Old-Age Pensions Concepts, Pillars and Regimes and Their Impact on Statutory Retirement Ages

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Abstract

Comprehensive old-age pension systems correspond to the respective welfare regimes. There is no "one fits all" solution for erstwhile and/or current old-age pensions. The former (disability and merit) old-age pension concepts were taking account of the prewar economic and social conditions and in this respect, they are instructive even today. Current pension theory and policy puts distinguishing solidary pillars from insurance pillars in the foreground. The contribution analyses application of different concepts of old-age pensions under the different times and conditions. The methodology concentrates on the comparative analysis of the retirement systems in this direction, in particular on the role of the statutory retirement ages. We find that the current Czech public old-age pensions are extremely inconsistent with any standard retirement system and/or welfare regime. Under these conditions it is even not easy to improve any single important parameter of the Czech old-age pensions for their participants.

Keywords: Old-age pensions ; Welfare regimes ; Retirement age ; Czech pension insurance ; Pension reform

JEL Classification: H55, J14

1 Introduction

The Czech Expert Commission for Pension Reform approved a "Proposal of a revision system of setting the retirement age threshold". As the control parameter, the Commission suggests introducing a percentage share of the life expectancy above retirement age threshold (RAT) in respect of the average life expectancy for people who have reached the RAT, calculated as the simple arithmetic mean of these average expectancies for men and women with two children, and setting its reference value at 25%, i.e. one quarter of their average life expectancy. The control parameter's permitted deviation from the control parameter's reference value is considered to be a deviation lower than one percentage point, i.e. the margins of tolerance consist of an open interval of 24-26% **[12]**.

Currently, there are two statutory retirement ages in the Czech "pension insurance":

- 63 years for men, 62 years and 4 months for women without children, ... 58 years and 4 months for women with 5 or more children, subject to a vesting period of 32 years (35 after 2018) this retirement age is the above-mentioned RAT
- 68 years, subject to the vesting period of 20 years (15 years without alternative periods). The question is if these retirement ages reflect any basic concept of pensions, not only because of the differentiation of mentioned lower retirement age by gender and the number of children, but mainly due to the relatively high vesting period at the higher retirement age. In fact, it is mainly the result of mechanical cuts in pension expenditures in the recent past.

The average length of drawing an ordinary old-age pension in Czechia has been growing over a long period: in 1990 it was 16 years, in 2000 20 years, 22.8 years in 2010 and 24 years (comprising 19.4 years with men and 27.5 years with women) in 2015 **[5]**. These data indicate also a significant gender inequality in the present Czech system of "pension insurance". The above-mentioned reference value 25% holds this year (2016) for men reaching the statutory retirement age 63 years.

The EU Council has repeatedly recommended that Czechia should accelerate the increase in the retirement age: "the statutory retirement age is planned to increase over the long run but too slowly in the medium term" **[7]**. The Czech government refused to do so, arguing that the current pace of increase of the retirement age corresponds to the life expectancy development; consequently, the average period spent in retirement is not higher than in most other Member States **[7]**.

The paper's objective is to confront the Czech retirement ages policy, within the framework of the Czech public pensions, with the international pension theory and policy. In the current Czech situation, it is necessary to perform a principal qualitative system analysis of old-age pension concepts, in the context of the entire pension policy or potential pension reform.

2 Material and Methods

The statutory retirement age plays the most striking role in the disability concept of oldage pensions, applied in a strict form in the original blue-collar social pension insurance. The old-age pension is understood "only" as a special case of disability pension: it was based on the presumption of disability of individuals from a given, statutory age. It applied also under the prewar Czechoslovakia: "An old-age pension is just a disability pension, only it is not necessary to examine the disability." A consistent disability pension concept also excludes overlapping pensions and earnings – if a pension beneficiary was not disabled and manifested it by a working activity, he/she automatically lost pension entitlement.

The disability pension concept also reflected an overwhelming superiority share of disability pensions in the total number of pensions. In Germany, before the World War I, at the retirement age of 70 years in the blue-collar pension ("disability") insurance, the share of disability pensions amounted to 92%; old-age pensions were paid on average for the period of about 7.5 years. The benefit ratio (average old-age pension divided by national average earnings, NAE) in 1891 amounted to 18.2% **[4]**. The old-age pension was understood as a living contribution, e.g. in a family of children at the countryside.

