

ECONOMIC ASPECTS OF THE SOURCE SECURITY OF THE SOCIAL AND HEALTH SYSTEM OF THE STATE IN THE CONTEXT OF POPULATION AGING ON THE EXAMPLE OF THE CZECH REPUBLIC

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Abstract

The article focuses on current issues of resource security of the social and health system of the state in the context of population aging on the example of the Czech economy. In this context, resource security is conceived of the position (quantitative and qualitative components) of strategic public resources to ensure space capacity, staff coverage of specialized health and social services and the financing of social benefits. This issue is fully in line with the theoretical concept of the Copenhagen Security School, which since the second half of the 1980s has gradually expanded the concept of reducing the risk of armed conflict to address political, economic, environmental and social issues in the dimension of national and global security. As a result of the expected demographic aging of the population after 2035, an enormously growing disproportion between the drawing and creation of public funds to ensure the security of the social and health care system can be expected, which can be seen as potential macroeconomic risks. In the context of reducing the above-mentioned risks, it is necessary to look for possible solutions within the interconnected reforms of the economic and social policy of the state.

Key words: resource security, Copenhagen school, social and health system

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Introduction

Demographic aging of the population represents a long-term economic challenge for the Czech Republic. While the number of people of working age is declining, the share of seniors (people over the age of 65) in society is gradually increasing. As a result of the larger number of people in this age group, public spending related to the aging population is increasing. These are old-age pensions, health and social care in the field of gerontology or other support

for people who can no longer work. According to demographic forecasts, a significant acceleration in the growth of the post-productive age group can clearly be expected after 2035. For these reasons public finances to ensure the social and health care system are unsustainable in the long run in the current budgetary policy stance. This is also the essence of the potential security risk of macroeconomic significance within the mechanism of operation and operation of the mentioned system. In addition, the situation has deteriorated significantly since 2021 as a result of enormous public spending due to the covid-19 pandemic, and since 24 February 2022 the effects of the war in Ukraine, linked in particular to the energy crisis and subsequent inflationary growth in the Czech economy.

For the above reasons, we can talk about the phenomenon of resource security of the social and health system of the national economy. The identification of potential macroeconomic risks of the mentioned system is caused by the already mentioned unfavorable demographic development due to the aging of the population. The risk reduction strategy within the said system is subject to the protection of important economic interests of the state and consists of established priorities of the state's economic policy (especially fiscal, social, health, security) in the areas of pension reform and healthcare provision and consequently increasing overall employment and productivity growth. work in economics (Fiala & Langhamrová; 2021). For this reason, it is fully in line with the theoretical concept of Copenhagen school safety, as this is a strategic area within public finances to ensure an appropriate standard of quality for life for all members of society (Šetek, 2015).

1 Data and methodology

When monitoring the source security of the state's social and health system (as part of public finances), it is necessary to take into account the longer-term dynamics of the age structure of the population, including its relevant predictions (Šetek et al., 2019). In this way, the typology, identification, analysis and forecast of potential risks of a macroeconomic nature can be established. Current data on the population, age structure and population development of recent years can be considered as basic starting data. Based on these facts, the shares of age groups in the total population are monitored through indices, ie comparative figures (age index, productive burden indices) and average age. The most common is considered to be the share of the three main age groups of the population, which are defined according to the expected economic activity of the majority of people of a given age. It is therefore a pre-productive component of the population, which is usually stereotypically defined as aged 0-14

years. The productive component of the population is represented by groups of people aged 15-64) and the age group of post-productive people aged 65 and over. Based on the age categories divided in this way, the aging process is interpreted using indicators of average age and age index (number of people aged 65+ per 100 children aged 0-14), dependency index I. (number of children aged 0- 14) on 100 persons aged 15-64), addiction index II. (number of persons aged 65 and over per 100 persons aged 15-64) and economic burden index (number of children aged 0-19 and number of persons aged 65+ per 100 persons aged 20-59). The most common characteristic used in international comparisons is the proportion of people aged 65 and over in a given population.

With regard to the specifics of monitoring the resource security of the social and health system due to population aging the interdisciplinary approach of the social sciences involved in economics, demography, sociology, theory of economic and social policy, gerontology (Duernecker, Vega-Redondo, 2018). At the same time, applications of methods of analysis, synthesis and deduction predominate. The analysis is based on the division of the reality of the state of the population in the economy into parts, elements, properties, reactions and processes. It is based on a specific criterion that allows the researched phenomenon to be divided in terms of the objective pursued. The application of analytical methods will make it possible to know the aspects of the observed phenomenon. Using the method of synthesis, a comprehensive idea of the investigated phenomena is created on the basis of a set criterion, thus revealing the mutual processes and relationships between the individual aspects of the investigated phenomenon, and consequently the overall nature of the phenomena. Based on deduction and deductive inference, a conclusion is drawn under certain assumptions based on strategic recommendations.

