

THE IMPACT OF POPULATION AGING ON GDP IN THE CZECH REPUBLIC

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Abstract

The Czech population is ageing and this undisputable trend is evident concerning all the world's developed countries. This paper will determine the life situation of Czech seniors, their income and consumption, and their impact on overall income and expenditure in the European context based on Eurostat and Czech Statistical Office data. The transition from economic activity to senior status usually results in an income reduction and, consequently, seniors reduce their consumption. In future years the ratio of the economically active population and dependent population will change considerably. In 2050 the old-age dependency ratio in the Czech Republic is expected to reach 52%. These developments will impact the Czech economy at several levels. The reduced consumption of seniors will lead to: a reduction in aggregate household consumption a subsequent GDP growth decline or even contraction, and lower tax revenues leading to a reduction in government spending, a spiral domino effect.

Keywords

Seniors, Household Consumption, Poverty, Public Budget

I. Introduction

According to the World Health Organisation (2002), the prolongation of life expectancy is the result of substantial improvements in health care and living standards and represents one of the most important human achievements in recent decades. It also presents a challenge for individual states to both address this trend and integrate it into the relevant strategic documents and policies.

The transition from the economically active life phase to economic inactivity (retirement) is a time of substantial change for seniors and often leads to dramatic changes concerning the daily routine and overall motivation; moreover, it also leads to a decrease in household / individual income. If senior households do not prepare sufficiently for this situation in advance, they may be faced with substantial life situation difficulties (Hrast et al., 2012; Sýkorová et al., 2014). The household or individual becomes fully dependent on the state social system. The main threat in the future for the Czech Republic and other countries consists of the inappropriate setting of the social (especially pension) and health systems which were created to respond to completely different demographic and economic conditions (as noted in a White Paper of the European Commission, 2012). Without the appropriate adjustment to current social developments, the increasing number of seniors may significantly distort these systems and become a significant burden on the public budget.

However, the problem will impact not only the expenditure side of the public budget. If the state fails to set the appropriate motives and conditions for first stabilising and then increasing the income of senior households, there will be a consequent decline in their consumption, thus exerting a negative effect on the revenue side of the public budget. As shown later in the paper, the consumption of senior households already substantially lags behind that of non-senior households. Population structure forecasts (Czech Statistical Office, 2013) clearly indicate that the proportion of lower consumption households will continue to increase in the future. Lower senior household consumption will lead to a reduction in aggregate household consumption, resulting in the

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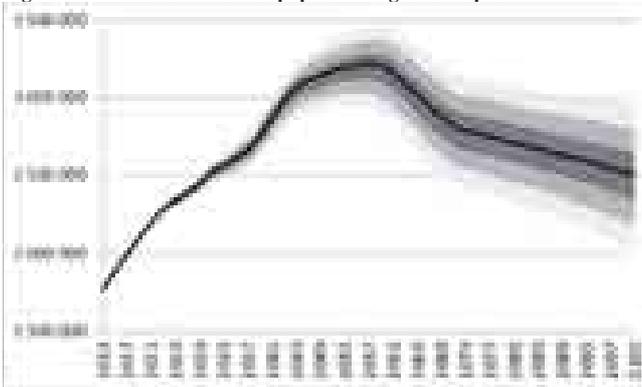
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contraction of the Czech economy and, possibly, a lower level of economic growth. The Ministry of Finance of the Czech Republic regularly highlights the importance of aggregate consumption in its reports. Since the recession which commenced in 2008, household consumption, which is based on a favourable situation in the labour market and increasing disposable income (Ministry of Finance, 2017), has constituted the main driver of Czech economic growth. **The paper aims to discuss both the extent to which the risk of a reduction in household consumption is imminent in the Czech context and the options available in terms of the reaction of the state.** It is important to remember that issues involving the senior population will require greater attention going forward, the inherent problems cannot simply be ignored.

II. Development of the senior population in the Czech Republic compared to that of the EU

In 2015, the population of the Czech Republic stood at just over 10.5 million, with those over 65 years making up 17.8% of the total population, i.e. 1.9 million persons (Eurostat, 2017a). All the forecasts available with respect to future developments agree that the proportion of seniors in the population will increase; however, forecasts differ in terms of the actual number of seniors involved. As shown in Figure 1 below, the Czech Statistical Office (2013) recognises three alternative developments in terms of the expected number of seniors. According to the medium scenario, in 2020 over 20.5% of the total population of the Czech Republic will be over the age of 65. By 2050, this number is expected to increase to almost one third of the Czech population (32.2%).

