

THE PERSPECTIVES OF AGEING, EMPLOYMENT OF ELDERS AND PENSIONS IN THE CZECH REPUBLIC

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Abstract

Ageing of population belongs to the most important and most discussed issues in the Czech Republic and other European countries. The population ageing process is unprecedented and is going to threaten all countries and therefore precautions should be taken to hamper the unfavourable trends. An increasing proportion of elderly people will cause the growth of economic burden on the pension system. The productive population will have to ensure sufficient resources for pensioners and the changes in age structure will cause disbalance between productive population earnings and post-productive population consumption. Both employment and pension policies and consequent services should be adapted to these demographic changes. More active participation of older workers is needed to keep the pension system and economic development in a balance, not only in the Czech Republic. Nowadays, the economic activity rate of people close to retirement is relatively low. The policy of preparation for population aging should focus on the support of employers' strategies towards older employees and the possibilities of the increase of their employment. The paper deals with employment and unemployment of older people and the cost of pensions of current and future pensioners. It is focuses on the Czech Republic in comparison with Central European countries.

Key words: aging of population, employment of elders, retirement pensions

JEL Code: E24, H55, J14

Introduction

The problem of population ageing and its consequences on the rate of economic activity should be studied from both demographic and economic point of view. Elder people form a significant economic power that is still increasing. It is clear that the age of retirement is still rising and it seems that this trend will not change in the near future. Appropriate determination of the retirement age is a key parameter determining sustainability of the pension system, regardless of kind of funding. The increasing share of economically inactive

people will continue to rise as well as the increase of the share of their expenditures on total households' consumption expenditures. If the ratio between economically active and inactive people should be kept at a stable level, the retirement age would have to be increased to 73 years, which is age discussed in northern Europe (Šimková, Sixta, 2013).

According to the law, retirement age has been constantly rising (MLSA, 2011) but any detailed strategy focusing on older people on the labour market is missing¹.

Denton and Spencer (2009) explore that higher economic activity rates of elder workers would have the implications for the overall size and age composition of the labour force, for the productive capacity of the economy and for incomes. The analysis of Kyzlinková and Kortusová (2011) proves the good health, psychological well-being and less social isolation of working older people compared to economically inactive older people.

There is a significant amount of studies dealing elder workers in Western societies (e.g. Hassel and Perrewe, 1995), especially focusing on the age discrimination from employers or employability of elders. Our paper illustrates the situation in Central European post-communist countries (Czech Republic, Slovakia, Hungary and Poland) from the perspective of economic activity of elders. It shows also macroeconomic impact of employment and unemployment of elders and payments of retirement pensions on the state.

1 Labour Market and Employment Policy of Elders

Nowadays, the economic activity of people about 60 years is relatively low and in higher age it decreases sharply. The economic activity rate² in age group 60–64 reached 31.4% in 2013, over 65 years only 5.2%. When comparing the rates of economic activity between V4 countries³, the situation in the Czech Republic is even better than in other countries, see Tab. 1. There is seen similarity between the Czech Republic and Slovakia for groups 55–59. According to Bujňáková and Štefáňik (2013), the economic activity rate in Slovakia in age group 55–59 will be doubled until 2025 due to prolonging retirement age. The rate of economic activity for people above 60 is rapidly decreasing. The economic activity in the last group covering people above 65 years is significant only in the Czech Republic (5.2%) and Poland (4.7%).

¹ Unfortunately, the general strategy for the fight with unemployment is missing in the EU, as well.

² It is the percentage of the population, both employed and unemployed that constitutes the manpower of the labour market.