2. Results

2.1 Social and health system in the context of resource security

An integral part of the basic natural aspects of the existence of human society is the regulation of one's own development. If these activities are to be based on rational foundations, it is impossible to do without forecasts representing realistic, scientifically based ideas for future developments (Džbánková & Sirůček, 2013). This is determined by the size and age structure of the population, which is the basis of demographic analyzes and forecasts (Volek & Novotná, 2019). Their outputs are a strategic basis for decision-making, but also an

immediate starting point for prognostic considerations about the development of various real systems directly connected with the population (Blaga & Jozsef, 2014). From a demographic perspective, these considerations are considered to be derived forecasts. These include, in particular, the level of employment and the situation on the labor market, from which the revenues and expenditures of public resources (state budget, health insurance) for securing the resources of the social and health care system are derived (Pavelka, 2017). The mentioned system represents the structure of material, financial and human resources for the provision of social benefits, health and social services to interest groups of persons (Prušvic & Pavloková, 2010). One of the largest groups in terms of numbers is the elderly, whose share in the total population will increase as a result of demographic aging, and consequently public spending within the social and health care system (Fiala & Langhamrová; 2021). For these reasons, we can talk about the issue of resource security of the social and health system. Its essence lies in sufficient financial resources to provide social benefits (especially old-age pensions) and to cover the demand for gerontological social services and health care (Šetek et al., 2019).

According to the theoretical concept of the Copenhagen School, which dates back to the turn of the 1980s and 1990s, the social and health care system is considered an integral part of resource national security (Šetek, 2015). The validity of the statement is based on the reality of extending the then concept of a clear orientation towards military security to address political, economic, environmental and social issues within national and global security. (Šetek & Petrách, 2016). Since the mentioned period, it is possible to observe a "broader" concept of security in the history of security sciences, which is extended to other non-military sectors with five sectors (military, economic, social, political and environmental). It can be stated that the mentioned security sectors are fully in the context of important economic interests of the state and correspond to the foundations of fulfilling the Maslow pyramid of human needs, applicable not only to individuals but also to society as a whole (Šetek, 2015).

2.2 Population development forecast for potential risk analysis

According to the results of the demographic projection, the largest decrease in the number of people of working age (15-64 years) in the Czech economy should occur between 2035 and 2045, by 4.5% (Novotná & Volek, 2014). In 2055, 53.7% of the population of the Czech Republic should belong to this age category. The center of gravity of the working-age population, represented by the strong birth rate of the 1970s, will gradually shift to older age as a result of the aging of individual generations, thus naturally changing the age structure of

the population. From 2022, it will focus on the 45–49 age group and from 2027 on the 50–54 age group (Novotná & Volek, 2014).

From the above facts, it is almost certain that a fundamental problem can be expected after 2035. In this period, the strong strong population years of the 1970s will reach retirement age. If we want to deal with the effects of the expected demographic development on the Czech economy and subsequently identify potential risks to the social and health system, it is necessary to consider the long-term dynamics of the age structure of the population, including their relevant predictions (Abraham & Laczo, 2018). These facts are evident from the following table 2, 3 with demonstrated milestones from 2010 to 2065 at five-year (Table 1) and ten-year (Table 2) time intervals.

Tab. 1: Population structure of the Czech Republic by age group in years 2010 - 2065 (selected years in %)

Age	2010	2015	2020	2025	2035	2045	2055	2065
0 – 14	14,2	15,1	16,1	14,8	13,0	13,1	13,9	13,2
15 – 64	70,6	67,2	63,7	63,4	62,4	57,2	53,7	54,6
65 +	15,2	17,7	20,2	21,8	24,6	29,7	32,4	32,2

Source: Czech Statistical Office 2021 and own processing

Tab. 2: Characteristics of age structure and load indices of the productive component of the Czech population between 2010-2065, selected years (in %)

Demographic indicator	2010	2015	2020	2025	2035	2045	2055	2065
Average age	40,6	41,6	42,7	43,9	46,3	47,5	48,3	49,0
Age Index	107,0	117,1	128,7	145,6	187,8	222,5	232,7	243,6
Dependency Index I.	20,2	22,5	24,2	23,5	20,8	23,4	25,9	24,2
Dependency Index II.	21,6	26,3	31,2	34,2	39,1	52,0	60,2	58,9
Economic load index	54,6	59,0	66,9	72,0	74,0	89,7	103,3	100,8

Source: Czech Statistical Office 2021 and own processing

However, according to the forecast (Population Projection of the Czech Statistical Office, 2021), the population 65+ in the Czech Republic should increase by more than half a million

by 2100 (compared to 2020), which is about 26%. At the same time, the working-age population is also expected to decline by almost 40% by 2100. This will mean a mismatch in the labor market due to a reduction in the share of the active working-age population (Novotná & Volek, 2014).

