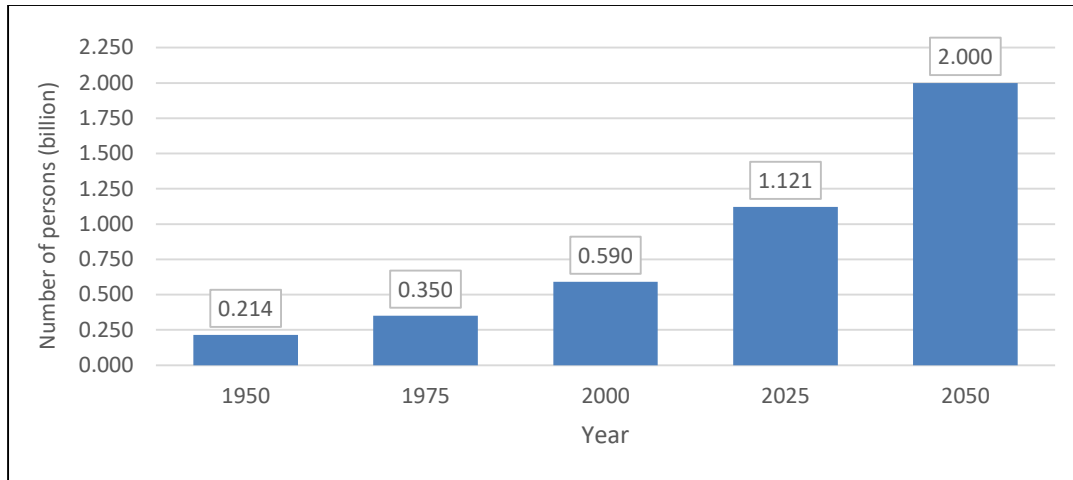
*The global trends of population aging and the consequences it leads to are analyzed in the scientific paper. One of them is the development of an economy related to the use of opportunities and the needs of the elderly people by means of the IT technologies advancement. The global trends in the development of the “silver economy” are studied and its immediate prospects are highlighted. Using the correlation regression analysis, the relationship between the employment rate of the elderly people and their length of retirement, as well as between the employment rate of the elderly people and the size of their pension is determined.*

*The dynamics of the number of elderly people in Ukraine and the problems they must solve after retirement is examined. The prospects for the development of the “silver economy” in Ukraine are outlined, the government measures to support it are offered. The emphasis is placed on the improving of the social component of public policy and using the potential of digitalization to support the “silver economy”.*

**Keywords:** Inclusive economy; Silver economy; Elderly population; Pensioners; Regression analysis.

## INTRODUCTION

Under the World Health Organization (WHO) and the United Nations (UN), the young people are the people from 18 to 44 years old, middle-aged people - from 45 to 59 years old, elderly people from 60 to 74 years old, old people from 75 to 90 years, longevity - after 90 years (The world report on aging and health, 2020). Under the WHO, the elderly (60-74 years) and the old people (75-89 years) are the growing population in the world. In 2019, the population aged 60 and over (the elderly) worldwide exceeded 1 billion people, which is 13.2% of the total population (7.7 billion people). This is 2.5 times more than in 1980 (382 million), and by the projections, up to 2050 the number of elderly people will reach almost 2.1 billion people (Figure 1). For the first time ever, the elderly population will exceed the number of children under the age of five. Under the UN expectations, by 2050 the number of elderly people will more than double the number of children at the age of five (The world report on aging and health, 2020).

