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JIŘÍ VEČERNÍK
Institute of Sociology, Czech Academy of Sciences

Retirees Are Also Stratified: Pre-Retirement Socio-Occupational Status and the Well-Being of Older Adults in Central Europe

Abstract: Most stratification research concerns solely the economically active population and omits inactive seniors. Retirees are often treated as a separate and rather homogeneous social category. However, this approach is only partially valid. Retirees can still be differentiated in regard to their objective and subjective well-being, which is linked to their former occupations. Using large EU-SILC datasets for Central European countries, this article focuses on the effect of pre-retirement socio-occupational category on the well-being of retirees. The category is found to be an important explanatory variable after controlling for age, sex, marital status, and other characteristics. However, there are substantial differences among countries. While in Czechia, retirees are most homogeneous in regard to their objective and subjective well-being across socio-occupational categories, the differences are considerably larger in Hungary and Poland, and on a similar level as in our benchmark country, Austria.

Keywords: well-being, seniors, Central Europe, social stratification

Introduction

There are several interconnected streams of research related to the ageing of populations and the living conditions of older people. One stream considers pension systems and needed reforms, while another concerns the employment of older adults and active ageing. Yet another stream of literature explores the threat, in old age, of poverty resulting from a weakened welfare system. Such frequently treated topics as "averting the old-age crisis" (World Bank 1994), "the retention of older people in employment" (OECD 2017), and "avoiding poverty in old age" (European Commission 2018a; Eurostat 2019) are mostly elaborated on the macro-level, while the issue of the social differentiation of older people (except the poor) is generally dismissed.

Social-stratification research commonly focuses on the economically active population, given that the core indicator of such research is socio-occupational status measured in various categories. However, economically inactive older adults are also socially differentiated, usually by their educational level, income, and accustomed life-style, which are all associated with their former occupation. Their social status does not entirely vanish after they leave the labor market. Important questions thus remain unanswered. To what degree can retirees be defined by their current economic position—economic inactivity and generally lower income—and to what degree can they be defined by their "emeritus" status, that is, the social position corresponding to their education, former occupation, and related income?

When studying transitional post-communist countries, a historical perspective is important, given the discontinuity of their economic and political development. Although social security was praised as being one of the pre-eminent "socialist advantages" of communist societies, in reality, pensions were the lowest priority in state budgetary spending, which preferred the army and police, heavy industry, and cooperative agriculture. The pension system was not separated from the state budget; the contribution-benefit link was weak; and pensions were little differentiated. The gap between the average wage and pension benefits was nevertheless small: not because pensions were high but because wages were also low. Under communist regimes, research into the living conditions of retirees was undesirable and the issue of their poverty was taboo.

After 1990, data on older populations became abundant and their living conditions have been studied from many angles but rather in averages of various indicators. The aim of this paper is thus to focus on disparities, especially the social stratification of today's retirees in three transition countries (Czechia, Hungary, and Poland), and also to compare these countries with Austria, which we use as a "Western" benchmark country. This paper is organized as follows. First we provide an overview of several streams of literature on ageing and the situation of older people. Then, we raise questions about the social differentiation of retirees. We present our data sources and define the variables. In the analyses, we examine the explanatory power of retirees' pre-retirement socio-occupational category in regard to their objective and subjective well-being.

Overview of the Literature

Population ageing is a general trend across the world and is the focus of a great deal of disciplinary and interdisciplinary research. The basic characteristics of ageing and older people in Europe are described using various comparative statistical databases including demographic statistics, labor force statistics, household-condition statistics, and health statistics. The data has been summarized and analyzed in many reports, including the European Commission's series *Ageing Europe* (Eurostat 2019), the *Active Ageing Index* of the United Nations Economic Commission for Europe (UNECE 2019), and the OECD's biennial report series on pension systems in the OECD and the G20 countries, *Pensions at a Glance* (OECD 2019a).

Most data describes country averages, which provide only an outline of the societal position of older people, without much regard for the internal disparities. However, such disparities have been studied by various disciplines using national and comparative datasets: in particular, the cross-national longitudinal panel "Survey of Health, Ageing and Retirement in Europe" (SHARE), which contains individual data on the health, socio-occupational status, and social and family networks of persons aged 50+ in 27 European countries and Israel. This survey has been used in many articles and several summarizing studies (see, e.g., Sohier, Van Ootegem and Verhofstadt 2020; Börsch-Supan et al. eds. 2019). Along with other data, the SHARE survey was also used by Radl (2014) in his study of the determinants of retirement timing in contemporary Western Europe.

Economics studies regarding retirees' income are still dominated by Modigliani's (1966) life-cycle model, according to which consumption-savings decisions by households

tend to smooth across life-cycle periods of predictably higher and lower income. Since retirement is arguably among the most predictable income changes individuals encounter, their consumption should not be affected by its onset. Similarly, Friedman's (1957) permanent-income hypothesis supposes that a person's consumption is determined not only by their current income but also by their expected income in future years. Against these theoretical assumptions, the empirical evidence shows a sharp decline in consumption after retirement. This constitutes a "retirement-consumption puzzle," which has been studied by welfare economists (see, e.g., Banks, Blundell and Tanner 1998; Haider and Stephens 2007; Olafsson and Pagel 2018).

Unlike this rather theoretical approach, "real economy" studies, together with policy and sociological studies, focus on various aspects of retirees' living conditions, in particular on minimizing poverty, promoting old-age employment, and active ageing. As mentioned above, these studies are produced by various institutions, in particular by the OECD and the European Commission, but there are also other research institutes (e.g., Eurofound), and large research projects, which are often financed by various EU research programs on active and healthy ageing.

In addition to the OECD studies mentioned above, we should yet point out OECD series of national reports produced within the program *Ageing and Employment Policies* and summarized in *Working Better with Age* (OECD 2019b). The main challenges for national policies at the level of both "push" and "pull" factors are: 1) the need to reduce early retirement rates and to provide incentives for continued employment; 2) the need to invest in older workers' employability through educational measures; 3) the need to provide incentives for employers to hire or retain older workers—an issue cutting across policy fields; and 4) the need to consider aspects of diversity and inter-individual differences in employability and work orientation when designing active-ageing policies.