When introducing the German blue-collar pension insurance, the retirement age of 65 years was considered, eventually, due to the financial reasons, the age of 70 was preferred; a reduction to 65 years occurred in 1916. In our country, this insurance was introduced in 1926, disability was assumed at a blue-collar worker from the (retirement) age of 65. In 1926, the average life expectancy of a Czechoslovak man aged 65 was 11.37 years and of a woman 12.02 years.

A merit concept of the old-age pension emerged before the disability concept – in the period of commencement of the state provision of civil servants. Under this concept the old-age pension needs to be "earned": the old-age pension entitlement arises based on working for the relevant number of years or after an appropriate period of insurance. Applying "a presumption of merit" comes from the earned right to retire after a certain number of years of service. Unlike the disability concept, there is primarily no fixed retirement age, but the vesting period. This does not preclude a pension reduction after fewer years of service. From a logical point of view, this old-age pension concept represents basically transferring the principles of private insurance – working (dis)ability is irrelevant here. The merit concept is also typical for the insurance of white-collar employees.

In our country, the National Insurance Act (1948) unified pension systems and introduced a dual retirement age, depending on the length of insurance: if the vesting period reached 20 years, a person could retire at the age of 60. The retirement age of 65 years was the second alternative, conditioned by the vesting period of 5 years. From 1957 the retirement age of 55 years was introduced for workers in the first category (underground miners and pilots) and women. The world rarity is the differentiation of the female retirement age by the number of children, introduced from 1965: 57 years for childless women, 56 years for women with 1 child, 55 years for women with 2 children, 54 years for women with 3-4 children, and 53 years for women with 5 or more children.

The coexistence of two retirement ages reflects the combination of the disability and merit concepts of the retirement age in the social insurance system. A higher retirement age (e.g. 65 years) is subject to a short vesting period, which in this respect represents only a "technical minimum" for the entitlement to retire – and, therefore, it is clearly a disability concept of the old-age pension. A lower retirement age (in our country 60 years from 1948) was subject to 20 years of insurance, which in then forthcoming communist regime was not difficult to achieve – therefore, it was a commencement of the transition to the merit old-age pension concept.

Today's Czech retirement ages do not reflect a clear concept of old-age pension or a combination of them, not only because of the differentiation of lower retirement age by gender and the number of children, but due to the relatively high vesting period at a higher retirement age. Therefore, we cannot talk about the application of the disability concept and the realization of the merit concept is very complicated. This is mainly the result of mechanical cuts in pension expenditures in the recent past.

In the past 50-70 years, there have been significant changes in the advanced economies as well as in the whole society. Currently, old-age pensions are significantly higher on average and they are paid considerably longer. In relation to the retirement age, prolonging life expectancy in general and specifically of seniors is essential. The pace of ongoing prolonging life expectancy is now approximately two months every year. Today, nobody explains the existence of old-age pensions by the presumption of disability. The number of old-age pensions' beneficiaries is considerably higher than the number of disability pensions' beneficiaries. In addition, present pension systems are considerably more complicated – they have multiple pillars, generally with different retirement ages. Several authors write about two groups of primary objectives of retirement systems, instead of the disability and merit concepts of the old-age pensions; pension systems should **[1]**:

- Provide insurance against low income and wealth in old age and offer a mechanism for consumption smoothing across one's life ("piggybank" function of pensions), and
- Relieve poverty and redistribute income and wealth ("Robin Hood" function of pensions.

From a conceptual standpoint, it is optimal when these two contradictory functions of oldage pensions correspond to two different pension pillars: social (solidary) pensions and earnings-related (insurance) pensions.

In terms of terminology, the disability and merit concepts of old-age pensions are based on the history of these pensions. In contrast, the solidary and insurance concepts correspond, in terms of terminology, to the current typology of basic pension systems – in terms of construction of old-age pensions, which also includes the issue of statutory retirement age. It is useful to distinguish between basic pension welfare regimes that are also reflected in the approach to the retirement age.

3 Results and Discussion

Several different typical pension systems have been developed, which are the result of historical development of economic and social policies in the OECD countries. Several standard systems may be observed among them, which can be considered the application of basic welfare regimes, as defined by Esping-Andersen [6]. Thus, we distinguish liberal, conservative and social democratic welfare regimes. We expand the range of pension models by a neoliberal regime that has developed since the 1990s. The choice between these welfare regimes is a matter of public choice. Ideally, each pension system should be based on one of these welfare regimes.