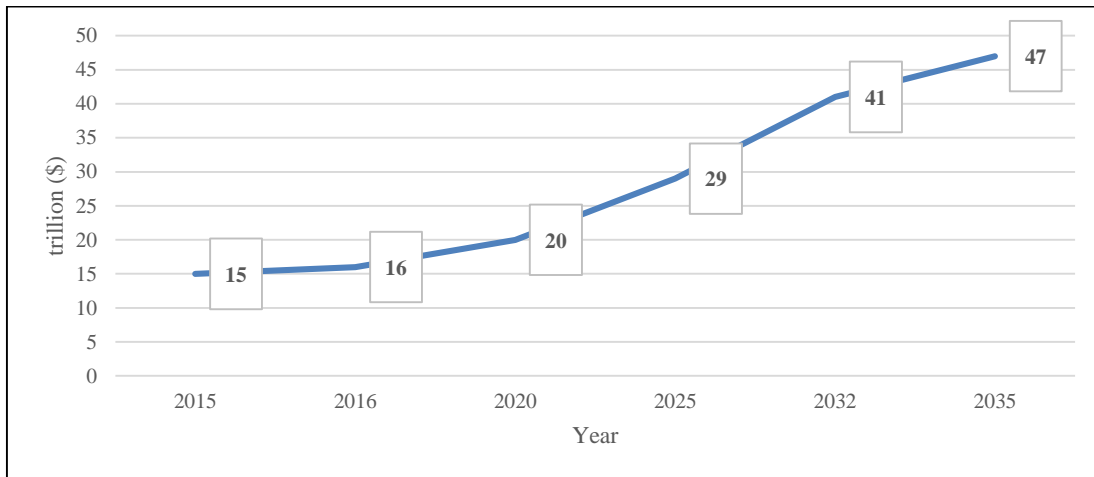


**FIGURE 1**

**PREDICTION OF GROWTH IN THE NUMBER OF PEOPLE OVER 60 YEARS OLD IN THE WORLD**

Source: The World Report on Aging and Health, 2020

Almost 80% of the elderly will live in the countries with low and medium levels of socio-economic development. At the same time, the number of elderly people who will not be able to take care of themselves will quadruple by 2050.



**FIGURE 2**

**FORECAST DYNAMICS OF THE WORLD VOLUME OF THE “SILVER ECONOMY” TRILLION \$**

Source: Silver Economy in The World (2020)

The aging of the population and the consequences it leads to, allows us to speak about the rapid development of the so-called «silver economy», the definitions of which are numerous in world science. Under the 2016 data, the purchasing power of elderly consumers amounted to 4 trillion dollars. The large American investment bank Merrill Lynch expects the growth of the global purchasing power of elderly consumers to 15 trillion dollars (Figure 2).

## LITERATURE REVIEW

The term “silver economy” is quite new in the modern economics, so its theoretical basis today is in its initial stage of formation. To identify a new type of economy - an economy focused on solving the problems of the elderly and providing them with the active and comfortable old age, the concepts of “longevity economy” (The longevity economy, 2020), “economy of aging society” (Krzyminiewska, 2019), “economics of aging” (Explorations in the economics of aging, 2021), “generational economy” (Lee & Mason, 2011), “silver-haired economy” (Villanueva, 2014; Subramaniam, 2016), “gold aging” (Bussolo et al. 2015), “silver market” (Kohlbacher & Herstatt, 2011), “silver economy” (European Commission. Growing the European silver economy, 2021), etc. are used. We consider the term “silver economy” to be the most convenient to understand and use.

The representatives of the different scientific schools have studied the concept of the “silver economy” in the various aspects. Thus, Eatock (2015) has formulated a definition that combined all existing approaches to understanding the concept of the “silver economy”. Bussolo et al. (2015) introduced the concept of the “golden aging” into the scientific circulation and found a tendency that population aging is not always accompanied by the stagnation and declining of the living standards (Kozlovskiy et al., 2021). Krzyminiewska (2019). offered her own structure of the silver economy, within the frames of which she singled out: the silver industry, silver innovations and gerontology. Gordon (2017) has developed a model of social investment in the “silver economy”.

Cylus et al. (2019) offered their own vision of the “silver economy” concept, which was based on the relationship between the health and activity of the elderly people, economic growth, public finances, and the general welfare of society. Domonkos et al. (2013); Villanueva (2014); Tsapenko (2017); and Martyniuk et al. (2020) singled out the promising sectors of economy that will be developed under the influence of the longevity growth and population aging. A. Klimczuk has analyzed the best practices of the creative aging policy and suggested the strategies that can be promoted internationally (Klimczuk, 2015). Felix (2016) has built a strategy for the development of the “silver economy” in Brazil and assessed its contribution to the economic development of the country. In the studies of Dluhopolskyi et al. (2019); Zhukovska (2009); and Dlugopolskyi and Zhukovska (2010) the success of the social and anti-corruption reforms aimed at the improving of the living standards of the population, including the retirement age is examined.