³ The Visegrad Group (the "Visegrad Four" or "V4") reflects the efforts of the countries of the Central European region (Czech Republic, Hungary, Poland and Slovakia) to work together in a number of fields of common interest within the all-European integration. (<http://www.visegradgroup.eu/about>)

Tab.1: Economic activity rates of elders in Visegrad countries

	55 – 59				60 – 64				65 +			
	CZ	SR	PO	HU	CZ	SR	PO	HU	CZ	SR	PO	HU
2003	57.5	43.3	39.8	40.2	20.3	6.7	18.6	9.2	4.1	1.0	6.5	1.4
2008	69.8	58.9	42.7	48.9	27.2	18.1	19.6	13.4	4.5	1.6	4.8	1.9
2013	78.6	73.5	60.1	63.5	31.4	21.8	25.9	17.1	5.2	1.7	4.7	2.0

Source: Eurostat

Czech Ministry of Labour and Social Affairs prepared a reform of the pension system (MLSA, 2011). According to current plans, the age of retirement is going to be increased from 62 for men and 60 for women in 2013 to a common threshold of 67 years in 2041. When we compare estimated Czech retirement age with Germany (65 years for men and women now and 67 years in 2030), the development is still slow.

With respect to current parameters of pension system in the Czech Republic, there is minimum difference between the effective average age of retirement and the law retirement age. It is in contradiction with most EU countries, where frequent early retirements significantly reduce the real retirement age. The effective retirement age of men in the Czech Republic is higher than statutory retirement age, compared to V4 countries (see Tab. 2).

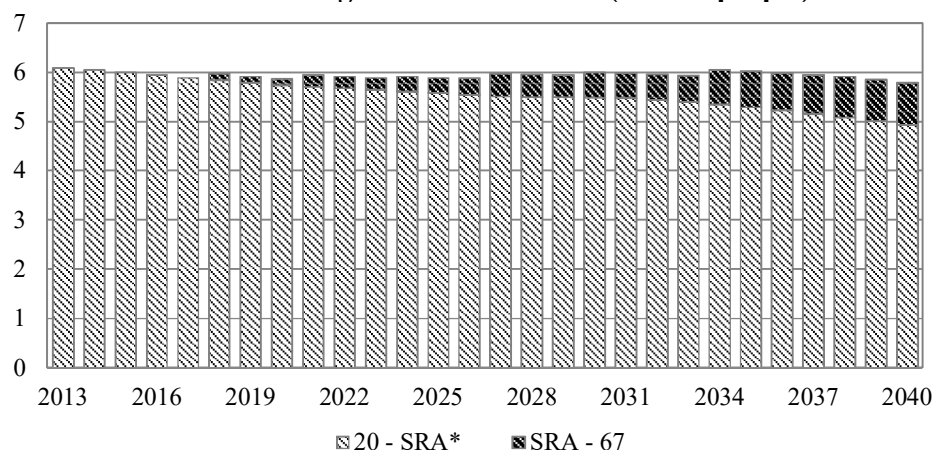
Tab.2: Average effective age of labour-market exit (2007–2012) and statutory retirement age (2012)

	Men		Women	
	Effective	Statutory	Effective	Statutory
Czech Republic	63.1	62.5	59.8	61.5
Poland	62.3	65.0	60.2	60.0
Slovakia	61.0	62.0	58.7	60.0
Hungary	60.9	63.5	59.6	63.5

Source: OECD

The current adaptation of the pension reform will cause the increase of the number of economically active people in the next 30 years, by 850 thousand people to 5.8 million in 2040. The increase of retirement age will keep the absolute number of economically active people at stable level (see Fig. 1), however it is not sufficient to keep the ratio of economically active and economically non-active people in balance. If the retirement age was increased to 73 years (according to Šimková, Sixta, 2013), the ratio would be at same level as nowadays, 6.4 million economically active people in 2040.

Fig.1: The number of people in economically active age and people in transition group between working life and retirement (million people)



Source: CZSO 2013, authors' calculations, * SRA = statutory retirement age

It is clear that some people aged 60–67 years, in transition group between working life and retirement, are not able to work for health reasons. According to Eurostat, 2.3% of men and 1.9% of women aged 55–64 years are not able to work due to bad health condition⁴. People with serious health problems are excluded from further computations; they belong to the economically non-active persons. We have to count with economically active persons only.