The classical liberal regime rejects any significant state intervention in the social sphere, it includes no public pensions. The modern liberal regime already recognizes a special, tested old-age pension; which is not understood (only) as a social assistance benefit. The "Age Pension" in Australia is a model of such a means-tested old-age pension, which provides – together with means-tested supplements and rent assistance – the income exceeding the risk of poverty line used in the EU (60% of median income), even with the poorest seniors! In several developed countries, however, we can find a significant, universal (flat-rate) old-age pension, which is

considered an expression of modern liberal pension welfare regime. "Superannuation" in New Zealand, tax-financed and providing income beyond the OECD poverty line (50% of income median), is a paradigmatic flat-rate old-age pension. These concepts of solidary pensions also include a fixed, statutory retirement age. The Australian Age Pension is provided to men and women from the age of 65; from July 2017, this retirement age shall increase every 2 years by half a year up to 70 years (in 2035). The New Zealand Super has a fixed statutory retirement age of 65 years; after its increase from the previous 60 years during the period of 9 years: New Zealand consequently experienced a sharp rise in labor force participation rates among older people over the period 1991-2001 **[9]**.

Conservative pension welfare regimes represent a mix of various retirement concepts – for different social groups. They include both the civil servants' security schemes, segmented social insurance schemes, and originally voluntary occupational pensions. These schemes may reflect the specificities of the given social group, in respect of the risks covered by the social security, as well as its power (influence) status. Retirement ages in these regimes – in general – differ, already regarding different conditions of life of individual social and professional groups.

The original blue-collar disability insurance included old-age pensions based on the disability concept, with old-age pensions at a low subsistence level. This changed after World War II, e.g. in West Germany, with the pension reform from 1957, the conditions of the main blue-collar and white-collar old-age insurance schemes were unified, the basic amount of blue-collar pensions was abolished. Instead of the previous prevailing blue-collar concept of old-age pensions as a tool to remove poverty of old people, a concept of the pension as a replacement of the lifetime average (net) wage was announced, respectively, to be more precise, maintaining the previous standard of living, considering the reduced needs in the old age; all this under the assumption of a lifelong gainful activity (45 years). A link of the pension to the paid premiums was strengthened significantly, the merit/insurance concept of old-age pensions won completely also in the blue-collar old-age insurance.

The basic system of social pension insurance in Germany includes today more than 85% of gainfully employed persons. Another 9% of these people are civil servants, with their separate pension system. Some self-employed persons participate in social pension insurance, while others have special social insurance systems and for others a voluntary private Rürup pension was set up. Farmers, miners, railwaymen and sailors have separate systems. Overall, we can distinguish about 10 systems.

In numbers, the disability pension in West Germany was until 1972 the major newly granted pension, only after this year the old-age pension relatively starts dominating. The reform of 1972 introduced a "flexible" statutory retirement age of 63 years for those insured for the period of 35 years – the real effect was non-shortening the old-age pension at this (earlier) retirement; a real average retirement age subsequently dropped by more than two years **[2]**.

Currently, old-age pensions from the German social insurance are higher than full disability pensions. Generally, it applies that a full disability pension amounts "only" to 30-34% of a previous gross wage **[13]**. In a general sense, a subjective risk is the reason. A basic formula for the calculation of both pensions is the same, however in the case of a disability pension not all years up to the statutory retirement age are added, but only up to the age when early retirement is possible (currently 60 years) and yet a discount for retirement before the age of 63 years at a rate of 0.3% per month continues to be applied; the discount may not exceed a total amount of 10.8%. These discounts can be considered system reductions also regarding the durations of unemployment, considered when calculating old-age pensions.

The construction of the German social old-age insurance is now dominated by the merit/insurance concept of the old-age pension. A pillar or another component providing universal or means-tested pensions is not part of the conservative (segmented) social pension insurance. If pension from the social old-age insurance is insufficient to cover the basic living expenses of old or disabled persons, basically, these persons need to ask social assistance of a general type.

The social-democratic welfare regime is often characterized by the dominance of universal benefits. This characteristic would match the universal (flat-rate) pension as a fundamental

pillar of the social-democratic regime. That was also originally in the countries with a socialdemocratic orientation. In this sense, we could define a classic social-democratic pension regime as a model based on a (higher) flat-rate pension.