Another special OECD study, *Preventing Ageing Unequally* (OECD 2017), was also devoted to inequality across the life-cycle. It concludes (p. 30) that

> (I) income inequality, as measured by the Gini index, has typically been rising with age within the same cohort, peaking at about age 55–60, on average across cohorts and countries. Inequality generally then declines, dropping by about 3 percentage points at ages 75–79, which corresponds to a 10% reduction of inequality. This is consistent with the age-as-leveller hypothesis, which states that inequality falls as older adults disengage from systems which perpetuate social strata, such as the labor market, and as pension systems tend to redistribute income to poorer retirees.

The European Commission publishes *Pension Adequacy Reports* tri-annually, most recently in 2018 (European Commission 2018a). The adequacy of pension income is defined by three criteria. First, it is measured by its ability to prevent and mitigate the risk of poverty (i.e., the degree and depth of income poverty and severe material deprivation) of persons aged 65+. Second, it is measured by the degree to which pensions replace pre-retirement earned income. Third, the age at which pensions are made available and their length matters. Pension duration must be considered when assessing the sustainability of pension systems and in interaction with the income-replacement ratio and poverty-prevention capacity.

Another important framework for studies on older people is the *quality-of-life concept*: a multi-dimensional construct of various disciplines including economics, and sociological, environmental, and health studies, with the notable component of subjective well-be-

ing, which we consider in this article. However, while general quality-of-life studies have used age as a social category like gender or social class, with a few exceptions they have largely neglected retirees as a target observation group (Walker and Mollenkopf 2007: 3). Observations across the entire life cycle are often produced instead (e.g., Börsch-Supan et al. 2019). This research perspective was established by a pioneer sociology oeuvre on age stratification and has not been developed much further (White Riley, Johnson and Foner eds. 1972).

Of special research interest is the *transition from work to retirement*, including its social-structural effects and possible shift. According to Ekerdt (2010), four frontiers of the shifting boundary between work and retirement deserve research attention: the form and timing of retirement opportunities, the labor market for older workers, the quality of pensions (meaning primarily their reliability), and the experience of retired life. In general terms, he states that "(s)tatus characteristics such as gender, social class, race, and ethnicity are bases of stratification that widen or narrow opportunity at multiple points in the life course. They set chances in the encounter with social structure (e.g., in the labor market) but also mediate the effects of social structure" (Ekerdt 2010: 72).[1]

Subjective well-being is another important indicator of quality-of-life. In her doctoral thesis, Palomäki (2018) investigates the income-satisfaction paradox, saying that the old-age population used to be financially more satisfied than other groups, in spite of its lower resources. The results, collected on Finnish data and the EU-SILC across Europe, showed that retirees experience greater ease making ends meet than might be expected solely on the basis of their income. In terms of subjective well-being, the difference between "emeritus" and "retiree" status could be measured by shifting the reference category for comparison of one's own situation with others. Palomäki (2017) shows that after retirement the reference group starts to shift its attention from the general population to a greater focus on other pensioners.

Overall, problems of the pension system and pension benefits have been tackled in the huge amount of literature on *the welfare state in post-communist countries*, its arrangements, development, and problems. In spite of common features of the post-communist transition, the paths toward reforms and the development of various facets of the welfare state in individual countries have differed (Nelson, Tilly and Walker 1998; Müller 1999; Stanovnik, Stropnik and Prinz 2000; Cerami and Vanhuysse 2009; Hoff 2016). Pensioners and retirees were one component in the overall picture. For instance, in Vanhuysse's (2006) interpretation, "abnormal retirement" (early retirement and disability pensions, especially in Hungary and Poland) was one of the "divide and pacify" strategies used during the early transition period.

Regarding the changing social status of retirees across political regimes, Večerník (2009) outlined three periods. Under the communist regime, as an unproductive segment of the population they were shifted to the margins of society. The re-establishment of democratic regimes empowered pensioners as voters and political parties began to pay more attention to retirees' living conditions. Retirees have been entrapped between "left-wing"

[1] See also the special issue of the Polish journal Studia Humanistyczne AGH (Krzyżowski, Kowalik and Suwada 2014) devoted to transition into retirement in Central and Eastern Europe.

and "right-wing" solutions, with the "left" leaning more toward solidarity (making pension benefits higher and more equal), and the "right" embracing more equivalence with previous earnings (by differentiating the size of pension benefits, by combining state and private resources). However, subsequent more rapid ageing of the overall population indicates that the perspective of future retirees is gloomy.

For a stronger equivalence between earnings and pensions, Večerník uses the term "emeritus" status as a reminder of the situation in pre-war Czechoslovakia, where state employees experienced only a small deterioration of their living standard after retirement. In those times, for example, retirees from the post office and state railways, as well as high-ranking ministerial officers, proudly used their former occupational titles along with the term "in retirement." Of course, due to the extremely high relative costs of such a model, it would not be applicable to the majority of the population. Instead of the "emeritus" status, under the communist regime it became common to define retirees as a particular social category with relatively low and quite similar living standards.

The literature regarding disparities in income and living conditions within the category of retirees—not to mention its social differentiation—is scarce or entirely missing if we want to make comparisons across time and countries. Practically nothing has been written on the topic in regard to the communist period and rather little for the period after 1989. The rare literature on retirees in the communist period deals rather with pension systems (see, e.g., Svejnar 1996; Nelson, Tilly, and Walker (eds.) 1998). The comparative empirical surveys conducted in CE post-communist countries in the early 1990s contain valuable information about pre-1989 and post-1989 income and well-being in connection with economic activity, but they have some deficiencies.[2] There is also a lack of comparative data on the situation of retirees in the 1990s.