Figure 1 Forecast of the Czech population aged 65+ up to 2101



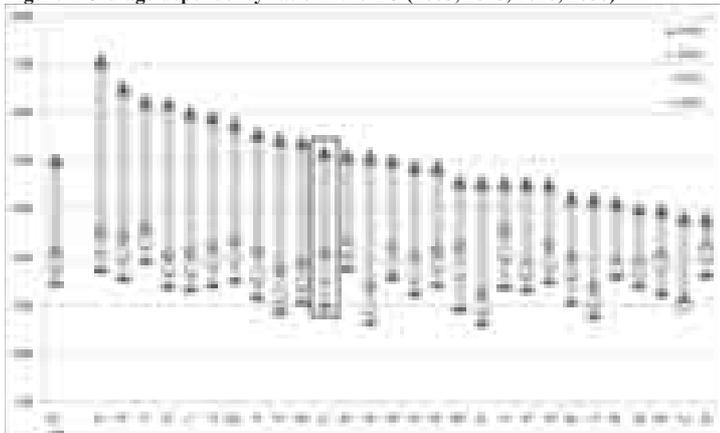
Source: Authors, based on Czech Statistical Office data (2013)

The afore-mentioned trend of population ageing is not unique to the Czech Republic. Over the last 10 years, EU member states have recorded an increase in the old-age dependency ratio³ of an average of more than 4 percentage points, i.e. from 25% in 2005 to 29% in 2015 (Eurostat, 2017a). The Czech Republic witnessed an increase in this indicator of 6.7 percentage points, thus ranking in the three highest growth rate countries in the EU behind Malta, with an increase of 8.3 percentage points and Finland with an increase of 7.4 percentage points (difference between 2005 and 2015). That said, it is also important to note that the old-age dependency ratio in the Czech Republic stood at 26.6% in 2015, i.e. lower than the EU average. However, as shown in Figure 2 below, the position of the Czech Republic is steadily intensifying and the rate of increase in the old-age dependency ratio is accelerating; indeed, the country moved from 23rd position in the EU 28 in 2005 to 21st position in 2015. Moreover, according to Eurostat forecasts (2017b), the Czech

³ Old-age dependency ratio - percentage of the population aged 65 and over relative to the population aged 15–64 years.

Republic will occupy 15th position in 2020 and 11th position in 2050. Similar growth trends are being seen in the other V4 countries, such as Poland, which will move 16 places to 9th position in 2050 and Slovakia 14 places to 13th position.

Figure 2 Old-age dependency ratio in the EU (2005, 2015, 2020, 2050)



Source: Authors, based on Eurostat data (2017a, b)

III. Economic development of the senior population in the Czech Republic

The authors intend to analyse the economic development of senior households at three levels. The first level concerns that of the financial income and expenditure of senior households; the second level concerns the difference between the expenditure of senior households and non-senior households and the third level a comparison of COICOP-classification consumer categories with respect to senior households across the 28 member states of the EU.

The baseline data with concern to the first two levels is extracted from Family Account Statistics compiled by the Czech Statistical Office, which cover economic behaviour of senior households (households with no economically active members) and non-senior households (average employed households). The open Eurostat database (2017c) is used for the third level analysis.

The first level aims to discover a trend with respect to the economic situation of senior households in the period 2010–2015. Annual income in the period increased by 11% to CZK 216,801 (€ 8,030⁴) while annual expenditure increased by 6% to CZK 200,657 (€ 7,432). This difference was reflected in an increase in annual savings from CZK 6,735 (€ 249) in 2010 to CZK 16,144 (€ 598) in 2015. These annual savings must be compared with unexpected expenditure⁵ according to the EU-SILC Survey, which amounted to CZK 8,500 (€ 315) in 2010 and CZK 9,600 (€ 356) in 2015. This means that in 2010 senior households were unable to cover unexpected expenditure from their annual savings. In 2015, however, average senior households were able to cover this expenditure. Nevertheless, the fact remains that the savings by senior households were created not only by increasing income but also by reducing consumption in natural units.

The Housing, water, electricity, gas and other fuels category represents the largest proportion of consumption in senior households. The final phase of rent deregulation was implemented in the

⁴ One exchange rate of 27 CZK = 1 € is used throughout the paper.