Modern social-democratic policy is to an important extent focused on the middle class. Indeed, modern social systems in developed countries, in principle, secure the needs of the poor classes of the population, especially in the old age. Differences are more in the forms and in the degree of utilization of more or less graduated social assistance benefits. If the goal of modern social-democratic policy was to provide workers with more than a basic universal old-age pension, then that could happen only in the form of earnings-related pensions. The interests of the social democracy electorate are easiest to enforce by a uniform, universal social insurance. In practice, then by increasing blue-collar pensions to the level of white-collar pensions. However, an essential component of a modern social-democratic pension regime is also a robust solidary pillar. A flat-rate pension with a "supplementary" earnings-related pension can be considered the original social-democratic pension regime.

The Swedish pension reform implemented from 1999, primarily significantly modernized universal social old-age pension insurance by the introduction of the NDC (notional defined contribution) product, supplemented by a robust "guarantee pension", increasing low NDC pensions. Modernization of this social-democratic regime consists in putting a stronger emphasis on universal social insurance, and the introduction of automatism of adapting pensions to demographic and economic development. The existence of quasi-mandatory occupational schemes reflects the situation in the labour market, which social-democratic parties need to respect. Trade unionists are predominantly their voters.

NDC is a modern system of social insurance, recommended since 2003 by the World Bank as a "core" (main pillar) of the "Pan-European pension system". Solidary pensions and private pensions are two "wings" of this system. NDC assumes the insurance technique of FDC (funded defined contribution) private systems; apart from fully funded financing. The pension saving is the first phase of this social insurance: premiums paid are deposited in a client's personal account and (collectively) valorized. The second, "pay-out" phase begins by the transformation of the client's account balance to the lifelong old-age pension, according to strict actuarial principles, taking the expected life expectancy of clients of the respective age into account. The statutory retirement age in the Swedish NDC scheme is set within the range of 61-67 years. The system is transparent and understandable, with automatic stabilizers. This insurance concept of the old-age pension can be identified as state-of-the-art. The statutory retirement age plays a secondary role in it – it is set by the interval, in principle, it is not necessary to speak about early retirement.

The "guarantee pension" is a significant complementary pension pillar in Sweden, the statutory retirement age of 65 years applies here; no early retirement is possible. This fully corresponds to the solidary concept of the old-age pension. In practice, the Swedes retire typically at the age of 65.

The neoliberal welfare regime is based on the hypothesis that the (more or less) mandatory private pension savings or insurance are significantly more favourable than the social pension insurance, already due to a general nature of private enterprise. The investment risk, in principle, is borne fully by clients. The basic pillar of mandatory private pension savings must be complemented by a public solidary pillar.

Thanks to the reform launched in 1981, Chile was an icon of the neoliberal pension regime. According to the original ideas a more significant state regulation was not assumed. The Chilean state had to correct these ideas gradually and significantly. Although the basic scenario of the neoliberal Chilean reform seemed to be relatively simple, the practice was quite different because the system is unintelligible for the clear majority of clients. Most Chileans have no idea how much they pay in commissions, how their money is invested, or how their benefits would be determined at retirement. Only one-fifth of the participants have the faintest idea about how much money they held in their accounts, even within plus or minus 20%! Financial illiteracy is a big problem, and not one confined to Chile **[10]**. However, the problems rest in the neoliberal pension welfare regime, not in "nation's failure to educate its citizenry about how their pensions

work", as Mitchel states. High fees of pension companies represent the major problem, the market mechanism had to be replaced by a robust state regulation and, finally, the state pension company is being established anyway. Former Chilean governments paid no attention to different "normal" retirement ages of men (65 years) and women (60 years) and the use of different male and female mortality tables by life insurance companies. A standard solidary pension pillar was introduced in Chile only in 2008; the retirement age here is 65 years.

The disability and merit concepts of the old-age pension originated as part of conservative pension welfare regimes. A "harder" disability concept was applied in the blue-collar insurance, with the level of old-age pensions substantially lower than it was for disability pensions. Moreover, the structure of the benefit in this case reminded more a social assistance than an earnings-related benefit of social insurance. On the contrary, the merit concept was applied in white-collar systems of social insurance in the private sector, not to mention civil servants' pensions, at which a concept of providing service income even after leaving the active service was originally applied. Those major systems of the conservative pension welfare regime gradually united after World War II, the relative amount of blue-collar pensions increased and in the major social insurance systems, the insurance principle prevailed as a basic principle.