More data became available by the mid-2000s. From Eurostat database which uses, in particular, EU-SILC surveys launched in 2005 and from the OECD database which started to appear in the 2010s, we can refer to some indicators concerning income gap between the older people and prime-age population, and concerning income inequality within the older population itself.

Eurostat indicators report on the replacement ratio for pensions, that is, the level of pension benefits after retirement as a percentage of pre-retirement earnings. In 2018, it amounted to 0.5 in Czechia and about 0.6 in other CE countries.[3] For indicating income inequality among the 65+ population, two measures are used: the quintile ratio, relating household income of the top and bottom 20%, and the share of older people with an income greater or equal to 150% of median income. Using the quintile ratio, all CE countries are located below the EU-28 average, with Slovakia and Czechia having the smallest dispersion of income (2.3 and 2.5 respectively), Hungary and Poland having a higher dispersion (3.4), and Austria the highest (3.8). Using the share of older people having income greater or equal to 150% of median income, the ranking of countries is the same, with Czechia dis-

[2] The large samples of the survey Social Stratification in Eastern Europe after 1989 (SSEE) collected in Czechia, Hungary, Poland, and Slovakia in 1993–1994 were limited to respondents under the age of 70. In the survey *Social Consequences of Transition (SOCO)* collected Czechia, Hungary, Poland and Slovakia in 1995, the observation unit was the household and the samples contained only 1,000 households per country.

[3] See Eurostat table [ilc_pnp3].

playing the lowest inequality (the share is 4.5%) and Austria, together with Hungary, the highest (14%).[4]

OECD indicators regarding age-specific income inequality include the Gini coefficient and P90/P10 and P50/P10 ratios of the distribution of equivalized disposable household income of the population 65+. Here we refer to data from 2016. Measured by the Gini coefficient, income inequality among the older population in all CE countries is below the OECD average. The lowest income inequality was in Czechia and Slovakia (0.19 and 0.20 respectively), and then in Hungary and Poland (0.25 and 0.26 respectively), which was on the same level as in Austria (0.26). In comparison with the total population, the lowest relative inequality of the population 65+ is in Czechia and Slovakia (73% and 84% respectively) and on a higher level in all other CE countries (about 90%).[5]

Income indicators are telling but insufficient for the description and explanation of well-being and other aspects of the social status of older people and differentiation between them. While the assumption that retirees are socially differentiated would appear to be evident, to the best of our knowledge—as we observed above in considering the relevant literature—there has been no comparative study of the internal differentiation of retirees. The task is thus to contribute to producing, on the basis of the available data, a comparative picture of retirees' characteristics in CE countries from the perspective of social stratification.

Research Question and Data Sources

We were interested in looking beyond the country averages, into individual differences among retirees within CE countries. The obvious starting point was that retirees do not fall into one homogeneous category but are differentiated by various characteristics mostly related to their former occupations. Thus, we can describe the social stratification of retirees, even though it is, as expected, much less pronounced than the social stratification of the economically active population. Our research question therefore concerned the degree to which a person's occupational status while engaged in economic activity is reflected in the person's well-being after leaving the labor market.

We targeted retirees in three CE transition countries, Czechia, Hungary, and Poland, using the comparative statistical survey EU-SILC. While we mentioned Slovakia above, we were unable to include it into analysis because the ISCO variable was missing in the 2018 EU-SILC dataset. For comparison with the "West," we included Austria, a neighboring country which managed to escape Soviet rule and was thus able to develop a successful market economy, a democratic political system, and a well-functioning corporatist welfare state. In all the countries considered, pensions are provided—mostly if not exclusively—by a public tier based on pay-as-you-go schemes with a defined benefit, except in Poland, where a notional defined-contribution scheme has been applied since 1996 (OECD 2019a: chapter 4).[6]

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[4] See Eurostat tables [ilc_di20] and [ilc_pns4].

[5] See OECD 2019a, Table 7.4. The P90/P10 ratio compares the income at the 90th percentile to the one at the 10th percentile while the P50/P10 uses accordingly the 50th percentile in the numerator.

[6] The notional defined contribution scheme is "… pay-as-you-go public schemes with individual accounts that apply a notional rate of return to contributions made … The accounts are "notional" in that the balances exist

Since Max Weber, social stratification has probably been the most frequently addressed topic in sociology, and occupational structure plays a dominant role in that stratification. The relevant literature is immense in regard to theoretical background, methodology, and empirics (see, e.g., Hatt 1950; Blau and Duncan 1967; Parkin 1971; Lambert and Griffiths 2018). "The occupational information that is routinely provided in large-scale social surveys is a key resource for studying contemporary social life, and occupation-based indicators are central to sociological investigations" (Connelly, Gayle and Lambert 2016: 1). Attention is given to various classifications and occupation-based measures of social status (Lambert and Bihagen 2014; Connelly, Gayle and Lambert 2016).

Given that occupation is key for defining individuals' status in society, such a definition, strictly speaking, concerns only the economically active population. Although we can rightly assume that the effect of a person's occupation extends into the post-active age as well, retirees have not been included in stratification research. The inequality of their well-being has been examined mostly in connection with poverty. The main reason is indubitably the sense of a conceptual "inappropriateness": how can the occupational aspect be reasonably applied to a part of the population that is not working? But another reason is the lack of representative data on retirees, with information about their last occupation before retirement.

There is one outstanding source of information about retirees in sufficiently large samples across EU countries. The data in the European Union Statistics on Income and Living Conditions (EU-SILC) has been collected since 2005 by Eurostat from unified national surveys of households in EU and EFTA countries. EU-SILC country datasets are based on a nationally representative probability sample of the population residing in private households. All private households and all persons aged 16 and over within each household are eligible. Information is collected at the household level and at the personal level. Usually (and in all CE countries) the variables are collected for all the individuals in each sample household (Eurostat 2012).