⁵ Unexpected expenditure makes up one of nine material deprivation indicators. The concept of deprivation generally expresses a feeling of the inadequate satisfaction of the needs of the household and its members. The EU measures material deprivation based on data from the EU-SILC Survey. Together with the rate of income poverty and the share of people living in low-intensity households, the poverty and social exclusion indicator is considered to be a global indicator.

Czech Republic during the monitored period. As a consequence of the deregulation process, expenditure on housing increased sharply, reaching a peak in 2013. This was followed by a housing expenditure decline which, however, failed to match the previous sharp rate of increase. The difference between the maximum and minimum amount of housing expenditure amounted to CZK 4,500 (€ 167). The second most important category in terms of household expenditure is that of Food and non-alcoholic beverages. Together, these two categories account for 52% of total expenses.

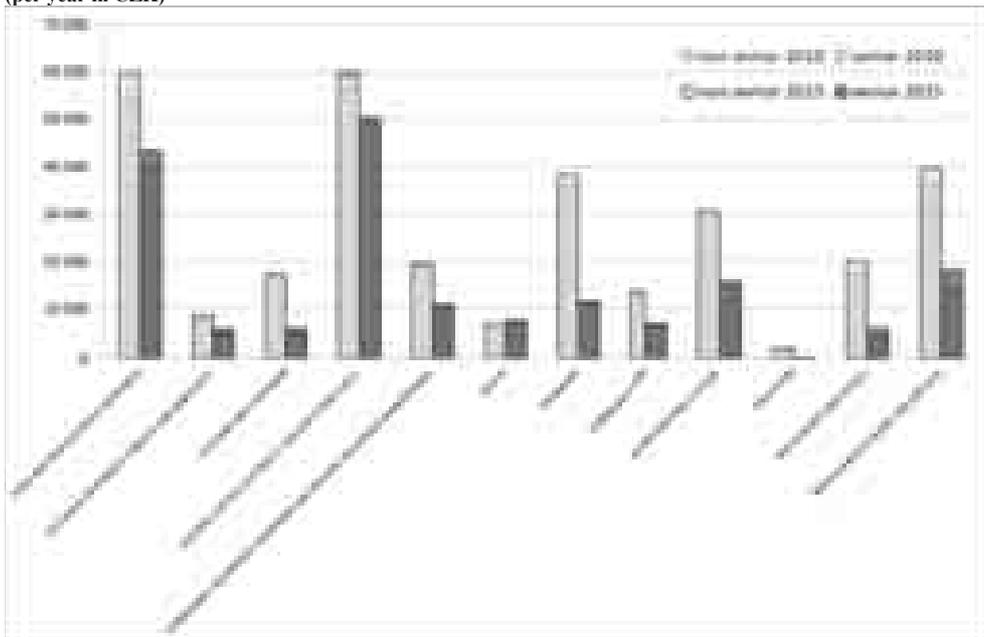
Other relatively important categories include Transport, Recreation and culture and Miscellaneous goods and services, which vary between 5% and 10% of household expenses. The share of other categories of total consumption is negligible. The question remains, however, as to whether the low share of senior household spending on these latter categories is influenced by the low level of income and the high level of expenses in the two most important categories (Housing, water, electricity, gas and other fuels and Food and non-alcoholic beverages), or whether the level would be low anyway since senior households do not need to spend money on such types of items. A partial answer to this question is provided in the second level of the analysis.

In the period under review, a relative decrease is evident in terms of the share of senior household expenses of total consumption on the categories Housing, water, electricity, gas and other fuels, Furnishings, household equipment and routine household maintenance, Health, Transport, Communications and Recreation and culture. It must be noted here, however, that this is merely a relative reduction in consumption in the order of just hundreds of CZK per year. Such savings do not represent a significant change in terms of the overall senior household budget.

Conversely, the most significant increases in expenses concern Food and non-alcoholic beverages and Miscellaneous goods and services categories (even in absolute terms). These increases amount to the order of thousands of CZK per year, which exerts a significant influence on the senior household budget. These two categories alone absorbed 40% of the increase in income over the reference period.

The second level compares senior households with non-senior households and aims to show to what extent household income decreases and how the structure of household expenditure changes upon leaving the economically active life stage. The income and expenditure of average senior households and non-senior households vary considerably. On average, senior households have an annual income of CZK 200,000 (€ 7,407) less than the average non-senior household. This difference alone defines the amount spent on consumption and the amount of savings.