The original disability concept of the old-age pension vanished from blue-collar insurance systems and it appeared in a new form of solidary pension in universal state pensions systems, in the form of a flat-rate and/or means-tested pensions. Solidary pensions are recommended by modern pension theory as one of the (three) basic pension pillars, as an essential complement of universal public insurance pensions (of the NDC form best). A unified statutory retirement age, without an "early" retirement is typical for the solidary pensions pillars. In contrast, an actuarial adjustment of the pension amount according to the age of the pension applicant is no problem in the insurance pensions pillar. The statutory retirement age may be defined as an interval. A fixed statutory retirement age, supplemented by the provisions on the scope and terms of early or later retirement represents an older alternative of the interval retirement age (connected with continuous adjustment of annuitization divisors to anticipated life expectancy of the individual cohorts). Either way, the statutory retirement age is the most visible parameter of the pension system and one which sets a clear signal for people in making economic decisions **[11]**. The design and concept of the retirement age is of essential significance for both pension pillars and for the pension system as a whole.

The Czech "pension insurance" is an entirely nonstandard public pension scheme. Particularly from the legal perspective, it may be viewed as social insurance; however, with predominant intra-generational redistribution or solidarity, as appropriate. The OECD once even included Czechia in the cluster of countries with the highest "progressivity index". These public pensions are fully financed from the state budget, as any other public expenditure program. The pension "insurance premiums" represent the state budget revenue, a pure tax; no legally declared link of such "insurance premiums" to budgetary expenditure for pensions exists.

The flat-rate "basic amount" of the pension is a constituent part of all Czech public pensions; it was developed through transformation of the state compensation allowance since 1996, which was introduced ("on a temporary basis") in 1990, as a social compensation for the one-off abolition of the former negative sales tax, initially for all citizens (like a small unconditional basic income). One year later, this cost-of-living allowance was restricted to children and non-active pensioners while, just a few years later, it was fully "incorporated" into universal child benefits – and into all pensions as their "basic amount". This basic amount has its separate position in the pension system (beneficiaries of all pensions get it), now it is defined as 9% of NAE and therefore indexed each year separately, too.

From the technical point of view, the Czech "basic amount" of the pension is not an analogy to the basic amounts of old-age pensions in the historical workers' social pension insurance schemes which were characterized by an overall low level of pensions. It was thus a redistribution device within the blue-collar pension system. With the increased level of blue-collar pensions, the purpose of this basic pension amount got lost. In our country, this basic amount was last in existence under the 1948 national insurance act and later it was replaced by

the introduction of bend points and reduction coefficients for higher earnings in the calculation of old-age pensions (as in US pensions).

The second component of all Czech pensions is the "percentage amount" of the pension which is, as a rule, significantly higher than the basic amount; its minimum level is 770 CZK. The percentage amount in old-age pensions is calculated from average earnings (since 1986) valorized to the present wage level and then reduced by the mentioned reduction coefficients.

"The complex construction of the pension scheme lacks transparency to a point, where it is de facto absolutely incomprehensible for intended addressees." **[3]**. The paradigm pension reform is, more than advisable. Unless the government wishes to considerably change the "progressivity" of the existing public pension pillar, it is possible to divide it into two pillars: solidarity pillar and universal social insurance, preferably in the form of NDC. Both pillars may or shall also differ in some significant parameters – such as the retirement age, among others. The role of the solidarity pillar may well be fulfilled by the tax-financed flat-rate pension, with a substantially higher rate than 9% of NAE. The alternative periods of insurance may be replaced by state or other contributions to individual accounts – within the NDC scheme. It is also possible to use special housing benefits for seniors – as significant income component for low-income seniors. The insurance contribution rate for the NDC scheme would be much less than 20% and could be paid solely by employers under the existing Czech conditions.