To each of the annual surveys, a specific module is attached, containing information and declared attitudes about a specific problem area surveyed at the personal level. Here we use the *Module on Well-Being*, whose data was collected in 2018. Together with the information contained in the main annual surveys regarding household and personal characteristics, we selected four indicators of objective and subjective well-being to test the effect of a person's former socio-occupational category (the individual's last occupation while economically active), indicated by the one-digit code of the International Standard Classification of Occupations (ISCO), and distinguished between retirees who were employees and those who were self-employed.

Specifically, the explained (dependent) variables of inactive older adults in this study include:

Objective well-being, measured by personal and household income (available in annual EU-SILC surveys). Personal income from all sources measured as a metric variable

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only on the books of the managing institution. At retirement, the accumulated notional capital is converted into a monthly pension using a formula based on life expectancy" (OECD 2019a: 132).

(logarithm). Household disposable income adjusted to an equivalence scale according to the EU formula measured as a metric variable (logarithm).[7]

Subjective well-being, measured by personal satisfaction with financial situation and ability to make ends meet in the household (available in the 2018 Module on well-being). Satisfaction with one's financial situation measured on a scale from 0 = "not at all satisfied" to 10 = "completely satisfied," taken as an ordinal scale. Ability to make ends meet measured on a scale from 1 = "with great difficulty" to 6 = "very easily," taken as an ordinal scale.

The observation unit is a retiree: a non-working person aged 60+ with non-zero income. We thus do not follow the accustomed definition of older people applied in international 65+ statistics, because most workers in this region are already inactive at 60+, particularly women (between 65% and 80% of women aged 60+ in CE countries). The 60–64 age category is used as a reference in the regression analyses. The majority of retirees are former employees, with smaller groups including former self-employed workers who had employees and self-employed workers who did not have employees. Poland includes "family workers," who were mostly involved in farming. Since they declared non-zero income (on average not far from the income of self-employed workers who did not have employees), "family workers" were kept in the analyses. We included the household information of all persons.

Explanatory (independent) variables include:

In Tables 1–4:

Sex: Male = 1, Female = 0.

Age categories: 60–64, 65–69, 70–74, 75–79, 80+ (dummy variables).

Marital status (also serves as a proxy for living in a single/couple household): Married or in cohabitation = 1, Other = 0.

ISCO—nine main socio-occupational categories: 1. Managers 2. Professionals, 3. Technicians and associate professionals, 4. Clerical support workers, 5. Service and sales workers, 6. Skilled agricultural, forestry and fishery workers, 7. Craft and related trades workers, 8. Plant and machine operators, and assemblers, 9. Elementary occupations. The tenth category—Armed forces occupations—was not included. For better fit with the social hierarchy in tables, we use the ISCO-6 as the last category and shifted the categories ISCO-7 and 8 above.

Employment status in former employment: 1. Self-employed with employees, 2. Self-employed without employees, 3. Employee, 4. Family worker. For analysis, a dummy variable was constructed so that 1, 2 and 4 = 1 and 2 = 0.

In Tables 3–4 in addition (included in the tables presented or just commented upon):

Housing occupancy status—the original variable has 4 categories: 1. Owner, 2. Owner paying mortgage, 3. Tenant or subtenant paying rent at prevailing or market rate,

[7] Of personal income, 95–97% is pension benefits from public funds (mainly old-age plus survival and disability pensions). Pensions from private funds are zero or negligible in CE countries, except Austria, where they amount to 1.5% of the personal income of the relevant population. The figure for Austria seems to be rather underestimated: the OECD database reports for Austria that a 5.6% share of the income of older people comes from private or occupational funds. For household income, Eurostat variable HX090 Equivalized disposable income is used.

3. Accommodation is rented at a reduced rate, 4. Accommodation is provided free. A dummy variable was constructed so that 1, 2 and 4 = 1, other = 0.

General health—the original variable has 5 categories: 1. Very good, 2. Good, 3. Fair, 4. Bad, 5. Very bad. For analysis, a dummy variable was constructed so that 1–3 = 1 and 4–5 = 0.

Degree of urbanization—the original variable has 3 categories: 1. Towns and suburbs, 2. Rural areas, 3. Urban areas (dummy variables were constructed for all three categories).

Education—distinguishing primary, secondary, and tertiary levels.

As the continuous dependent variables were regressed, whether present (personal and household income) or assumed (financial satisfaction and making ends meet), OLS regression models were applied.

Analysis of Objective and Subjective Well-Being

For this section, we regressed the indicators of retirees' objective and subjective well-being by socio-occupational categories, along with various control variables. For socio-occupational categories, we used the ISCO one-digit code. The reason we did not use one of the categorizations usually applied in social stratification analyses (EGP, ESEC) is that the categories of entrepreneurs and the self-employed are too small, especially in retiree age groups (see the list of variables and their values in Appendix 1A and B).

The composition of national samples according to socio-occupational categories differs rather on the lower ladders of the occupational hierarchy, specifically in regard to the traditional working class (ISCO8—plant and machine operators, and assemblers), which has a higher share in Czechia and Hungary and a lower share in Poland and Austria, in regard to farmers (ISCO6—skilled agricultural, forestry, and fishery workers) which have the highest share in Poland, and in regard to the lowest category of workers (ISCO9—elementary occupations), which have the highest share in Hungary. In regard to previously self-employed retirees, Czechia and Hungary, with low shares, contrast with Poland and Austria, with more than double the share (mostly former farmers in Poland and rather former service workers and freelancers in Austria).

First we will analyze the retirees' characteristics in terms of *personal and household income* in 2018. The disparities between the CE countries and Austria are huge, but there are also significant differences among the three transition countries depending on the indicator we use. According to the personal pensions of retirees 60+, Czechia (after adjusting to purchasing power parity) is at 42% of the Austrian level, Hungary at 36%, and Poland at 43% (see Appendix 1C). According to the equivalized disposable household income of the population 65+, Czechia is at 45% of the Austrian level, Hungary at 36%, and Poland at 46%. Only in Czechia is the relative income position of older people considerably worse than that of the 18–64 population.[8]

[8] In equivalized disposable household income of the population aged 18–64, Czechia is at 59% of the Austrian level, Hungary at 37%, Poland at 49%, and Slovakia at 40%. See Eurostat table "Mean and median income by age and sex"—EU-SILC and ECHP surveys [ilc_di03].