Figure 3 Expenditure development of senior and non-senior households in the period 2010 to 2015 (per year in CZK)



Source: Authors, based on data taken from Family Account statistics (Czech Statistical Office, 2010-2015)

Figure 3 clearly shows the change in expenses upon transition from one to the other of the monitored groups (non-senior to senior households). Nevertheless, on the expenditure side, the same development is evident with concern to two of the COICOP categories, i.e. Food and non-alcoholic beverages and Restaurants and hotels, both of which show increase. Stagnation is evident with respect to Alcoholic beverages and tobacco, Clothing and footwear, Housing, water, electricity, gas and other fuels, Furnishings, household equipment and routine household maintenance, Health and Recreation and culture. The similar rate of development of the two groups should, however, be considered in relative terms since the absolute values of senior household expenses are generally around half those of non-senior households.

The opposite trend is clear with respect to household expenses on Transport, Communications, Education and Miscellaneous goods and services, concerning which the difference between senior and non-senior households is considerably more than double.

With respect to senior households, expenses in Education has increased compared to non-senior households. However, the frequency of the occurrence of expenses in this category remains at a very low level and the total amount of expenses is in the order of just tens to hundreds of CZK per year. This category is, therefore, negligible in terms of the economic situation of senior households.

Concerning the Transport category, despite slight volatility, expenses by non-senior households is on the increase, while that of senior households has stagnated. This is due to a decrease in the use of personal transport means by seniors and the higher use of urban public transport with the senior discount. However, the amount of expenses on long-distance transport is also decreasing. Senior households, in general, incur three times lower transport costs than non-senior households. This phenomenon is most likely reflected in a reduction in the geographical area visited by senior household members, they tend to reduce the extent of their living space. Notably, it is not unreasonable to suggest that worsening health conditions leads to such behaviour. However, it is

also important to mention that the financial demands of personal means of transport makes up a considerable hidden factor behind this phenomenon.

Expenses in the Communications category has seen a slight decline with respect to non-senior households, which can be attributed to increased competition in the telecommunications sector which has resulted in lower tariffs. However, no significant change is evident in this respect concerning senior households (stagnation). This may be due to a reluctance to change telephone operator or tariff structure. It is a question of how much seniors would save even if expenses were halved. Expenses in this category is already so low that it would be difficult to decrease it further.

Transport and Communication provide for communication with others and general social interaction. It is, therefore, ironic that senior households are reducing their consumption in these respects and, thus, are further isolating themselves from their surroundings.

Conversely, a greater increase is evident with respect to expenses on Miscellaneous goods and services by senior households, even in absolute terms, than that of non-senior households. The largest share of this category consists of insurance, particularly life insurance and supplementary pension insurance. Supplementary pension insurance provides a tool for the investment of non-committed financial resources, while life insurance serves for seniors to secure funds for surviving loved-ones (spouse, partner, companion, descendants etc.). Senior households perceive the end of life considerably more intensely than do households with a younger age structure.

The third level consists of a comparison of COICOP consumer categories with respect to senior households across the 28 member states of the European Union. Three categories were selected: Food and non-alcoholic beverages, Housing, water, electricity, gas and other fuels and Recreation and culture, see Table 1.

The first two categories were chosen due to their substantial share of total senior household expenses and due to their making up basic life essentials. Recreation and culture was chosen so as to provide a comparison with the other two high expenses categories and to provide an insight into the leisure activities of seniors. Moreover, it is a category to which financial resources can be devoted once all the essential needs have been met.

Table 1 Senior household expenses in Food and non-alcoholic beverages, Housing, water, electricity, gas and other fuels, and Recreation and culture in European Union countries in 2010