Despite variety of scientific studies in this area, most of them are fragmentary, i.e., they cover only some areas of the “silver economy”. As of this date, there are no comprehensive scientific studies in the domestic literature that substantiate the importance of the development of the “silver economy” in Ukraine, the above mentioned determines the relevance of our study.

## GLOBAL TRENDS IN THE “SILVER ECONOMY”

On the one hand, the development of medicine, improving of the well-being, promoting the healthy lifestyles and environmentally friendly habits have led to the increased life expectancy, however, being combined with a significant reduction in fertility, it has become a serious challenge to the socio-economic development (Figure 3).

Firstly, the accelerated aging of the population is caused by the reduction of the labor force and slowdown of the economic growth, the increase of social, including pension, expenses, the increase of the tax burden on the able-bodied population, reduction of savings, etc. Secondly, the accelerated aging of the population causes: the reduction of the labor force and slowdown of the economic growth, the increase of social, including pension, expenses, the increase of the tax burden on the able-bodied population, reduction of savings, etc.

However, an aging population not only poses challenges to the socio-economic development, but also creates the additional opportunities in the various areas, through the expanding of the employment opportunities by the extending of the employment or creating new jobs in the health and social services; development of adult education; strengthening the institution of the family, etc. Analyzing the global trends in the development of the “silver economy”, we consider it appropriate to compare the level of employment of elderly people with the length of their retirement, as well as with the immediate size of their pension.

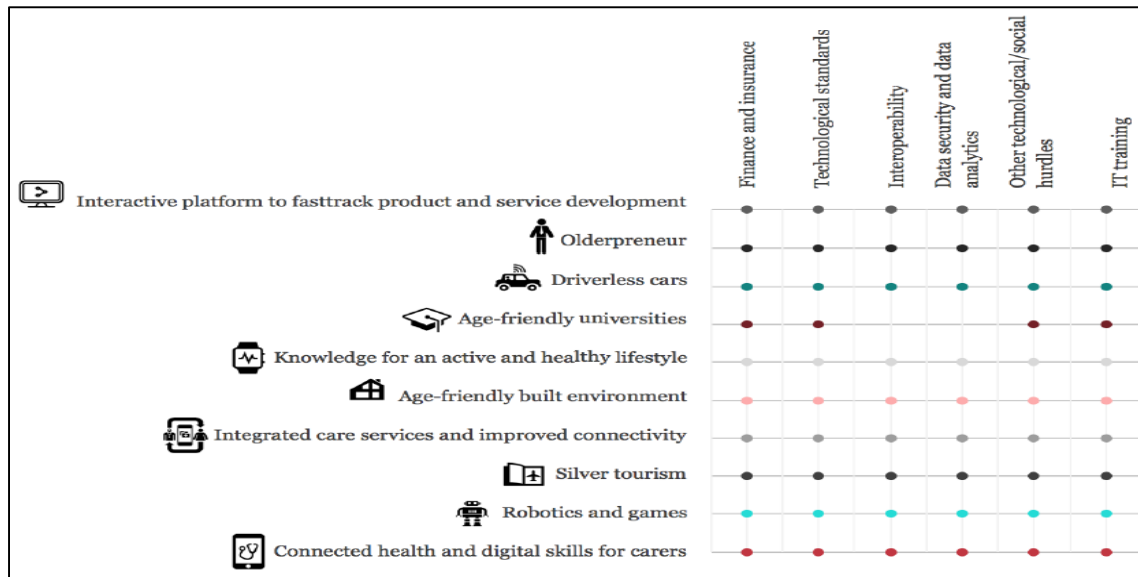
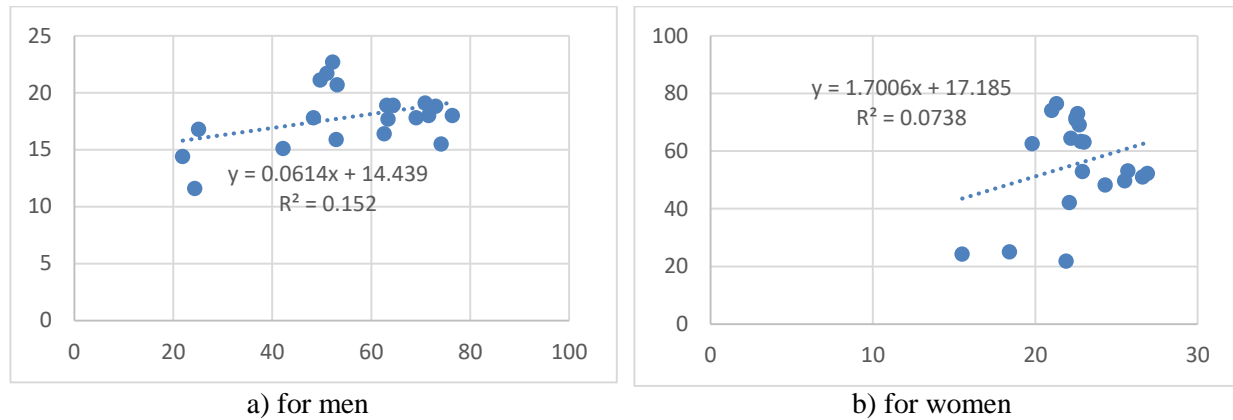