Table 1

Personal income (ln) of retirees 60+ in 2018 (OLS regression coefficients)

	Czechia		Hungary		Poland		Austria	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	8.56	***	8.08	***	8.13	***	9.50	***
MALE	0.18	***	0.20	***	0.26	***	0.45	***
MARRIED	–0.10	***	–0.10	***	–0.05	***	–0.21	***
AGE65_69	–0.01		0.04	*	0.06	***	0.01	
AGE70_74	–0.03	***	0.02		0.02		0.02	
AGE75_79	–0.04	***	0.06	*	0.18	***	0.06	
AGE80_	–0.02	**	0.10	***	0.22	***	0.11	***
ISCO1	0.22	***	0.50	***	0.39	***	0.46	***
ISCO2	0.21	***	0.58	***	0.42	***	0.65	***
ISCO3	0.17	***	0.31	***	0.26	***	0.38	***
ISCO4	0.13	***	0.29	***	0.19	***	0.35	***
ISCO5	0.05	***	0.10	***	0.07	***	0.10	**
ISCO7	0.05	***	0.10	***	0.07	***	0.14	***
ISCO8	0.06	***	0.07	***	0.16	***	0.11	**
ISCO6	0.06	**	–0.10	*	–0.12	***	–0.03	
SELF	–0.14	***	–0.21	***	–0.13	***	–0.16	***
R2	*0.18*		*0.21*		*0.28*		*0.28*	

Source: EU-SILC 2018, own computation.

Reference categories: Female, Else than married (never married, separated, widowed, divorced), Age 60–64, Primary education, ISCO9 = elementary occupations.

A person's pre-retirement socio-occupational category significantly affects his or her income situation in retirement in all CE countries (Table 1). This is predictable, considering the dependence of the amount of pension benefits on income earned during employment, which is again closely associated with occupation. However, the linkage between earnings and pension is not straightforward, because it is reduced by various national-specific reduction formulae. The EU-SILC data thus enables us to compare the resulting outcome of the two opposite effects: occupational differences in earnings (during the relevant period for setting pension rates) and the effect of the reduction formula (applied in individual countries for calculation of pension benefits).

The specific effect of pre-retirement socio-occupational category on a retiree's pension is derived from the overall inequality in retirees' pensions, although not directly. The gaps between ISCO1 and ISCO6 or between ISCO2 and ISCO6 categories are similar in Hungary, Poland, and Austria (where income inequality among retirees is close to the EU-27 average), but much smaller in Czechia (where income inequality is lower). In any case, the statistical significance of almost all ISCO categories is high in all CE countries. Self-employment during the pre-retirement period affects pensions negatively in all CE countries, and most of all in Hungary. In regard to control variables, gender inequality in pensions is by far the highest in Austria and lowest in Czechia. Except Poland, age has little effect on pensions, even if it is statistically significant.

The effect of socio-occupational categories on retirees' household income is only somewhat less pronounced but no less statistically significant (Table 2). The difference between

Table 2

Equivalent household income (ln) of retirees 60+ in 2018 (OLS regression coefficients)

	Czechia		Hungary		Poland		Austria	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	8.85	***	8.33	***	8.48	***	9.79	***
MALE	0.04	***	0.04	**	0.05	***	–0.02	
MARRIED	0.16	***	0.17	***	0.20	***	0.22	***
AGE65_69	–0.07	***	0.00		–0.01		0.01	
AGE70_74	–0.12	***	–0.04		–0.06	***	–0.02	
AGE75_79	–0.15	***	–0.01		0.05	*	0.01	
AGE80_	–0.16	***	0.06	*	0.07	***	0.01	
ISCO1	0.13	***	0.40	***	0.28	***	0.36	***
ISCO2	0.16	***	0.47	***	0.31	***	0.45	***
ISCO3	0.08	***	0.27	***	0.21	***	0.24	***
ISCO4	0.07	***	0.21	***	0.12	***	0.27	***
ISCO5	0.02		0.08	***	0.07	***	0.07	
ISCO7	0.01		0.06	***	0.03	*	0.10	
ISCO8	0.01		0.06	***	0.05	*	0.05	
ISCO6	0.05	*	–0.03		–0.11	***	0.03	
SELF	0.01		–0.02		–0.05		0.02	
R2	*0.14*		*0.17*		*0.18*		*0.09*	

Source: EU-SILC 2018, own computation.

Reference categories: Female, Else than married (never married, separated, widowed, divorced), Age 60–64, ISCO9 = elementary occupations, Employee.

employees and the self-employed is fairly irrelevant in this indicator. Apparently, the income packaging in households smoothes the income disparities between men and women and emphasizes the advantage of living in couples. However, the effect of belonging to higher socio-occupational categories before retirement exceeds the effect of living in a single-person versus two-person household in all CE countries except Czechia. This especially concerns the ISCO categories 1–3 in Poland and 1–4 in Hungary and Austria. In Czechia, the effects of living as a couple go beyond all other effects and, furthermore, inequality of income by age is quite pronounced in contrast with other CE countries.

When reading the Tables 1 and 2 horizontally, we can compare the income position of individual ISCO categories across countries, after controlling for demographic characteristics. For instance, the relative income status of the four highest categories is considerably lower in Czechia than in the other three CE countries. The lowest ISCO6 categories fare much worse in Hungary and Poland than in Czechia and Austria. Taking absolute levels into account as well (after adjusting pensions according to purchasing power parity), Czech retirees belonging to the highest ISCO categories are worse off in regard to their pensions than their Hungarian (ISCO1–2) and Polish (ISCO 1–3) counterparts. In contrast, the low average level of pensions in Hungary, in combination with the steep distribution of pensions across socio-occupational categories, makes the absolute position of the lowest categories even worse (see Appendix 1C).