	Food and non-alcoholic beverages		Housing, water, electricity, gas and other fuels		Recreation and culture	
	%	rank	%	rank	%	Rank
Belgium	14.1	21	28.9	23	8.3	9
Bulgaria	30.3	2	41.0	3	2.3	28
Czech Republic	22.3	10	27.4	24	10.3	6
Denmark	11.3	26	37.4	10	11.6	4
Germany	11.4	25	33.2	17	11.4	5
Estonia	28.7	5	35.8	15	6.6	15
Ireland	13.2	22	33.4	16	8.1	11
Greece	18.1	14	30.8	21	3.1	25
Spain	16.5	17	36.3	12	5.4	18
France	18.8	13	30.2	22	7.1	14
Croatia	27.2	7	37.0	11	3.8	24
Italy	20.5	11	37.7	8	4.9	21
Cyprus	17.5	15	30.9	20	4.3	22
Latvia	30.0	4	27.4	24	6.0	16
Lithuania	30.3	2	37.5	9	2.9	26
Luxembourg	9.1	28	39.4	6	7.3	13
Hungary	19.1	12	44.4	1	5.4	18
Malta	27.7	6	8.7	28	8.1	11
Netherlands	10.2	27	33.1	18	10.0	8
Austria	13.0	23	26.7	26	12.1	3
Poland	24.2	8	39.9	5	5.2	20
Portugal	15.3	18	36.1	13	4.0	23
Romania	32.2	1	41.0	3	2.5	27
Slovenia	17.5	15	36.0	14	8.2	10
Slovakia	24.2	8	42.4	2	6.0	16
Finland	14.2	20	32.8	19	10.1	7
Sweden	13.0	23	38.6	7	13.8	2
United Kingdom	14.9	19	19.0	27	14.9	1

Source: Authors, based on Eurostat data (2017c)

As can be seen from Table 1, the standard of living in individual member states is crucial with respect to the structure of expenses. It is typical that senior households spend a higher proportion of income on Food and non-alcoholic beverages in economically weaker states. The ideal limit might be set at 20% of total expenses. There are exceptions where senior households in economically weaker countries expend a lower proportion of income to this category; however, the values in such cases are not significantly lower. The average expenses of senior households in member countries which acceded to the EU in 2004 and later with concern to the Food and non-alcoholic beverages category is 25.5%. Senior households in the Czech Republic spend 22.3% of income on this category (ranked 10th), relatively close to the average. The average value in this respect for senior households in the original (pre-2004 accession) member states is 14.2%, i.e. more than 10

percentage points lower. In other words, the richer the country, the less senior households spend of their budget on essential survival items. It is important to note that price levels are higher in the original member states, which is also reflected in the parity of the purchasing standard. An explanation of this phenomenon, therefore, lies in the higher incomes of senior households in the original member states which, in turn, is due to receiving higher incomes during the economically active period. They receive significantly higher real pensions which are so much in excess of those received in recent accession states that even though food costs are higher, seniors still spend relatively less on this category.

Housing costs make up an important item of expenditure in all EU member states. The average expenditure of senior households on this category in the original EU member states is 32.9% and 34.6% in the recent accession countries. The Housing, water, electricity, gas and other fuels category makes up the most significant category in the expenditure of senior households in the EU. Senior households in the Czech Republic ranked in 24th position in this respect with a value of 27.4%. According to the same methodology, it is clear that senior households in the Czech Republic expend a relatively low proportion of income on the most costly item. The social benefits system (non-insurance social housing benefits) helps to cover housing costs and aims to ensure that such costs do not exceed 30% of total household income. According to EU-SILC 2015 data, 2.7% of senior households receive the housing allowance (see Table 2)

Table 2 Development of the share of senior households with respect to the housing benefit

	2010	2011	2012	2013	2014	2015
senior households	1.0%	1.3%	1.6%	2.1%	2.7%	2.7%
share of senior households	16.9%	18.4%	20.5%	27.0%	23.7%	22.4%
senior household share of the housing allowance	10.8%	13.0%	13.1%	24.1%	14.2%	13.8%

Note: "senior households" shows the percentage of senior households receiving the housing benefit; "share of senior households" refers to the percentage of senior households of total housing benefit recipients; "senior household share of the housing allowance" shows the percentage of the total amount of the housing benefit which is paid out to senior households.

Source: Authors, based on EU-SILC data 2010-2015

Since 2010, there has been a steady increase in the share of senior households receiving the housing benefit. The reasons include the effects of the economic crisis, the deregulation of housing rents and, probably, the decreasing rate of the non-take-up of the benefit. In 2015, senior households accounted for approximately 22% of all housing benefit recipients; however, they made up just under 14% of the total amount of housing benefit (see Table 2). According to Ministry of Labour and Social Affairs statistics (2010-2015), there has been a steady increase in the payment of non-insurance social benefits for the support of housing costs; in 2015, total expenditure amounted to in excess of CZK 12.3 billion (€ 456 million).