Tab.3: Inactive population aged 55–64 by type of disability and the main reason for not seeking employment (2011) in the Czech Republic

	Type of disability				Total people aged 55-64 years	Share of non-active people (%)
	Own illness or disability		Retired			
	in absolute numbers	in %	in absolute numbers	in %		
Men	16 769	2.3	75 906	10.5	722 212	12.8
Women	14 702	1.9	108 672	14.0	774 168	15.9
Total	31 471	2.1	184 578	12.3	1 496 380	14.4

Source: Eurostat

Economic activity of elders has to be increased if the retirement age is rising. Employment rate of people aged 55–64 years reached 51.6% in 2013 in the Czech Republic (CZSO, 2013). The aim of the employment policy of the Czech Republic and EU (the "Europe 2020") is to increase the employment rate in this age group to 55% until 2020, see

⁴ We derived that share of economic inactivity from the age group 55–64 years. This percentage is applied to the age group 60–67 years.

MLSA 2014. However, the prolonging retirement age to 67 years will cause the increase in a number of economically active elders and thus the number of both employed and unemployed people.

High unemployment rate of people in transition age group between working life and retirement causes the higher government expenditures on unemployment benefits. Unemployment rate of people aged 55–64 years reached 5.9% in 2013 in the Czech Republic. If the average monthly unemployment benefit will be paid under current conditions and unemployment rate would be constant at 5.9%⁵, government expenditures on unemployment benefits for people in transition age group would reach 5.8 billion CZK in 2040⁶ (see Tab. 4).

Tab.4: The estimation of government expenditures on unemployment benefits to people in transition group in 2040 at various unemployment rates

Unemployment rate in transition age group (%)	Government expenditures on unemployment benefits (billion CZK)
5.9	5.8
8.0	7.8
10.0	9.8

Source: CZSO 2013, MLSA, authors' calculations

2 Ageing of Population and Pensions

An increasing financial burden on the pension and health care system belong to serious consequences of the ageing of population. It is caused by an increasing disproportion between paid retirement pensions and received pension contributions. The Czech Republic has currently higher revenues from social contribution in comparison with V4 countries. Revenues from social contributions represented 8.3% of GDP in 2011. However, nowadays the expenditures on retirement pensions are more or less at the same level as revenues, they were 8.3% of GDP in 2009. Poland has the highest expenditures on retirement pensions, 11.8% of GDP. At the same time, Poland belongs to the group of population with very fast ageing. Table 6 also provides the view of old-age support ratio in V4 countries. In the Czech Republic, old-age support ratio⁷ will decrease about 1.7 between 2011 and 2040. According to the population projection (see CZSO, 2013), the development will ensure that for a one

⁵ We assume the constant unemployment rate as in 2013. Because of fluctuations in the unemployment rate in the past, especially in times of economic crisis (see Czesaný, 2014), we disregard the latest development in level of unemployment.

⁶ For comparison, the total government expenditures on unemployment benefits represented 9.65 CZK billion CZK in 2013.

⁷ The ratio of persons aged 20–64 years to persons aged more than 65 years.

person aged 20–64, 2.4 persons aged more than 65 will be. In Slovakia, this ratio will decrease to nearly 3 persons by 2040. The satisfying of needs of old persons will be there more difficult.

