

# WORKING RETIREES AND LONG-TERM SUSTAINABILITY OF THE CZECH PENSION SYSTEM

Lenka Lakotová

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## Abstract

This paper analyses the position of working retirees in the Czech Republic and consequently the impact on the long-term sustainability of the pension system. As the population ageing represents a serious challenge for the upcoming years, the increase of working retirees could become a way how to (at least partially) reduce the pressure on long-term sustainability of the pension system. Pension system sustainability was evaluated by using pension sub-component of S2 indicator. In the Czech Republic, the economic activity of retirees is relatively low compared to other European countries. It was confirmed by the analysis that older people retire mainly because they have reached the statutory retirement age, and it seems that more educated individuals retire on average later than individuals with lower educational attainment, and men retire on average later than women. Furthermore, it was found relatively significant relationship between activity of retirees in the labour market and sustainability of the pension system. There was found no relationship between life expectancy and activity of retirees in the labour market.

**Key words:** retirement policies, pension system, sustainability of public finance, population ageing

**JEL Code:** J26, J11, H68, H55

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## Introduction

In the Czech Republic ageing of the population will represent a serious challenge in the future. The aging population will place a significant burden on public finances, especially on the pension system, which is directly dependent on demographic trends. Discussion about the need for pension reform, which would result in maintaining the pension system in balance even after the demographic situation worsens, has been continuing for several years without any satisfactory outcome. Nevertheless, it is very probable that the political and social consensus will result in preserving the PAYG based first pillar as the cornerstone of the pension system in the long run. Hence, it is necessary to look for ways how to make the first pillar more resilient.

According to Janíčko and Tsharkyan (2013), the main economic policy recommendations for increasing the sustainability of the pension system while maintaining PAYG funding include variety of measures aiming at increasing labour market participation, e.g. retraining programs, training programs, active job search support or efforts on

reconciliation of family and working life (e.g. part-time work or work from home) aimed mainly at women and inhabitants of higher productive age (55–64 years). Increasing labour market participation of retirees then could be considered as one of possible solutions how to improve sustainability of the pension system. Janíčko and Tsharakyan (2013) also recommend setting appropriate conditions for working retirees. Here, however, they warn that the incentive to remain in the labour market and have simultaneously the possibility of receiving a full pension should not be detrimental to the possible relief of the pension system in the form of a reduction in current liabilities to these retirees.

In the Czech Republic, there is a significant decline in the economic activity of persons who have reached retirement age (VŠPS, 2018). Having in mind the problem of long-term sustainability of pension system, this tendency is a risky one and deserves special attention. The aim of this paper is thus analysis of the position of the retirees on the labour market followed by some policy suggestions. Firstly, the relevant legislative environment in Czech Republic will be described followed by analysis based on labour market statistical data. Then the long-term sustainability of pension system with respect to the position of working retirees in the Czech Republic will be analysed within the context of other EU countries. The synthetic S2 indicator will be used for the assessment of long-term sustainability of pension system evaluation. Finally, the possibilities to improve the motivation of retirees to work and their alleged discrimination by the employers will be discussed.

## **1 Working retirees**

### **1.1 Institutional background**

Issue of the concurrence of gainful employment and receipt of an old-age pension is regulated by the §37 of the Act No. 155/1995 Coll., the Pension Insurance Act. Since 1995, legislation on this issue has undergone many changes. The concurrence of gainful employment and receipt of an old-age pension was only allowed to a person who, in the first two years after reaching the statutory retirement age, did not exceed the income threshold set at twice the individual's subsistence minimum. This condition was abolished by Act No. 425/2003 Coll. Since 1998, the payment of an old-age pension has been conditional on the conclusion of a fixed-term employment relationship, but the length of this contract has not been limited in any way. However, then it was introduced an amendment under Act No. 425/2003 Coll. with effect from 1 January 2004. The Act stipulated that in order to be entitled to an old-age pension in addition to income from gainful employment, the employment relationship must be concluded for a fixed

period of no more than one year. (Šlapák, Holub, 2015) This condition was abolished by the Amendment to Act No. 306/2008 Coll. This amendment gave the possibility of receiving an old-age pension and income from gainful employment, even if the employment relationship is concluded for a definite period of more than 1 year and even if it is concluded for an indefinite period. It came into effect on 1 January 2010. Reforms under Act No. 306/2008 Coll. they were also adopted with a view to improving the financial sustainability of basic pension insurance as well as long-term stability.