Second, we analyzed retirees' characteristics in regard to *subjective well-being* in 2018. In fact, the indicators we used—financial satisfaction at the personal level and making ends

meet at the household level—were not purely subjective since they comprised a larger set of objective circumstances: not solely income but also payments and expenditures, financial liabilities and housing expenses. Since national economic levels serve as a reference context outlining consumer ambitions, the disparities among CE countries are much smaller than those based on income variables, even after taking into consideration purchasing power parity. According to the indicator of financial satisfaction, Czechia is at 88% of the Austrian level, Poland at 81%, and Hungary at 75%. According to the indicator of making ends meet, these relations are only slightly lower than the indicator of financial satisfaction.

Table 3

Financial satisfaction of retirees 60+ in 2018 (OLS regression coefficients)

	Czechia		Hungary		Poland		Austria	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	4.40	***	3.62	***	3.37	***	5.43	***
MALE	0.69	***	0.59	***	0.82	***	0.38	***
MARRIED	0.20	***	0.02		0.45	***	0.02	
AGE65_69	0.01		0.10	***	–0.10		0.09	
AGE70_74	0.05		0.13	*	–0.34	***	0.10	
AGE75_79	0.12		0.36	***	0.01		0.26	
AGE80_	0.54	***	0.77	***	0.48	***	0.28	*
ISCO1	0.79	***	1.37	***	1.22	***	0.81	***
ISCO2	0.87	***	1.20	***	1.07	***	1.21	***
ISCO3	0.68	***	0.99	***	0.94	***	0.79	***
ISCO4	0.51	***	0.51	***	0.48	***	0.66	***
ISCO5	0.23		0.29	***	0.20	*	0.16	
ISCO7	0.32		–0.07		0.15		0.27	
ISCO8	0.22		0.41	***	0.39	***	0.17	
ISCO6	0.19		0.30	***	0.17	*	–0.15	
SELF	0.14		–0.10		–0.16	*	–0.07	
TENURE	0.22		0.05		0.70	***	0.31	***
HEALTH	1.15	***	1.10	***	1.24	***	1.12	***
R2	*0.10*		*0.14*		*0.16*		*0.11*	

Source: EU-SILC 2018, own computation.

Reference categories: Female, Else than married (never married, separated, widowed, divorced), Age 60–64, ISCO9 = elementary occupations, Employee, Tenant or subtenant paying rent at prevailing or market rate or accommodation rented at a reduced rate, Health bad or very bad.

In regard to determining people's personal financial satisfaction by socio-occupational categories, the effect is weaker than that of personal and household income (Table 3). The effect is highly statistically significant for ISCO 1–4 categories in all CE countries. Disparities between the ISCO1/ISCO2 and ISCO6 categories are quite small in Czechia but large in all three other countries. This also means that, in relative terms, the subjectively expressed financial position of the highest categories is best in Hungary and next best in Poland. Pre-retirement self-employment status contributes positively to financial satisfaction only in Czechia but is not statistically significant in any CE country.

Table 4

Make ends meet of retirees 60+ in 2018 (OLS regression coefficients)

	Czechia		Hungary		Poland		Austria	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	2,40	***	2,07	***	2,02	***	3,01	***
MALE	0,10	***	0,10	***	0,17	***	0,09	*
MARRIED	0,45	***	0,26	***	0,32	***	0,25	***
AGE65_69	–0,04		0,04		0,08	***	0,04	
AGE70_74	0,04		0,06		–0,05		0,04	
AGE75_79	0,06		0,16	***	0,12	***	0,14	*
AGE80_	0,22	***	0,30	***	0,21	***	0,23	***
ISCO1	0,43	***	0,77	***	0,63	***	0,57	***
ISCO2	0,39	***	0,68	***	0,62	***	0,79	***
ISCO3	0,33	***	0,42	***	0,51	***	0,57	***
ISCO4	0,22	***	0,22	***	0,24	***	0,50	***
ISCO5	0,13	*	0,13	***	0,19	***	0,21	***
ISCO7	0,28	***	–0,12		0,19	***	0,45	***
ISCO8	0,12	*	0,12	*	0,17	***	0,16	
ISCO6	0,11	*	0,05		0,21	***	0,15	
SELF	0,17	***	0,00		–0,09		–0,15	*
TENURE	0,09	***	0,01		0,38	***	0,21	***
HEALTH	0,50	***	0,44	***	0,38	***	0,47	***
R2	*0,12*		*0,15*		*0,12*		*0,10*	

Source: EU-SILC 2018, own computation.

Reference categories: Female, Else than married (never married, separated, widowed, divorced), Age 60–64, ISCO9 = elementary occupations, Employee, Tenant or subtenant paying rent at prevailing or market rate or accommodation rented at a reduced rate, Health bad or very bad.

* P ≤ 0.05
** P ≤ 0.01
*** P ≤ 0.001

Even more than personal financial satisfaction, subjective well-being on the household level as indicated by the question on making ends meet is telling (Table 4). Unlike personal financial ease, not only the higher socio-occupational categories (ISCO 1–4) but also some lower categories have a significant effect on household budget management. In Czechia and Poland, the relevant coefficients are statistically significant for all socio-occupational categories and in Austria they are relevant up to ISCO7. Pre-retirement self-employment status has an important positive effect in Czechia but—surprisingly—a negative effect in Austria. In sum, the relative position of individual categories diverges considerably less among CE countries than in the case of financial satisfaction.