FIGURE 3

### OVERVIEW OF CHALLENGES FOR MARKET DEVELOPMENT

Source: The Silver Economy (2021)

The correlation dependence and regression equation ( $R^2 = 0.152$  - for men,  $R^2 = 0.0738$  - for women) indicate a direct and insignificant relationship between the relative employment rate of the elderly and the absolute indicator - the period of their retirement (Figures 4a & 4b).



**FIGURE 4**

### **RELATIONSHIP BETWEEN THE RELATIVE INDICATOR OF THE EMPLOYMENT RATE OF ELDERLY PEOPLE AND THE ABSOLUTE INDICATOR – THE PERIOD OF THEIR RETIREMENT\***

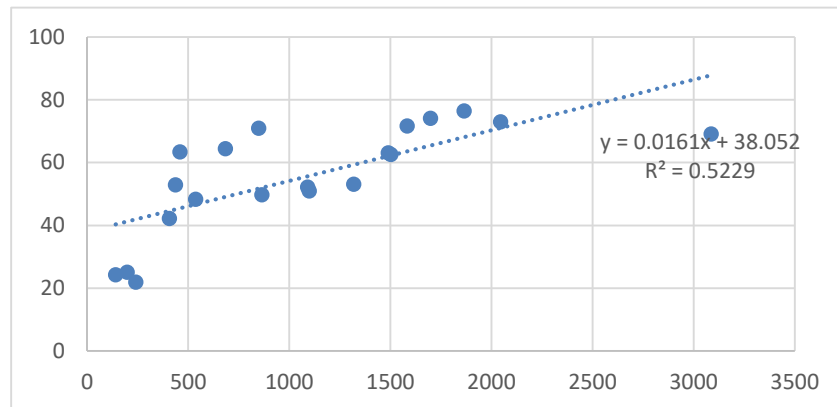
\* Build by the authors based on (Pension size in different countries, 2021; Comparison of the retirement age in the countries of the world, 2021; Employment: expected number of years in retirement, by sex, 2021; Lee, 2019)

The correlation dependence and regression equation ( $R^2 = 0.5229$ ) indicate a direct and significant connection between the relative indicator of the employment rate of the elderly and the absolute indicator - the size of the pension (Figure 5).

In the near future, the aging population will seriously affect the socio-economic development of all countries, the structure of economies, the structure of consumption, inasmuch as the demand for housing, cars, motorcycles, clothing and a number of other consumer goods targeted at young people may decrease, at the same time the demand for the medical and social services, leisure services, banking services, travel services, telecommunications and insurance services, as well as specialized legal, financial, pharmaceutical, dietary services, care services for the elderly people may increase. At the same time, the fundamentally new types of goods and services will appear, for example: housework companions that help lonely elderly people to spend their leisure time; driverless cars, smart home technologies that monitor and analyze the condition of the elderly and offer treatment options; dementia support systems, intellectual reminders, etc. (Lee, 2019).

Along with the expansion of the labor market, soon the elderly people will form a special consumer market due to the specifics of their needs. Sectors that will receive the additional opportunities for the development include: health care (provision of medical, health and cosmetic services, sale of medical devices and equipment, development of the pharmaceutical industry, establishment and development of telemedicine), education and culture, services in the field of security, entertainment and tourism, services for setting up a “smart home” system, which is

designed to support the independent life of the elderly, service robotics, personal and autonomous transport, banking and financial services, etc. (Figure 6).