Another change under Act No. 306/2008 Coll. was to adjust the increase in the earnings-related pension for the period of gainful activity carried out after the entitlement to the old-age pension arose while receiving this pension simultaneously. Newly, in the case of receiving full pension benefit, the earnings-related pension is increased by 0.4 % of calculation basis for every 360 calendar days. Or for every 180 calendar days of economic activity during which the claim for half of an old-age pension is postponed, an increase of 1.5% of the calculation basis is provided. Prior to the introduction of this amendment, the earnings-related pension was increased only in relation to postponed whole old-age pension or eventually a disability pension for third degree invalidity. In such case, the earnings-related part of the old-age pension was (and still is) increased by 1.5% of calculation basis for every 90 days (an increase of 1.5 % was stated in § 29 of the Pension Insurance Act 2001, before the 2001 it was increased only by 1 % of calculation basis). This change could have a positive effect on increasing motivation to work after reaching retirement age.

In 2011, the so-called “Small” pension reform was enacted with effect from 1 January 2012. It brings changes in the setting of rules for valorisation, accelerates the increase in the retirement age of women (by 6 months per year) and introduces a system of infinite increase in the retirement age by 2 months per year. The unlimited increase in the statutory retirement age (2 months per year) has been abolished in 2017, and there was introduced a revision mechanism for setting retirement age, “capping” retirement age to 65 years. The Czech Republic does not currently have a legal retirement age linked to demographic indicators. According to the current wording of Act No. 203/2017 Coll., a revision mechanism for setting the retirement age according to the development of life expectancy at the retirement age in individual generations will be introduced in the Czech Republic. The aim should be to spend a quarter of the total life in retirement for every individual (on average). However, according to the latest government decision, the retirement age will not be changed or automatically linked to the demographic indicators despite the recommendation of experts. As for the possibility of concurrent gainful employment and receiving an old-age pension, it is also important to mention that persons in

early retirement must not simultaneously engage in activities that would constitute participation in pension insurance.

## **1.2 Position of working retirees in the labour market**

The labour market participation of retirees in the Czech Republic is determined by the fact that a large proportion of these persons become economically inactive voluntarily. Approximately 80-85 % of all older people retire mainly because they have reached the statutory retirement age. The retirement of these persons is therefore not a consequence of deteriorated health conditions but rather a consequence of entitlement to a retirement pension. Only a minority of people who have retired immediately after reaching the statutory retirement age report health reasons, job loss or positive reasons (retirement with a partner, spending more time with family, etc.) as the main reason for retirement. Therefore, if retirees were sufficiently motivated, their employment could increase as most of them are still able to work. (Bakalová et. al., 2015)

According to Šatava (2015), the motivation of people to work after reaching retirement age could be increased by changes in taxes, benefits or pension insurance. Indeed, these changes could increase the net work income of retirees and thus motivate them more to work. Šatava (2015) found that in terms of tax incentives, retirees are motivated in the same way as persons aged between 50 years and retirement age, although they should be more motivated because they are more motivated to leave the labour market. Using own model based on French data, Sabatier and Legendre (2017) predict that the closer the retirement, the greater the reservation wage and the lower people's search effort. After reaching retirement age, people are likely to have an incentive to work even lower. For this reason, these incentives do not effectively motivate retirees to gain employment.

Of course, there are other determinants that influence the decision to work beyond retirement age, which cannot be politically influenced. According to Anxo et. al. (2019) good health, high educational attainment/high-skilled jobs, good psychosocial work environment, employment status (to be self-employed), personality traits (extraversion, openness to experience and conscientiousness) as well as industrial sectors (agriculture, healthcare and transport) are significant determinants of the continuation of work after the standard retirement age<sup>1</sup>.

However, the motivation of retirees to work is just a one side of the problem – supply-side barriers. But further complications are caused by the demand-side barriers. Age discrimination was identified for example by Neumark et. al. (2019a) or Solem (2016).

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<sup>1</sup> They use data for Sweden citizens. In Sweden the standard retirement age is 65 years.