Of the control variables, gender scores in both aspects of subjective well-being, as in objective indicators, goes to the advantage of men. Persons living in couples feel financially better off since they can share expenses and benefit from all the economic advantages of a common household. Age categories affect well-being inconsistently, so that, for example, in Czechia they determined objective indicators of well-being but not subjective ones, while the opposite is rather true for Hungary. The other control variable is housing-occupancy status. Owner occupancy or accommodation provided free contributes significantly

to making end meet in CE countries, with the exception of Hungary. Finally, good or fair health contributes importantly to subjective well-being: 1.1–1.2 points to financial satisfaction on an 11-point scale and about 0.5 points to making ends meet on a 6-point scale. Health problems might become a major burden on a family budget with the costs of drug purchases, dietary food, and other health-related expenses.

In additional analyses of the two subjective indicators of well-being, we also controlled the effect of socio-occupational categories by other variables (not presented in tables). First, education is highly correlated with socio-occupational categories. While coefficients of those categories were reduced after introduction of educational dummies (primary-secondary-tertiary), their statistical significance remained intact. The second most correlated variable is household income. Although income is of utmost importance for subjective well-being, the effect of ISCO categories persists even after income is included in the analysis, at least for the four highest categories. The reason may be twofold. Either these categories dispose of other important resources besides their current income (savings or income from property) or they are able to manage their family budget better—or both. The third most correlated variable is the type of locality, on the expectation that the somewhat lower cost of living in a town or village will enhance subjective well-being, in comparison with living in a city. However, the effect of the relevant dummies (city-town-village) was not validated.

The Social Status of Retirees—a Contracted Stratification

Transition from activity to retirement represents a substantial but not complete break in a person's and family's life cycle. Though paid economic activity may end, most of an individual's characteristics remain and so does their well-being and social status. The prerequisite is an advanced and well-supplied pension system. This is the case of Austria, our benchmark country, where retirees keep a great deal of their former social status and well-being. The problem for transition CE countries is that their "pension funds" (which are essentially fictitious in the pay-as-you-go systems), are not sufficiently fed to fulfill the criteria of pension adequacy—first and foremost the creation of enough space between the minimum acceptable pension level and the average pension, which would allow a merit-based differentiation of benefits.

Differentiation among retirees results from two social-policy pressures. On the one hand, there is the effort to maintain the link between pre-retirement and post-retirement income (thus allowing retirees to keep their "emeritus" status). On the other hand, there is the effort to redistribute resources in favor of low-income retirees via setting minimum benefits or by increasing pensions by absolute amounts instead of relative proportions. Both these measures lead to the equalization of benefits (thus treating retirees rather as one homogeneous "social group"). The higher the purchasing power of the average pension in a country, the easier it is to reconcile both objectives and to provide decent and, at the same time, properly differentiated pensions. However, there is no simple association between the absolute level of pensions, their replacement rate, and the inequality of retirees' income and well-being.

Individual CE countries cope with the problem of insufficient "pension funds" differently, if at all. The real picture does not accord with the above-mentioned assumptions. Although in comparison with Austria, incomes of the population in general and the pension benefits of retirees in particular in CE transition countries are on a lower level in real purchasing power terms, they still differ. In Czechia, the incomes of the population are higher than in Hungary and Poland, and pension benefits are higher in Czechia and Poland than in Hungary. We would expect that where incomes and pensions are lower, the replacement rate would also be lower and inequality smaller. But in fact pension inequality is minor in Czechia and larger in Hungary and Poland. Thus not only Austrian retirees, but also retirees in the latter two countries are closer to the "emeritus" status, while in Czechia retirees are closer to the "social group" status.

For observing disparities among retirees in individual CE countries we applied a stratification prism, that is, socio-occupational categories as measured by ISCO one-digit codes together with the distinction between former employees and the formerly self-employed. Through this prism, we observe relative disparities in objective and subjective well-being among those mainly hierarchically ordered categories. In analyses based on comparative data of EU-SILC surveys, the demographic traits and various other characteristics of persons and households were controlled. Our comparison involved Czechia, Hungary, and Poland, with Austria as a benchmark country. Slovakia was omitted in the analyses because of the missing ISCO variable in its dataset. However, as evidenced by the available descriptive data, Slovakia is quite similar to Czechia due to the legacy of the two countries' having been one state up to 1992.

The resulting picture of inequalities in well-being is an outcome of several effects involving the general situation of inequality in individual countries and the pension system. As regression analyses on well-being indicators show, the position of socio-occupational categories across countries is basically consistent across personal and household, objective and subjective indicators. The position of individuals in retirement should in any case reflect the stratification profile of the economically active population, within a more or less reduced range. The more pronounced income inequalities of the economically active population in Hungary and Poland, and the lesser inequalities in Czechia and Slovakia, transfer into analogous inequalities among the post-active populations, although not uniformly.

In Czechia, the gap between pre-retirement earnings and pensions in retirement is the largest, and the replacement ratio is the smallest. Pension benefits are the most equalized and, consequently, disparities in well-being indicators across socio-occupational categories are also the smallest. The position of the highest categories (at least ISCO 1 and 2) is lower here than in Hungary and Poland not only relatively but also in real terms of the purchasing power of Czech pensions. The lower categories are better off, in both relative and absolute terms. In spite of the fact that in Czechia the relative income position of older people is considerably worse than that of the economically active population, the well-being of Czech retirees is perceived to be the best among CE transition countries while the dispersion among socio-occupational categories is again the smallest.

The two other transition countries differ. The purchasing power of pensions in Poland is on average stronger than in Hungary, but the replacement ratio and inequality are about the same in both countries. They are mostly similar in objective indicators of well-being

according to socio-occupational categories—except for the better relative pensions of persons belonging to the top two categories in Hungary (ISCO 1 and 2) and the better pensions of the traditional working class (ISCO8) and self-employed in Poland. In regard to subjective indicators of well-being, the discrepancy between personal financial satisfaction and the ability of Polish farm households to make ends meet is apparent: while the pensions are perceived as low, household purchasing power is considered to be quite high.