2.3 Analysis of potential risks of the social and health system

As the population ages, the number and proportion of seniors is increasing and the proportion of people of working age is decreasing. This disproportion is clearly reflected in the state's public revenue (Abraham & Laczo, 2018). This is also the essence of the potential security risk threatening the financial stability and sustainability of public finances of the state, of which the resources of the social and health care system are an integral part. Therefore, this issue, as an integral part of resource security, is fully in line with the already mentioned theoretical concept of the Copenhagen School (Šetek, 2015).

As a result of a certain decrease in the share of the working age population of the national economy, we can primarily expect decreasing contributions of a lower number of taxpayers of the population of the mentioned group, whose income will be subject to taxation (Pavelka, 2017). However, not only the state budget, but also the entire system of insurance benefits based on selected social insurance, but also the health insurance system is logically dependent on the contributions of economically active persons. As a result of the increase in the representation of the post-productive group of the population, an increase in entitlement to social security system benefits can be expected. Due to the fact that the majority of this system finances old-age and survivors' pensions, the growth of expenditures will be relatively significant with the growing number of seniors (Fiala & Langhamrová, 2021). Expressed by the value of the old age dependency ratio, the degree of dependence of the category of persons 65+ on the category of productive age will increase approximately twofold by 2100 (Šetek et al., 2019). While maintaining the current state of the pension system, this would mean that the contributions of the economically active population would have to roughly double in order to maintain the current income standard for seniors.

As with the social security system, there will be a significant decrease in the health insurance system, which would also be in deficit at the current parameters set. The reason is the expected lower number of payers, ie the economically active population, on the one hand, and a significantly higher number of people of post-productive age with premiums paid from the state budget on the other. On the other hand, with a smaller volume of funds in the health

insurance system, we can expect a growing demand for health care. The growing demand is also connected with the growing share of people over the age of 65, for whom a significantly higher amount of funds is spent from the insurance system in the long run than for people of working age (Šetek & Petrách 2016).

Secondly, lower corporate income tax levies can also be expected (Dugast & Foucault, 2018), where the expected labor shortage will result in lower prosperity and corporate profits, and subsequently in indirect taxes (excise duty, value added tax). On the other hand, higher demands can be expected for non-insurance benefits intended for the elderly (state social support and assistance benefits - mobility allowance, housing allowance, care allowance...)

It is also certain that the Czech economy will have to constantly strengthen the integrated system of social services in the field of gerontology as it ages in the coming years. It is also necessary to create a sustainable model for their financing. As part of the fiscal and social policy design, it will be necessary to make conceptual decisions on how these services will continue to be funded. Possible variants are from the state budget or the budgets of territorial self-governing units. Another element of long-term care insurance may also be added to public finances, as was the case in Germany in 1994.

For the above reasons, it is also necessary to point out the risk to the sustainability of living standards of people dependent on the social and health system. In addition to recipients of old-age pensions, it is also necessary to point out other groups completely dependent on social benefits - ie people with disabilities (disability pensions), parents on maternity benefits (maternity cash benefits) and parental leave (parental allowance benefits). As a result of the expected demographic changes, it can be assumed that the current setting of a number of social benefits will have to be reconsidered in the coming decades so that their financing is secured by the economically active population. It cannot therefore be ruled out that these arrangements may affect the living standards of all persons dependent on social transfers and services.

Conclusion

It is certain that in connection with the aging of the population, the Czech economy will face very significant demographic changes in the coming decades, which will significantly affect all systems based on redistribution of funds from economically active to economically inactive - public finances and therefore the social and health system. The rule that the required resources will be greater than the available resources applies almost unequivocally and

without exception (Barro & Martin, 2004). This is also the potential risk to the source security of the system.

Given that demographic methods in the forecast of population development cannot predict events (pandemics, economic crises, wars...) that could significantly affect the population, the projection is burdened with uncertainty over a period of almost several decades. A typical example is the events of February 24, 2022 (the beginning of the war in Ukraine), accompanied by a large-scale migration crisis. Migration is the most difficult component to predict. Due to its strong external conditions, which are mainly legislative measures governing the entry and residence of foreigners in the country and the situation in potential source countries, the future level is very difficult to predict (Šetek, 2015). In this context, the program allocation of public finances can be determined as a tool of the management strategy of reducing the potential risks of resource security of the national economy. This requires knowing the exact development of all the resources needed to implement the individual objectives of the programs for a time horizon of ten years.

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