**FIGURE 5**

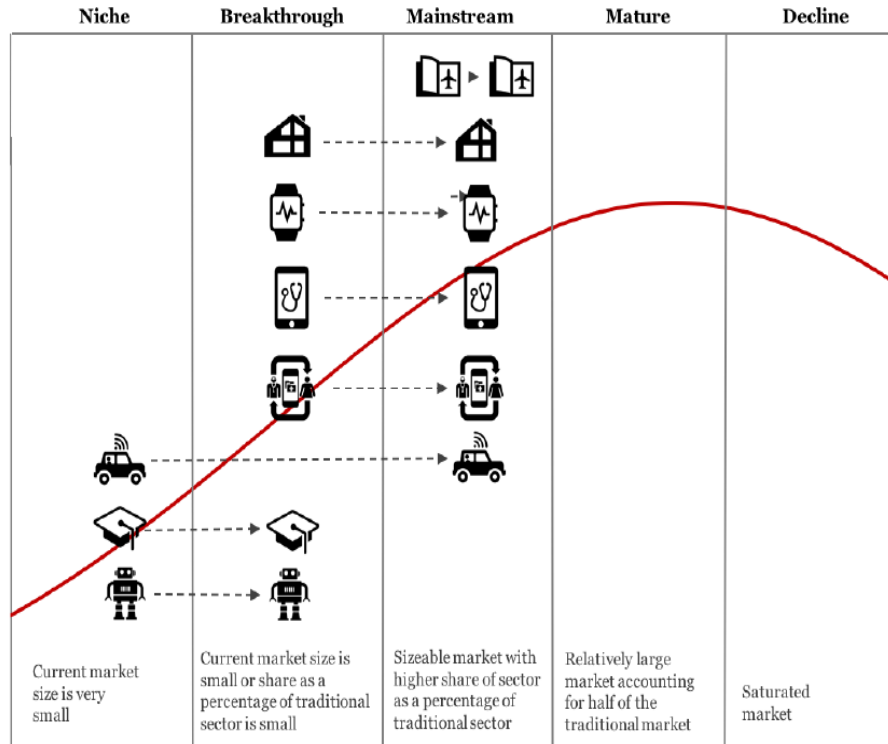
**RELATIONSHIP BETWEEN THE RELATIVE INDICATOR OF THE EMPLOYMENT RATE OF THE ELDERLY AND THE ABSOLUTE INDICATOR – THE SIZE OF THE PENSION\***

\* Build by the authors based on (Pension size in different countries, 2021; Comparison of the retirement age in the countries of the world, 2021; Employment: expected number of years in retirement, by sex, 2021; Lee, 2019)

For example, “Accenture” and “Oxford Economics” companies have estimated that the silver economy will create millions of additional workplaces: in the United States 5 million more workplaces in 2020 were created, and GDP has grown by \$ 442 billion or 2.2%; in Germany - 5 million workplaces and an additional 2.1% of the economy; in the UK - \$ 1.3 billion and 2.5%, respectively (Kuvshinova, 2012; Digital agenda of the Eurasian Economic Union until 2025, 2021).

Under conditions of the 4.0 revolution challenges and the associated technological modernization and digitalization, the “silver economy” will be able to thrive through the active use of the technological and digital innovations in which all sectors of the national economy function, interact, improve, and grow. That is why in Ukraine it is necessary to create the organizational and economic foundations for bridging the digital divide and creating a model of development that would be based on an inclusive approach and ensure the diverse use of the intellectual and creative potential of the “silver economy”, improve the health and life expectancy, provide the access and quality provision of public services to all categories of the population. The need to use the potential of digitalization provides the fact that the modern labor market is a complex multi-component and dynamic system that is permanently affected by the information technologies, which entails the reductions and changes in the structure of employment, social and labor relations. In this context, the usual social security for people, a guarantee of a decent pension is destroyed, a need to adapt to new conditions arises. As an adaptation we can offer an unconditional basic income, the model of which is actively promoted by M. Friedman, G. Standind, but then with their favorite job the people lose the meaning of life. In our opinion, it is

the network economy that can eliminate the existing employment risks. A possible solution would be to support those areas of the economy where a person cannot be replaced by a neural system. It is about creating the opportunities for the realization of creative potential that will meet the trends of the network society.