Tab.5: Pension contributions and retirement pensions in V4 countries

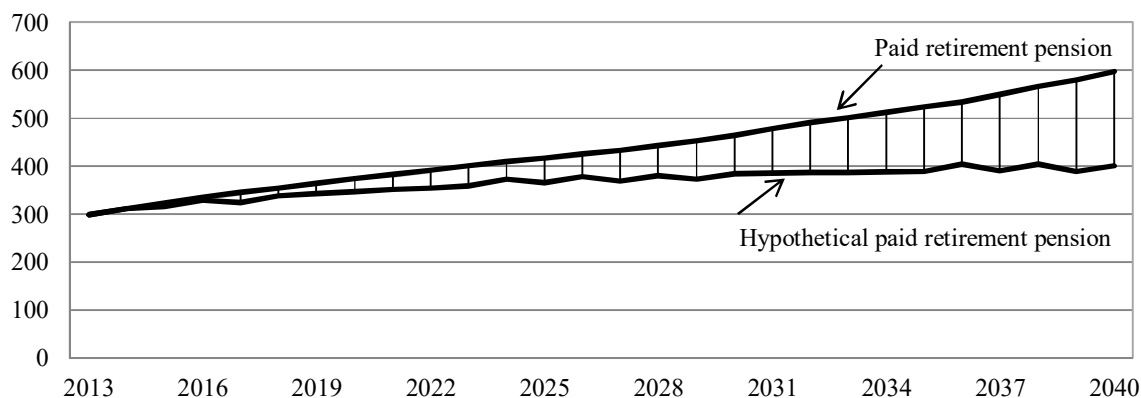
		CZ	SR	PO	HU
Pension contribution revenues (% of GDP (2011))		8.3	4.3	6.8	8.3
Public expenditures on retirement pensions (% of GDP (2009))		8.3	7.0	11.8	9.9
Old-age support ratio	2011	4.1	5.3	4.7	3.7
	2040	2.4	2.6	2.4	2.6
	Change (2011–2040)	-1.7	-2.7	-2.4	-1.2

Source: OECD 2013

One of the key questions is: will the society (including state) be able to satisfy needs of elders in the future? From statistical perspectives, some assumptions was emphasised few years ago. First of all, it started with the low possibility of comparisons of pension systems between based on benefits and contributions. From the economic point of view, changes of parameters of pension systems can ensure appropriate living conditions for selected individuals, i.e. in a relatively lower age (e.g. 60 years), the majority of population cannot be retired. In other words, people consume real goods and services and not financial. In a current pension system, prolonging of retirement age is just an effort to keep a stable ratio between paid retirement pensions and received pension contributions. However, the increase of retirement age to 67 years for both men and women in 2041 provides only partial success (see Fig. 2). The share of people in this age group (entitled to retirement pensions) will still grow. Consequently, the government expenditures will continue to increase. Without any change of the retirement age, expenditures will rise to 813 billion CZK⁸. The Czech Republic will save about 214 billion CZK when shifting retirement age to 67 and while the paid retirement pensions will reach 597 billion CZK. If the retirement age reaches 73 years, retirement pensions amount to 401 billion CZK. Furthermore, we do not consider any employees' early retirement, which can even increase this amount.

⁸We assume 2% wage growth in the future (see below).

Fig.2: Paid retirement pensions and savings from them due to the increase of retirement age (billion CZK)



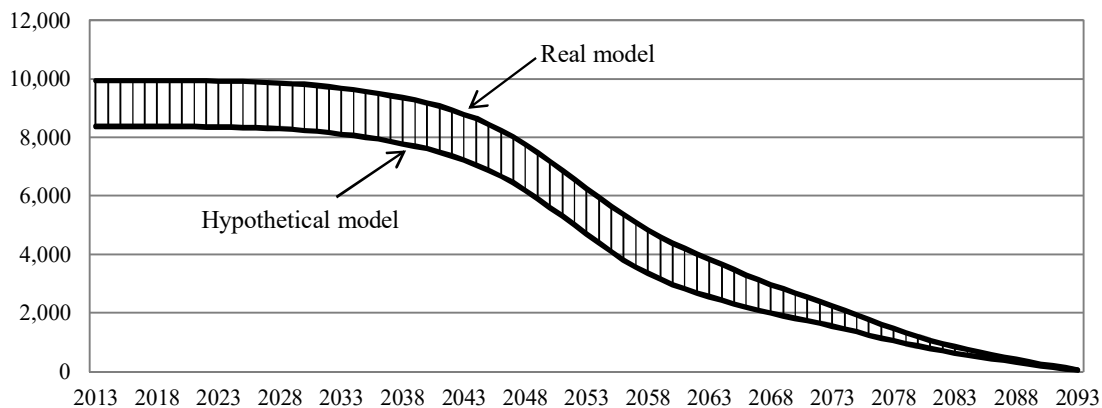
Source: CZSO 2013, MLSA 2011, authors' calculations