In cross-national, European, or larger comparisons, the Central European transition countries are often treated as a quite homogeneous region. In spite of their similarity, each of these countries is in many aspects a separate case. This is valid for every area, including for the levels and disparities in the well-being of retirees, which mostly derive from the "general landscape" of inequality in individual countries. While in all CE countries, well-being in retirement is significantly affected by socio-occupational status during the period of economic activity, this effect is weakest in Czechia. Retirees there are more homogeneous in terms of their objective and subjective well-being, implying that they have the "social group" status. Unlike Czechia, in Hungary and Poland the disparities among socio-occupational categories are considerably larger and are on a similar level as in our benchmark country Austria, thus suggesting that retirees in those countries have the "emeritus" status.

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Biographical Note: Jiří Večerník, Ph.D., associate professor. Since 1990, he is a senior researcher at the Institute of Sociology of the Czech Academy of Sciences, the Department of Economic Sociology (head until 2019). Between 1991 and 1993, he was the editor-in-chief of the Czech Sociological Review and he launched its English edition which he edited again in 2002–2009. He cooperated with ILO, OECD and the European Commission. He published in the areas of labour market and social policies, income inequalities and poverty, subjective well-being and value orientations. He also wrote or edited several comprehensive books about Czech society after 1990: *Markets and People: The Czech Reform Experience in a Comparative Perspective* (1996), *Ten Years of Rebuilding Capitalism: Czech Society after 1989* (1999), *Czech Society in the 2000s: A Report on Socio-Economic Policies and Structures* (2009), *Work, Values, Well-being: Czech Reality in a European Context* (2016, in Czech).

ORCID: http://orcid.org/0000-0002-0535-3118

E-mail: jiri.vecernik@soc.cas.cz

Appendix 1. Variables in analyses

A. Description of variables

Label	*Description*
LNINC	Personal income from all sources measured as a metric variable (logarithm)
LNINCQ	Household disposable income adjusted to an equivalence scale according to the EU method (logarithm)
FIN_SATIS	Satisfaction with person's financial situation from 0 = 'not at all satisfied' to 10 = 'completely satisfied'
MAKE_ENDS	Ability to make ends meet from 1 = 'with great difficulty' to 6 = 'very easily'
MALE	Dummy: male = 1, female = 0
MARRIED	Dummy: Married or in cohabitation = 1, else = 0
AGE60_64	Reference
AGE65_69	Dummy
AGE70_74	Dummy
AGE75_79	Dummy
AGE80_	Dummy
ISCO1	Dummy: Managers
ISCO2	Dummy: Professionals
ISCO3	Dummy: Technicians and associate professionals
ISCO4	Dummy: Clerical support workers
ISCO5	Dummy: Service and sales workers
ISCO7	Dummy: Craft and related trades workers
ISCO8	Dummy: Plant and machine operators, and assemblers
ISCO6	Dummy: Skilled agricultural, forestry and fishery workers
ISCO9	Dummy: Elementary occupations (reference)
SELF	Dummy: Self-employed with employees and self-employed without employees = 1
TENURE	Dummy: Owner or free accommodation = 1
HEALTH	Dummy: Very good, good or fair health = 1

B. Mean values of variables (non-active retirees 60+)

	Czechia	Hungary	Poland	Austria
LNINC	8.64	8.32	8.39	9.83
LNINCQ	8.91	8.57	8.71	10.11
FIN_SATIS	6.46	5.45	6.00	7.35
MAKE_ENDS	3.44	2.87	3.23	4.14
MALE	0.40	0.37	0.38	0.45
MARRIED	0.59	0.45	0.61	0.57
AGE60_64	0.17	0.17	0.21	0.23
AGE65_69	0.28	0.29	0.29	0.23
AGE70_74	0.24	0.20	0.18	0.19
AGE75_79	0.16	0.17	0.15	0.17
AGE80_	0.17	0.17	0.17	0.17
ISCO1	0.04	0.05	0.07	0.09
ISCO2	0.11	0.11	0.12	0.11
ISCO3	0.14	0.12	0.12	0.15
ISCO4	0.12	0.11	0.08	0.09
ISCO5	0.14	0.12	0.10	0.15
ISCO7	0.17	0.15	0.15	0.13
ISCO8	0.15	0.14	0.10	0.07
ISCO6	0.03	0.05	0.16	0.10
ISCO9	0.10	0.15	0.09	0.10
SELF	0.06	0.07	0.19	0.17
TENURE	0.82	0.94	0.88	0.60
HEALTH	0.80	0.72	0.72	0.84
N	*4486*	*4769*	*7083*	*2828*

Source: EU-SILC 2018, own computation.

C. Personal pensions and equivalent household incomes in % of Austrian level (non-active retirees 60+)

ISCO code	Personal pensions				Equivalent household income			
	Czechia	Hungary	Poland	Austria	Czechia	Hungary	Poland	Austria
1	35.9	38.0	43.0	100.0	40.4	39.7	44.7	100.0
2	31.4	35.6	37.1	100.0	37.1	37.2	42.3	100.0
3	40.5	35.1	42.3	100.0	41.8	36.2	46.8	100.0
4	40.9	37.5	41.9	100.0	43.4	35.9	44.3	100.0
5	50.4	40.0	48.7	100.0	50.8	39.1	52.0	100.0
6	59.8	39.0	44.8	100.0	50.5	34.8	41.9	100.0
7	44.0	35.4	43.9	100.0	49.9	37.9	50.3	100.0
8	45.7	34.9	50.7	100.0	52.4	39.2	54.8	100.0
9	55.7	40.4	51.2	100.0	54.8	38.0	53.5	100.0
Total	42.4	36.1	42.9	100.0	45.0	36.4	46.2	100.0
Self-employed	46.4	35.8	38.1	100.0	50.0	38.3	39.7	100.0

Source: EU-SILC 2018, own computation.

The procedure: Pensions and income (in EUR yearly) were computed from EU-SILC datasets, then adjusted to purchasing power parity (taken from Eurostat database) and then related to Austrian levels.