**FIGURE 6**

**ROADMAP FOR MARKET DEVELOPMENTS, 2015-2025**

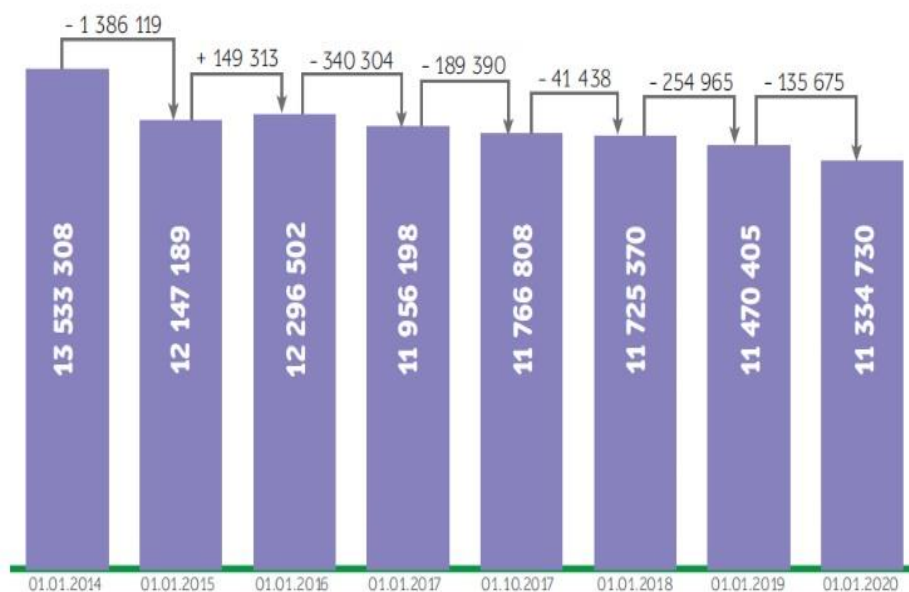
Source: The Silver Economy (2021)

Under the World Bank's predictions, 30% of the broadband Internet access in the Eurasian Economic Space will create up to 4 million new workplaces, 1 million of which are in the digital economy (Digital agenda of the Eurasian Economic Union until 2025, 2021). To make better use of the potential of digitalization in the context of the development of the "silver economy", it is necessary to ensure the creation of the modern communication infrastructure, data storage and processing centers, smart grids, platforms and technologies; differentiate information services; to resolve the issue of providing fiscal benefits to small and medium-sized businesses that work with the use of information and communication technologies; to promote computer literacy for elderly people.

## “SILVER ECONOMY” IN UKRAINE

In Ukraine, an increase in the number of elderly people is observed. If in 2007 the share of people of retirement age was 23.9%, in 2019 it reached 24.4%. Under the rating of aging (the share of the population over 65), Ukraine ranks 11<sup>th</sup> in the world, and under the forecasts in 2025 will move to 9<sup>th</sup> place. Under the national demographic forecast for the period up to 2025, the share of people aged 60 and older will be 25.0% of the total population, and in 2030 - more than 26.0% (Silver economy in the world, 2020).

The trend will continue even in the context of a systematic decrease in the total number of people of retirement age. Thus, in Ukraine within the period of 2014-2020 there is a gradual decrease in the number of retirees. As of January 1, 2020, 11,334.7 thousand of pensioners were registered in the Pension Fund of Ukraine, which is 135.7 thousand less than as of January 1, 2019 (Figure 7). This situation is caused by: sharp decline in population; reduced fertility, increased mortality and, as a consequence, the lack of positive natural increase; aging population, increasing the “load” on its able-bodied part; intensification of the migration processes, the impact of which is contradictory and often negative. This means that Ukraine will remain one of the “oldest” countries in the world for a long time to come. Under these conditions, the use of the potential of the “silver economy” becomes especially relevant.