One statistical possibility of expressing society liabilities are the so-called pension schemes. They became a part of official macroeconomic statistics for the EU. There can be found lots of alternative estimates of pension entitlements in Technical Compilation Guide (see Eurostat, 2011). We estimated pension entitlements for the total Czech population, for both current pensioners and people older 20 years (future pensioners). Estimation of pension entitlements is based on the official projection of Czech Statistical office (see CZSO, 2013). This number is multiplied by the average monthly retirement pension. Further, pension entitlements are dependent on the assumptions about discount rate and wage growth. The discount rate is a tool to measure the actual capital costs of financing future payments. For simplicity, we used recommended the discount rate at 5% in nominal terms, see the Guide. Wage growth assumption is based on past development. Wages were rising by 5% on average in the last ten years but after the financial crisis in 2007 – 2008 the growth slowed to 2%. We assume this wage growth in the future (2%).

The development of society liabilities results from the all accrued-to-date pension liability (ADL)⁹ to current pensioners and current living persons over 20 years (future retirees). Such pension liabilities amount to 9,929 billion CZK, which is 243% of GDP in 2013. The prolongation of the statutory retirement age to 67 years in 2040 will reduce pension liabilities by 1,765 billion CZK. Accrued-to-date pension liabilities would reach 286% GDP without any pension reform. Alternative prolongation of retirement age to 73 years in 2040 would reduce the current pension liabilities by 1,564 billion CZK, to 205% of GDP. This hypothetical situation is shown by the black line in Fig. 3.

⁹ADL represents the present value of pensions to be paid in the future on the basis of accrued rights. The concept of ADL is described in Guide in a detail.

Fig.3: Total pension entitlements in 2013 to people older 20 years (billion CZK)



Source: CZSO 2013, MLSA 2011, authors' calculations

Our model is rather simple and can be also influence by other criteria like education of elders since retirement pension will also tend to be higher for individuals with higher education (Zimmermann et al., 2014). Despite the simplicity, macroeconomic impact would not differ significantly.

For comparison, according to actuarial estimates in Germany, the pension liabilities amount to 6,702 billion EUR (186,061 billion CZK), which is equivalent to 276% of GDP in 2007 (Eurostat, 2011). The pension reform in Germany approved the increasing the statutory retirement age gradually from 65 to 67 between 2011 and 2029 and this reform lowered the level of pension liabilities by 178 billion EUR (4,941 billion CZK), to 269% GDP. According to the study of Van der Wal (2014), household pension entitlements in UK were estimated to 321% of GDP in 2010. In comparison with Germany and the United Kingdom, Czech pension entitlements seem low. But they reflect also current Czech purchasing power and increasing differences between workforce and pensioners. The replacement ratio between average pension and average wage per month is 44% in the Czech Republic (in 2013), while in Germany it is 47% and in United Kingdom 50% (Destatis, 2014).

Conclusion

Since ageing is often discussed issue, it might be seen that the problem is discussed from economic and demographic approach. Unfortunately, all the discussion is focused on creation and/or destruction of pension systems. The real problem is more complicated, it is connected with the future availability of resources taking into account possible increase of productivity and demographic structures.

The parameters of the systems can be always changed in line with the opinion of the political representation but the core should remain unchanged. Elders' participation on the market seems not sufficient nowadays. The preparation of society is very weak. It ranges from the availability of social services and health improvements to the obvious discrimination of elders on the labour market. Even the Czech situation looks better than in other Central European countries, proposed reforms seem not adequate.