Neumark et. al. (2017) found evidence that older workers experience age discrimination in hiring especially in the lower-skilled types of jobs. They further argue that by reducing these barriers, employment of retirees can be increased. At the same time, the effects of labour supply reforms can be improved by reducing age discrimination. Neumark et. al. (2019a) found considerably stronger evidence of discrimination against older women than older men. One of possible explanations of this result is that for women, age discrimination can be further complemented by gender discrimination. Neumark et. al. (2019b) analyses if the state laws protecting older workers reduce age discrimination. They claim, that anti-discrimination laws could boost hiring, although they could have the unintended consequence of deterring hiring if their main effect is to increase termination costs. However, according to results of their analysis, these unintended effects have not been confirmed.

**Tab. 1: Number of workers, population and ratio of working persons by education in 2018**

Education <sup>2</sup>	Number of workers		Ratio of working persons and population (%)		Population	
	60-64 years	65-69 years	60-64 years	65-69 years	60-64 years	65-69 years
<b>Low</b>	15 100	4 500	21	5	73 100	90 600
<b>Middle</b>	227 100	61 100	45	12	500 800	505 800
<b>Tertiary</b>	82 800	30 500	72	36	114 700	85 600
<b>Total</b>	325 000	96 100	47	14	688 700	682 300

Source: Own elaboration and EUROSTAT 2019<sup>3</sup>

In tab. 1 number of workers and population of each level of education in both selected age group are used to compute ratio of working persons in the Czech Republic. Only 5 % of low educated persons aged 65-69 years is active in a labour market. Ratio of working people with middle level of education in this age group is 12 %<sup>4</sup> and more than third of people with tertiary education is still active in the labour market. Tab. 1 confirms, that people with higher education tend to postpone the retirement more frequently than people with lower education. Several different reasons for this phenomenon can be identified. For example, if a person has a high education, he or she could have a higher wage and thus be more motivated to remain in the labour market for a longer period of time even after reaching retirement age. Another reason

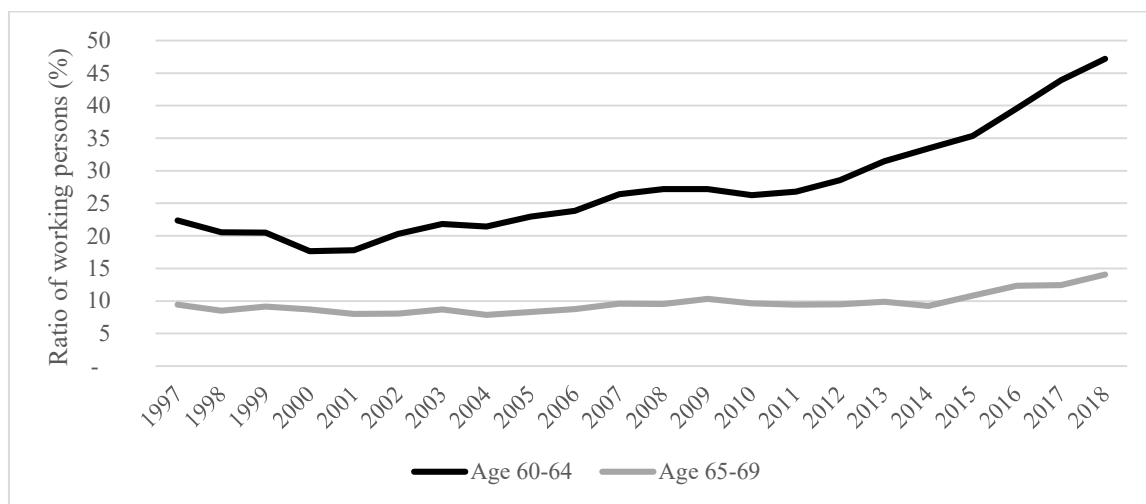
<sup>2</sup> Total- all ISCED 2011 levels; Low - Less than primary, primary and lower secondary education (levels 0-2); Middle - Upper secondary and post-secondary non-tertiary education (levels 3 and 4); Tertiary - Tertiary education (levels 5-8)

<sup>3</sup> Population by sex, age and educational attainment level (1 000) - lfsa\_pgaed, Active population by sex, age and educational attainment level (1 000) - lfsa\_agaedv

<sup>4</sup> According to VŠPS data, there is a significant difference between the number of working people aged 65 and over with secondary education without high school diploma (“maturita” exam) (27 900 persons) and with high school diploma (38 000 persons).

for higher employment of older people with higher education could be the fact that the more educated people do not usually work in physically demanding jobs, so they can perform their work without much difficulty even in old age. This assumption is in line with the findings of the study by Bakalová et al. (2015) that "*educated individuals live longer, are healthier, have less physically demanding occupations, earn more money and retire on average later than individuals with lower educational attainment*" (Bakalová et al., 2015).