The Recreation and culture category was chosen so as to form an impression of the leisure activities of senior households. It is evident that such households in the original EU member states expend more than those in later accession states, more than 10% of total expenditure. The cost of leisure activities varies considerably. However, again, it is clearly higher than in the recent accession states. Southern EU countries (Greece, Portugal, Italy and Spain⁶), however, form notable exceptions, senior households expend so little income on these activities that they more resemble recent accession states in this respect. Based on the results of the Eurostat research (2017c), it might be argued that, in terms of an EU comparison, senior households in the Czech Republic behave more similarly to senior households in the original member states, i.e. 10.3% of income (ranking in sixth position).

⁶ listed from the highest to the lowest values

Nevertheless, it is necessary to point out here that the absolute amount of senior household expenses in the original member states is considerably higher. In many cases spending on these activities involves a reduction in expenses on the other nine COICOP categories.

IV. Senior poverty in the Czech Republic

The combination of low incomes and the consequent inadequate consumption level suggests that senior households are at risk of poverty. However, according to international statistics (European Commission, 2015), the Czech Republic has, over the long-term, ranked amongst those countries in which seniors are least vulnerable to income poverty, for this moment. One positive factor in this respect consists of a pension system that provides most retirees with a pension that exceeds the poverty income threshold defined by Eurostat (CZK 10,220 / € 379 in 2015). This applies, in particular, to the internationally used the AROP (60)⁷ indicator. However, if one applies the AROP (70) indicator, the income poverty rate for seniors increases from 9.5% to 24% (EU-SILC data 2015). A breakdown of senior households reveals that the most vulnerable group in terms of income poverty consists of single-person households, particularly female households (see Table 3).

Table 3 Senior household poverty in the Czech Republic (2010-2015)

	2010	2011	2012	2013	2014	2015
AROP (60)	8,7%	8,8%	8,0%	7,6%	8,7%	9,4%
AROP (70)	19,7%	20,4%	20,0%	19,7%	22,3%	24,3%
1-person household – male	26,7%	26,2%	24,8%	26,1%	27,5%	32,2%
1-person household – female	49,4%	51,2%	45,8%	44,6%	49,4%	53,7%
2-person household	6,2%	6,8%	5,6%	4,5%	6,9%	9,0%
3+ household	6,5%	8,2%	9,3%	11,1%	10,9%	7,9%

Note: senior here is defined as a person receiving the retirement pension; the internationally recognised age of seniors is 65 years and over; however, for the Czech Republic this would mean the non-inclusion of a relatively large proportion of real retirees (the average retirement age ranges between 60 and 63 years)

Source: Authors, based on EU-SILC data 2010-2015

The paper monitors senior households in the period 2010 to 2015. Most senior households are dependent on state social benefits, especially the old-age pension. In 64% to 68% of senior households, social benefit income makes up the primary source of income (the pension and other social benefits account for more than 80% of total household income). In the case of single-person senior households, the share of households with predominantly social benefit incomes stands at 90%.

In order to complement the comprehensive overview of the financial situation of seniors, the results of the direct questioning of households are available (this material is also contained, for example, in the above-mentioned EU – SILC data). Respondents provide information on the ability of their households to meet current expenditure and/or are asked to subjectively determine the minimum income they require (see Vidovicová et al., 2015). Moreover, with respect to individual interview research, the Czech Republic also participated in the DIPEX survey on active ageing. Research is thus already geared towards senior respondents and their life experiences. Seniors themselves are aware of the need to create a financial reserve which, in most cases, includes reducing spending in old age, a modest life style and securing part of their food supply outside the commercial market, by means of growing their own vegetables and the rearing of animals. The most significant problems

⁷ AROP (60) – the at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income after social transfers. Alternatively, the threshold may be set at 50% or 70%.

faced by seniors include high housing costs, costs associated with health issues and the onset of financial problems following the death of a partner (Social Health Institute, 2016).

V. Pension system reform scenarios and their impact on the Czech economy

Consumption is based on household income and savings. Currently, Czechs who have almost no savings, and whose income does not adequately cover optimal consumption, are entering their senior years. They had no opportunity to prepare themselves financially for old age. Financial market products that are standard in terms of financing retirement either were not available or have not had enough time to mature before retirement. A further, and possibly more significant reason for low savings levels and the continuation of this trend into the future, concerns the low level of wages and salaries in the Czech Republic (Beran, 2016; Czech Statistical Office, 2017a). A large proportion of the working-age population are simply unable to create a significant financial reserve for retirement from their earnings and will, therefore, be solely dependent on the state social insurance system.