One issue is the macroeconomic estimation of entitlements and participation of older people on the labour market but second issue is if the increase of statutory retirement age will respect healthy life expectancy, situation on the labour market and individual conditions of people.

References

BUJŇÁKOVÁ, T. ŠTEFÁNIK, M. 2013. Projections of the Economically Active Population Based on Retirement Age Postponement Using Logit Model. In: *Journal of Economics*. Vol. 61, no. 10 (2013), p. 1011-1033.

CSÉFALVAIOVÁ, K., ŠIMKOVÁ, M., LANGHAMROVÁ, J. 2013. How high is it possible to extend the retirement age? Life expectancy vs. healthy life expectancy? In: *15th Applied Stochastic Models and Data Analysis (ASMDA 2013)*. [online] Mataró, Barcelóna. 28.06.2013 – 28.06.2013. p. 249–258. ISBN 978-618-80698-2-4.

<http://www.asmda.es/images/1Proceedings_ASMDA_2013_A-E.pdf>

CZESANÝ S. 2014. Context of Current Financial and Economic Crisis and Labour Market Developments in the Czech Republic. In: *Journal of Economics*. Vol. 62, no. 4 (2014), p. 377-393.

CZSO 2013. *Projekce obyvatelstva České republiky do roku 2100*. Český statistický úřad, Praha. <<http://www.czso.cz/csu/2013edicniplan.nsf/p/4020-13>>

DENTON F. T.D, SPENCER B. G. 2009. *Population Aging, Older Workers, and Canada's Labour Force*.

DESTATIS 2014. *Statistisches Jahrbuch 2014. Deutschland und Internationales*.

Statistisches Bundesamt, Wiesbaden 2014. ISBN: 978-3-8246-1029-7

EUROSTAT 2011. *Technical Compilation Guide for Pension Data in National Accounts*.

Eurostat Methodologies & Working papers. European Central Bank. ISBN: 978-92-79-22515-4.

- HASSELL, B.L. & PERREWE, P.L. 1995. An examination of beliefs about older workers: Do stereotypes still exist? *Journal of Organizational Behavior*. 16/1995. p. 457–68.
- KYZLINKOVÁ, R., KOTRUSOVÁ, M. 2011. Zaměstnanost starších osob na částečný úvazek: role zdravotního stavu. In: *Fórum sociální politiky*, 3/2011.
- MLSA 2011. *Důchodová reforma* [online]. Ministerstvo práce a sociálních věcí. <<http://socialniporadce.mpsv.cz/cs/164>>
- MLSA 2014. *Strategie politiky zaměstnanosti do roku 2020* [online]. Ministerstvo práce a sociálních věcí, Praha. <https://portal.mpsv.cz/sz/politikazamest/strateg_zam_2020/strategiepz2020.pdf>
- OECD 2013. *Pensions at a Glance 2013* [online]. The Organisation for Economic Co-operation and Development, Paris. <<http://www.oecd-ilibrary.org/docserver/download/8113221e.pdf?expires=1416477680&id=id&accname=guest&checksum=2434E4ECA424ECF91A34B3A6E223FADA>>
- ŠIMKOVÁ, M., SIXTA, J. 2013. Vývoj životní úrovně osob v důchodovém věku. *Acta Oeconomica Pragensia*, roč. 21, č. 3, p. 14–31. ISSN 0572-3043.
- VAN DER WAL, D. 2014. *The measurement of international pension obligations – Have we harmonised enough?* DNB Working Paper, No. 424 / May 2014. <http://www.dnb.nl/binaries/Working%20Paper%20424_tcm46-307802.pdf>
- ZIMMERMANN, P., MAZOUCH, P., TESARKOVA HULIKOVA, K. 2014. The difference in present value of retirement pensions for education groups. In: *8th International Days of Statistics and Economics*. Prague, Czech Republic. p. 1715-1721. ISBN:978-80-87990-02-5

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