**Fig. 1: Ratio of working persons aged 60-69 years in the labour market (1997-2018)**

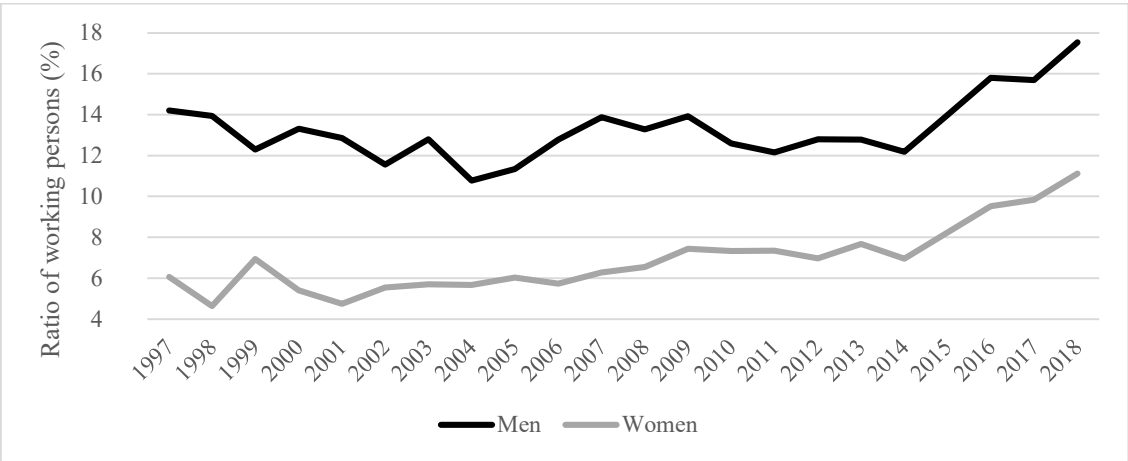


Source: Own elaboration and EUROSTAT 2019

Fig. 1 shows that difference between ratio of working persons has increased since 1997 from 13 p.p. (percentage points) to 33 p.p. in 2018. Major reason for this increase is the gradually increasing retirement age enacted by the “Small” pension reform in 2011. Fig. 1 also confirms result of Bakalová et al. (2015), that older people retire mainly because they have reached the statutory retirement age, as there is a more or less constant ratio for persons aged 65-69 (i.e. retirement age persons), while on the other hand, the ratio for persons aged 60-64, for whom the retirement age has been gradually being raised since 2011, is increasing. In recent years it seems, that the activity of persons aged 65-69 slightly increases, which may be due to a very favourable economic situation accompanied by massive creation of vacancies and thus strong demand for labour force.

Fig. 2 shows that there is significant difference in ratio of working persons between men and women. This difference seems to be approximately constant over time.