Gross domestic product, calculated in the Czech Republic by the Czech Statistical Office using the expenditure method according to international methodology, is made up of four variables (Czech Statistical Office, 2017b), of which the Ministry of Finance of the Czech Republic states in its regular reports that household consumption is the main driver of economic growth (Ministry of Finance, 2017). This view has also been confirmed by Eurostat statistics (2015) which revealed that household consumption accounts on average for half of the GDP of member states EU (the specific economies of Ireland and Luxembourg form exceptions in this respect).

In the future, we anticipate not only a growing number of seniors who will receive benefits from the social security system (old-age pension) but also the need for such persons to receive higher pensions. Individual states have implemented or are introducing structural reforms to their public systems. Unfortunately, due to the influence of political interest, the long-planned reform of the pension system in the Czech Republic has stalled. Therefore, if no reformed system is introduced, we can count on increasing demands on the social system in the future, especially with concern to the social insurance system and the provision of social and health care. As evidenced by many studies, the setting of public policy has a great impact on deciding of individuals and firms, consequently on the performance of the economy as well (např. Kotlán et al., 2015).

An overview is presented below of the most widely discussed proposals aimed at addressing the pension crisis, the decline in the living standards of seniors and the sustainability of the retirement account. We supplement the proposed solutions with a consideration of the consequences of a decline in domestic consumption which has remained more or less stable over recent years and which supports the level of gross domestic product in the case of fluctuations with respect to the other relevant variables.

Extreme pragmatic solutions include the freezing in the growth of the amount of the pension. The state treasury would make relative financial savings even though the pension account deficit would continue to deepen due to the increasing number of people receiving pensions. At the same time, the income of seniors would be reduced relative to average earnings. As a consequence of rising price levels, this would lead to a deterioration in the living standards of seniors, and the relative poverty of senior households would increase compared to that of the productive population. Senior households, which will represent over 30% of total household consumption in the future, would in such a situation be forced to reduce their consumption. A reduction in such a large proportion of total household consumption would, eventually, exert a negative effect on the overall economic situation. For the state, a reduction in consumption would lead to lower tax revenue which would be accompanied by higher demands on the social benefits system, i.e. a downward economic spiral. Moreover, lower consumption would also affect the private sector through reduced demand. Lower demand for products and services would lead to declining operating costs, lower investment and

redundancies, thus leading to further demands on the state budget in terms of unemployment benefits and non-insurance social benefits⁸. Further effects on the economy would be similar to those brought about by recession (reduced innovation, stagnation or a reduction in the quality of products and services, a deterioration in competitiveness, etc.). This “recession” would be deeper than previous recessions since it would affect more areas of individuals lives. For example, the inability of seniors to manage on the reduced household budget would, in many cases, result in the need for financial assistance from their offspring, thus leading to a further decline in overall household consumption. This variation, despite the relative savings for the pension account, represents the most negative option in this respect.

A further option consists of restricting other expenditure from the state budget in order to be able to meet mandatory expenditure commitments. Pensions would be indexed; thus, there would be no decline in the living standards of senior households. Seniors generally spend their entire income without amassing significant savings, thus providing a boost to the economy and indirect tax revenue for the state. If one follows the assumption that there will be no increase in the state budget deficit, state spending would clearly be limited, resulting in a reduction in gross domestic product or, at least, a decline in its rate of growth. The consequent fall in the rate of employment would result in lower revenues for the social insurance system, thus increasing the pension account deficit. Thus, there would be an even greater need to raise funding from other areas of the state budget. Again, the result would be a downward spiral that would worsen the overall economic situation in the Czech Republic. The economy would find itself in recession, but probably a milder recession than that resulting from the option described above. If it were accepted that the state budget deficit might be increased, the result would be similar to the solution outlined below.

The last extreme pragmatic solution involves maintaining the pension system as it is currently set up, including regular indexation, and simply “surviving” the approaching most costly period. The resulting increased state budget deficit would be paid off only once the pension system issue had been solved. However, any increase in the deficit is linked to uncertainty concerning the future development of interest rates and the sale of state bonds. It is far from certain whether the financial markets will be interested in purchasing Czech government bonds in the future.

All the pension reform scenarios presented above bring with them a range of uncertainties and problems as well as a number of challenges for policy makers. Unfortunately, the variability of the predictions (the number of seniors, the composition of senior households and their consumption) is too broad for a realistic forecast of the overall impact on household consumption, and the level of reliability of any estimates made at the present time would be very low.