**FIGURE 7**

### **DYNAMICS OF THE NUMBER OF PENSIONERS IN UKRAINE IN 2014-2020, PERSONS**

Source: Report on the Main Results of the Pension Fund of Ukraine, 2021



Prospects for the development of the “silver economy” in Ukraine can be assessed from both a pessimistic and an optimistic point of view. Under the pessimistic point of view, the “silver economy” in Ukraine is at the initial stage of its development and soon no changes in its development will take place. According to the optimistic point of view, the “silver economy” in Ukraine is developing quite rapidly, which is confirmed by the following factors: growing number of working retirees, slight growth of the commercial sector in services for the elderly, increasing activity of the elderly as consumers of goods and services.

The increase in the number of working retirees is due to the fact that most people over the age of 60 significantly reduce their income after retirement. This is because of the inconsistency of the domestic system of social standards, when the amount of pension benefits is lower than the subsistence level approved by the government (Report on the main results of the Pension Fund of Ukraine, 2021). Therefore, the retirees are forced to work in order to provide themselves with at least minimal living conditions. Low incomes after retirement make it difficult for them to access the health care (Order of the Cabinet of Ministers of Ukraine, 2018).

In our opinion, the “silver economy” in Ukraine is just beginning to develop and lags far behind the developed countries, but its growth is taking place and the prospects for its development are quite optimistic with the extensive state support.

Ukraine has already taken several steps in this direction. Thus, on January 11, 2018, the Ukrainian Government approved the Strategy of the State Policy on Healthy and Active Longevity for the period up to 2022 (Order of the Cabinet of Ministers of Ukraine, 2018). This Strategy is designed to implement the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand, the Madrid International Plan of Action on Aging, likewise, to ensure an enabling environment for healthy aging and active longevity, adaptation of public institutions to the further demographic aging and building a society of the equal opportunities for people of all ages.

But the above noted measures of the state support are not enough to ensure the further development of the “silver economy”. The state policy of developing the “silver economy” should be based on (Dluhopolskyi, 2017; Dluhopolskyi, & Dluhopolska, 2017); Dluhopolskyi, 2018; Koziuk et al., 2019):

1. Fight against the negative stereotypes of old age;
2. Awareness of the variety of consumer habits and behavior of different generations;
3. Overcoming barriers associated with the aging and activity in old age;
4. Awareness of enterprises and organizations of responsibility to an aging society;
5. Promoting a positive attitude towards older workers.

To ensure the formation and development of the “silver economy” in Ukraine, it is necessary (Zhukovska, 2020):

1. To modernize the state policy in the field of health care by shifting the vector towards the disease prevention, primary health care and improving diagnostics, which will significantly reduce the mortality rate;
2. To create conditions for lifelong learning, increase mobility and migration both within the country and at the international level, the above noted will increase the flexibility of the labor market;

3. To stimulate the production of goods and services for the elderly by providing the benefits to the enterprises engaged in this type of activity; stimulate the research of the markets for goods and services for the elderly people in order to identify those that older people need but which are not at the market;
4. To provide support for the continuation of employment of the elderly through the development and approval of the appropriate government programs, such as: a program that regulates the retirement options; programs for adaptation of workplaces to the peculiarities of the mentality and physical well-being of elderly employees; lifelong learning programs; social program to reduce the level of age discrimination, etc.;
5. To ensure the adaptation and accessibility of facilities for the elderly by developing and approving the standards for a “universal environment” – an environment that is equally comfortable for all members of society, including the elderly people. The mentioned standards should be considered by the construction companies and local authorities when designing the building and planning of the urban environment;
6. To inform the society about the problems of the elderly, to create favorable conditions for the activities of the non-governmental organizations, to support the elderly, to promote the formation of a friendly attitude towards the elderly;
7. To provide the social support for the elderly by forming the financial reserves to pay for the care services for the elderly, as well as provide the social protection bodies with the optimal number of care specialists (social workers, nurses, physiotherapists, ergo therapists, gerontologists).

## CONCLUSION

Thus, the “silver economy” both expands the existing and creates the new economic opportunities associated with the increasing of the government expenditures and consumer spending, which are caused by the aging population and the specific needs of the elderly people. Population aging creates the additional opportunities for the development of a large number of industries and sectors of the economy, accelerates the innovation process aimed at reducing of the complexity of production, automation and robotization of services for the elderly people. Scientists believe that this direction will become one of the most important factors of economic growth and innovation in the future, and the elderly people will become its new resource.

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