**Fig. 2: Ratio of working persons aged 65-69 years in the labour market – comparison of men and women**

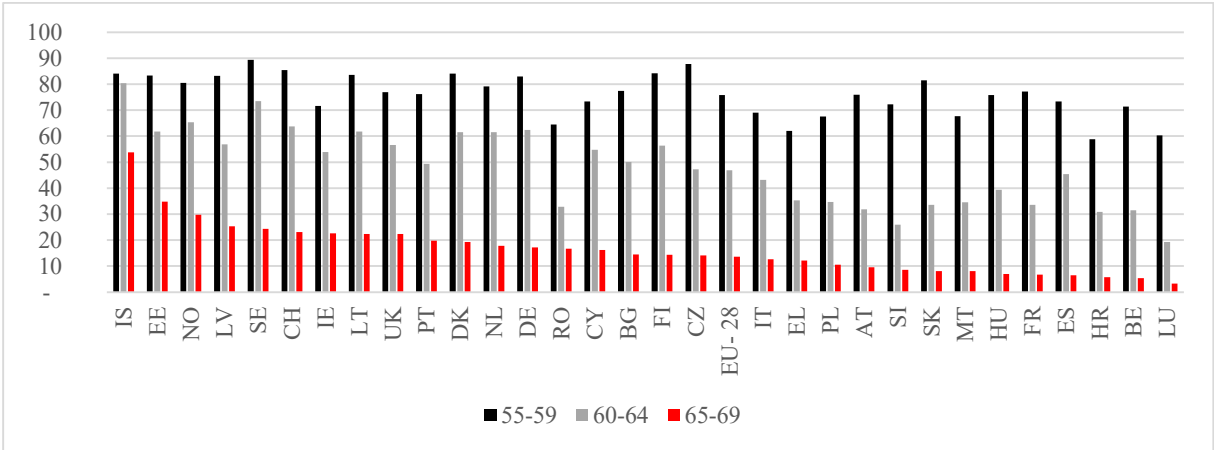


Source: Own elaboration and EUROSTAT 2019

**2 The long-term sustainability of pension system**

As it was already mentioned, the ageing population will be challenge for most European countries. Therefore, the postponing of retirement and prolonged working carriers beyond the retirement age can be one of possible way to improve the sustainability of pension system, which is directly endangered by the population ageing. Pension system in Czech Republic is based primarily on the pay-as-you-go basis, and this type of financing is considered to be beneficial and appropriate especially in the case of strong population growth. In such a case, there is a sufficient number of people to finance current pensions for a smaller number of current retirees.

**Fig. 3: Comparison of ratio of working persons aged 55-69 in the labour market in European countries in 2018**



Source: Own elaboration and EUROSTAT 2019

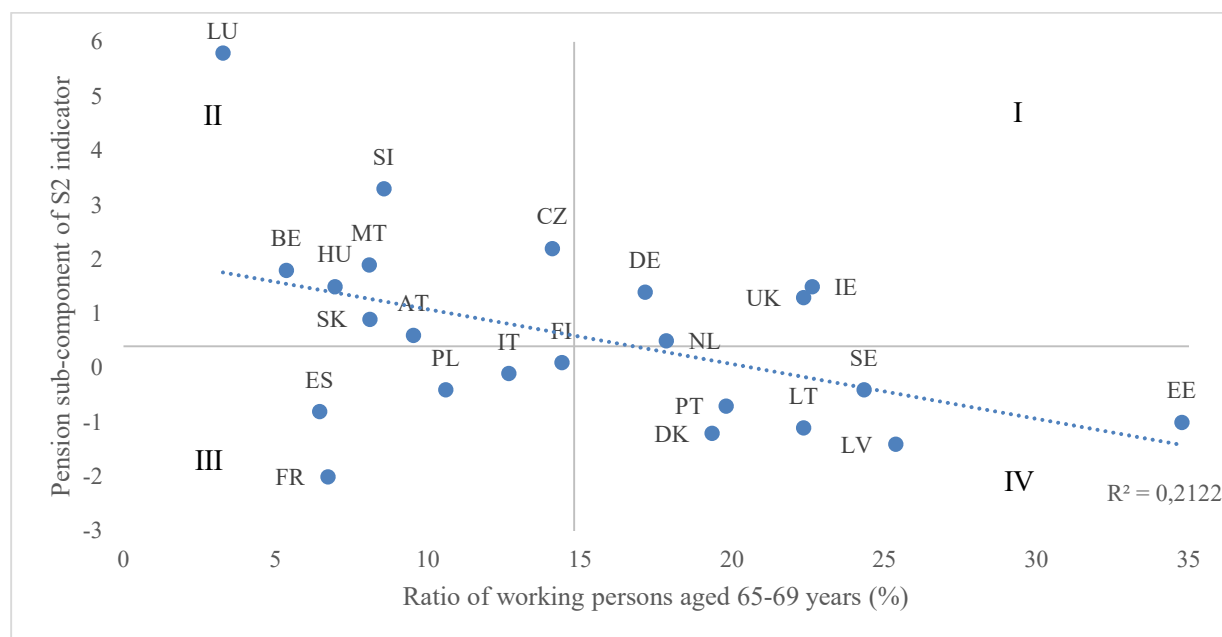
**Tab. 2: Statutory and early retirement age<sup>5</sup>**