4 Conclusion

Both merit and disability concepts of old-age pensions reflect in different ways the role of the statutory retirement age under different welfare regimes. The fixed statutory retirement age, based on the presumption of disability, emerged in the framework of the blue-collar disability insurance system in Bismarck's Germany, and found the application in the Czechoslovak blue-collar pension insurance, too. After WWII, the disability concept changed in solidary pillars, which are typical of the liberal, original social-democratic and, ultimately, neoliberal welfare regimes and which may secure old people even at the level exceeding the EU poverty line. In contrast, the merit old-age pension concept converted in the post-war reforms fundamentally into earnings-related pension pillars, which are typical for conservative and newer social-democratic welfare regimes. For more than 10 years, the World Bank has been recommending the NDC as a major pension pillar based on the actuarial equivalence and modern pension technique, which includes the statutory retirement age defined as an interval, e.g. 61-67 years. Solidary public pensions with a fixed statutory retirement age, e.g. 65 years, are one of two supplementary pension pillars. These constructions also support the extension of seniors' working activities and the interest in higher pensions.

The strongly deformed Czech "pension insurance" is virtually to a very high degree a flatrate pension. Basically, the only intelligible parameter of our "pension insurance" is the statutory retirement age, which is still significantly differentiated by sex and number of children. The research on the retirement age is already rather complicated due to the absence of a clear concept of our single public pension pillar. Under these conditions the "Proposal of a revision system of setting the retirement age threshold", approved by the Czech Expert Commission for Pension Reform, tries to improve a detail in a non-standard old-age pension provision only.

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References

- [1] BARR, N., DIAMOND, P. 2008. *Reforming Pensions. Principles and Policy Choices.* Oxford: Oxford University Press.
- [2] BOERSCH-SUPAN, A. H., JUERGES, H. 2011. [online] *Disability, Pension Reform and Early Retirement in Germany.* NBER Working Paper No 17079. Cambridge, MA: National Bureau of Economic Research. Available on <u>http://www.nber.org/papers/w17079.pdf</u>
- [3] CONSTITUTIONAL COURT 2010. Rozhodnutí Ústavního soudu ČR: Nález ÚS 8/07. (Decision of the Constitutional Court of the Czech Republic: Decision ÚS 8/07.)
- [4] COPPOLA, M. 2014. [online] Imagine there's no pension. In Miksa, B. (Ed.): PROJECT M: 125 years: Special edition. Munich: Allianz SE, International Pensions, 28-29. Available on http://projectm-online.com/app/uploads/Bismarck-125years-of-pensions-PROJECTMspecial.pdf
- [5] ČSSZ, 2016. *Statistická ročenka z oblasti důchodového pojištění 2015*. (Statistical Yearbook of the Pension Insurance). Prague: Česká správa sociálního zabezpečení.
- [6] ESPING-ANDERSEN, G. 1990. *The Three Worlds of Welfare Capitalism.* Cambridge: Polity Press & Princeton: Princeton University Press.
- [7] EU COUNCIL 2014. [online] Council Recommendation of 8 July 2014 on the National Reform Programme 2014 of the Czech Republic and delivering a Council opinion on the Convergence Programme of the Czech Republic. Available on: http://eurlex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0729(03)&from=CS
- [8] GOVERNMENT 2015. [online] Národní program reforem České republiky. (National Reform Programme of the Czech Republic) Prague: Úřad vlády. Available on: http://www.spcr.cz/images/EU/NPR-2015_CS.pdf
- [9] HURNARD, R. 2005. [online] The effect of New Zealand Superannuation eligibility age on the labour force participation of older people. New Zealand Treasury Working Paper No 05/09. Available on: <u>http://www.treasury.govt.nz/publications/research-policy/wp/2005/05-09/twp05-09.pdf</u>
- [10] MITCHELL, O. 2015. [online] *Chile's Fabled Retirement System: Why Fix It?* Available on http://www.forbes.com/sites/pensionresearchcouncil/2015/09/29/chiles-fabled-retirement-system-why-fix-it/#1c935fe07007
- [11] OECD 2014. OECD Reviews of Pensions Systems: Ireland. Paris: OECD Publishing.
- [12] POTŮČEK, M. 2015. [online] Final Report on Activities in 2014. Expert Committee on Pension Reform. Prague: MoLSA. Available on http://www.duchodova-komise.cz/wpcontent/uploads/2015/02/Final-report-CoE-2014.pdf
- [13] RODENSTEIN, R. 2015. [online] Volle Erwerbsminderung berechnen so stellen Sie Ihren Versorgungsanspruch fest. Helpster, Ratgeberredaktion. Available on: http://www.helpster.de/volle-erwerbsminderung-berechnen-so-stellen-sie-ihrenversorgungsanspruch-fest_83881