It is, however, certain that the final solution to this issue will be strongly motivated by political considerations. Going forward, seniors will, undoubtedly, become an increasingly influential electoral group of the population. While seniors do not represent a homogeneous group, i.e. they make up a financially, culturally, personally, etc. heterogeneous group, the working age electoral population is considerably more differentiated. If politicians fail to address this issue in their electoral programmes, the impact of the senior electoral group will be clearly felt in the near future. Although some seniors will ensure their own financial security in the future, most seniors will still be dependent on the state social insurance system pension (in the case of the Czech Republic, the first, general, state-guaranteed pillar).

⁸ At the same time, the Czech Republic is already facing challenges in the form of Industry 4.0, Employment 4.0 and Society 4.0 which will most likely lead to increased state budget expenditure. However, due to the scope of this paper, this topic will not be discussed, even though the authors are aware of this issue. Further, the topic of early retirement, which has a lasting impact on senior household income, will not be discussed herein.

VI. Conclusion

It is important to remember that more and more attention will have to be devoted to issues surrounding seniors and population ageing in general going forward. This issue simply cannot be avoided. All EU states, including the Czech Republic, must prepare for developments in this context.

In the coming years, the Czech Republic can expect one of the largest increases in the old-age dependency ratio in the EU (52% by the year 2050, i.e. the 11th highest in the EU). A combination of factors: (1) low wage levels in the Czech Republic (2) the lack of tradition of ensuring private savings for retirement and the consequent high level of dependence on the state social security system and (3) the lower consumption of senior households compared to that of non-senior households, means that the Czech Republic faces the threat of a decrease in household consumption and thus a decrease in GDP.

Chapter 5 introduced the most widely discussed potential reforms of the social insurance system, respectively those aspects that influence the payment of old-age pensions, to which the authors added the effects of these reforms on the consumption of seniors and the impacts on the Czech economy. None of the proposed reforms presented to date present a positive outlook for the Czech Republic and all of them impose conflicting demands on the system to a certain extent. On the one hand, increasing the purchasing power of senior households and thus maintaining the low risk of income poverty and, on the other, the requirement for an expenditure-stable and long-term sustainable social insurance system. While policy makers have already begun to work on the first part of the equation, the second part remains in the design stage. From 1 January 2018, the pension indexation system will be changed from the present inflation plus 1/3 of the growth in real wages to inflation plus 1/2 real wage growth. The change in the indexation system will be accompanied by a change with respect to the definition of the senior consumer basket so that it contains items more suited to the consumption of seniors.

It should also be noted that more than 50% of the total income of seniors in the Czech Republic is spent on the consumption of essential commodities: Food and non-alcoholic drinks and Housing, water, electricity, gas and other fuels. Senior households spend a further quarter of their income on housing (after passing through the relevant support of the social benefits system). A supplementary housing indicator is provided by the “housing cost overburden rate”, according to which in 2014, 13.9% of senior households exceeded, they had housing costs of greater than 40% of income (Eurostat 2016a, 2016b). This is partly due to low housing mobility in general in the Czech Republic. With age, an individual’s living space tends to shrink and the barriers to moving accommodation increase. Seniors often prefer to restrict the consumption of other goods and services or find other sources of income (part-time work, in-family financial assistance, social benefits, etc.) rather than to change their housing arrangements. Indeed, seniors tend to perceive where they live as a kind of “social anchor” (the feeling of certainty and security) (Vidovicová, 2013). A further reason consists of the high rate of the non-take-up of social benefits by seniors aimed at supporting the cost of housing. The share of senior households receiving the housing benefit increased during the monitored period (from 17% in 2010 to 23% in 2015); however, their share continues to make up a relatively small part of the total amount of benefit (just 14% in 2015; although an increase is evident, it is not as great as the increase in the number of entitled household). The ever-increasing share of senior households implies a higher burden on the social benefits system in future years (as also pointed out by Andrews, Philips, 2005). Finally, problems may arise due to a lack of housing which meets the specific needs of senior households (barrier-free, in a good location with respect to requirements, medical services, shops, services, etc.). That problems concerning the housing of older people, i.e. mobility and suitable design (barrier-free smaller flats), will be alleviated by upcoming legislation on social housing. Municipalities, or the state, will be required to provide sufficient housing capacity for vulnerable groups of the population (low-income

households, newly-established families, senior households, etc.). However, the discussion procedure on this legislation is taking so long that it may not be approved under the current Sobotka government (parliamentary elections will take place in autumn 2017).

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