	BE	DK*	DE	EE	IE	EL*	ES	FR	IT*	CY*	LV	LU	HU	MT	NL*
Men – Statutory	65	65	65,5	63	65,4	67	65,3	66,3	66,6	65	62,8	65	63,1	62	65,5
Men – Early	62	61,5	63	60	x	62	63	61,3	63,6	x	60,8	57	63,1	61	x
	BG	CZ	HR	LT	AT	SI	SK*	UK	PL	RO	PT*	FI*	SE	NO	
Men – Statutory	63,8	63,1	65	63,3	65	65	62	65,4	65	64,8	66,2	66	67	67	
Men – Early	62,8	60	60	58,3	60	59,3	60	x	x	59,8	60	63	61	62	
Women - Statutory	60,8	60,5	61,5	61,7	60	63	60,2	63,1	60	60,4					
Women – Early	59,8	57,5	56,5	56,7	55	59	58,2	x	x	55,4					

Source: Own elaboration and European Commission 2018

In fig. 3 there are ratios of working persons in European countries for each of selected age group. In Czech Republic ratio of working persons aged 55-59 is higher than in all other compared countries except Sweden. In a group aged 60-64 years differences in retirement age (tab. 2) have large impact on this ratio.

**Fig. 4: Ratio of working persons aged 65-69 years in the labour market in relation to S2 pensions sub-component**



Source: Own elaboration and European Commission 2018; EUROSTAT 2019

<sup>5</sup> The data are valid for 2016. \* indicates statutory retirement age is legislated to increase in line with life expectancy changes. Shaded area indicates, it is legally approved that the retirement age of women will increase to the level of retirement age of men in the future. X indicates that early retirement is not possible. For countries where there is no special retirement age for women (same retirement age for men and women), only the retirement age for men is listed.



In fig. 4 there is shown the relationship between the ratio of working persons aged 65-69 years to pension sub-component of S2 indicator<sup>6</sup>. The pension sub-component measures which adjustment effort is required to reach a certain sustainable debt ratio at a given point in the future – lower values represent higher sustainability. The area is divided into 4 quadrants by threshold for pension sub-component, which is set at value 0.4 (same as in The Fiscal Sustainability Report) and threshold for the ratio of working persons is set at value 14.8 % (the arithmetic average of included countries).

Czech Republic is in quadrant II with ratio of working persons aged 65-69 lower than average of EU countries, and at the same time its pension system is evaluated as unsustainable in a long-term horizon. In same quadrant are also other central European countries – Slovakia, Slovenia, Austria and Hungary. Belgium, Luxembourg and Malta. On the contrary, in quadrant IV, there are countries with high ratio of working persons aged 65-69, but their pension system is able to cope with this problem. Such countries are Nordic countries (Denmark and Sweden) and Baltic countries (Latvia, Lithuania and Estonia). Despite the low ratio of working persons aged 65-69 is pension system in France, Spain, Italy, Poland and Finland evaluated as sustainable in the future, conversely, despite the high ratio of working persons aged 65-69 is pension system in Germany, Netherlands, Great Britain and Ireland evaluated as unsustainable in a long-term. According to simple regression, it seems that there is a strong negative relationship between these two variables. Coefficient of determination is equal to 0.21. Correlation coefficient is relatively high and negative -  $\text{corr}(\text{Working persons aged 65-69}, \text{Pension sub-component of S2}) = -0,46$ . Thus, it seems that ratio of working retirees could to some extent be one of the determinants enhancing the sustainability of the pension system.

Fig. 5 shows, that there is no relationship between life expectancy and ratio of working persons aged 65-69. In countries with higher life expectancy, there is not necessarily higher economic activity of retirees and vice versa.

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<sup>6</sup> The S2 indicator represents the amount by which the state budget would have to be adjusted to ensure long-term fiscal sustainability or in other words, the amount of the adjustment to the current structural primary balance needed to achieve a stable debt-to-GDP ratio over an infinite horizon.

**Fig. 5: Ratio of working persons aged 65-69 years in the labour market in relation to life expectancy at 65**



Source: Own elaboration and EUROSTAT 2019

## Conclusion

The Czech Republic, as the most other European countries, will face the challenge of an aging population in the coming years, culminating in the fifties. At the same time, pension system of the Czech Republic is evaluated as unsustainable in the future (The Czech Fiscal Council, European Commission). Therefore, the pension system should be reformed to be able to cope with the aging population. It is also important to implement reforms in the labour market to increase labour market participation. A possible gap is, for example, in the employment of women and the elderly. This paper deals with the working retirees, and its impact on long-term sustainability of pension system. The result of the analysis is, that there exists relatively significant relationship between working retirees and pension system sustainability.

Therefore, reforms targeted at increasing the participation of retirees in the labour market will also improve the sustainability of the pension system. Approximately 80-85% of all older people retire mainly because they have reached the statutory retirement age despite that they are still physically able to work. In the data, there are observable significant difference in labour market activity of retirees and people in pre-retirement age. There is relatively high employment of people aged 55-59 in the Czech Republic compared to other European countries, but employment of people aged 65-69 (most countries have retirement age under 65 years) in Czech Republic is lower than the average value of European countries.<sup>7</sup>

<sup>7</sup> While in the 55-59 years age group 87.7 % of persons are economically active, only 47.2 % of persons in the 60-64 years age group are economically active, and only 7.2 % of persons older than 65 years are economically active (VŠPS, 2018).

The analysis shows that the Nordic countries (Denmark, Sweden) and the Baltic States have relatively high labour market participation of retirees in combination with a sustainable pension system. On the contrary, the Czech Republic, along with some other Central European countries (Slovakia, Slovenia, Austria and Hungary), Belgium and Luxembourg, has a relatively low employment rate for retirees combined with an unsustainable pension system. Furthermore, it appears that incentives in the form of penalties for early retirement and postponement bonuses do not in themselves have an impact on retirees' working activity. There are countries that have a high working activity of retirees even though they do not have any such incentives (e.g. Denmark, Sweden, Norway), but also countries which despite these incentives have low working activity of retirees (e.g. France, Czech Republic, Slovakia, Slovenia). There was found no relationship between life expectancy and activity of retirees in the labour market.

## References

- Anxo, D., Ericson, T., & Herbert, A. (2019). Beyond retirement: who stays at work after the standard age of retirement?. *International Journal of Manpower*.
- Bakalová, J., Boháček, R., & Münich, D. (2015). *Komparativní studie věku odchodu do důchodu v České republice*. Národohospodářský ústav AV ČR, vvi.
- Česká správa sociálního zabezpečení. Důchodové pojištění. Dávky. [online]. [cite 15. 12. 2019]. Available at: <https://www.cssz.cz/cz/duchodove-pojisteni/davky/starobni-duchody.htm>
- European Commission. (2018). Fiscal Sustainability Report 2018. Institutional Paper 094. January 2019. Brussels. PDF. 176pp. (vol. 2). ISBN 978-92-79-98871-4
- Janičko, M., & Tsharakyan, A. (2013). K udržitelnosti průběžného důchodového systému v kontextu stárnutí populace v České republice. *Politická ekonomie*, 61(3), 321-337.
- Neumark, D., Burn, I., & Button, P. (2019a). Is it harder for older workers to find jobs? New and improved evidence from a field experiment. *Journal of Political Economy*, 127(2), 922-970.
- Neumark, D., Burn, I., Button, P., & Chehras, N. (2019b). Do state laws protecting older workers from discrimination reduce age discrimination in hiring? Evidence from a field experiment. *The Journal of Law and Economics*, 62(2), 373-402.
- Neumark, D., Burn, I., & Button, P. (2017). Age discrimination and hiring of older workers. *Age*, 6.

Sabatier, M., & Legendre, B. (2017). The puzzle of older workers' employment: distance to retirement and health effects. *International Journal of Manpower*, 38(1), 45-61.

Solem, P. E. (2016). Ageism and age discrimination in working life. *Nordic Psychology*, 68(3), 160-175.

Šatava, J. (2015). *Pracovní aktivita po dosažení důchodového věku: Institucionální pobídky v České republice: IDEA pro reformu*. Národohospodářský ústav AV ČR. vvi.

Šlapák, M., Holub, M. (2013). Možnosti souběhu výplaty starobního důchodu a příjmu z výdělečné činnosti. Praha: VÚPSV.

Výběrové šetření pracovních sil

## Contact

Lenka Lakotová

University of Economics, Prague

W. Churchill Sq. 1938/4

130 67 Prague 3 – Žižkov

Czech Republic

xlakl00@vse.cz