

MASARYK UNIVERSITY  
Faculty of Social Studies  
Department of Sociology

Mgr. Martin Lakomý

**Role dynamics of older adults and their consequences**

Dissertation thesis

Supervisor: prof. Martin Kreidl, Ph.D.

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# Chapter 1: Introduction

## Demographic development in Europe

The whole world currently faces unprecedented demographic changes, which include raising longevity, dropping fertility levels, and subsequent changes in age structure. These changes are most profound in Europe as a frontrunner of demographic and cultural development in many areas (Sobotka 2008a; Timonen 2008). Since the central claim of modernization theory says that “economic, cultural, and political changes that go together in coherent patterns are changing the world in predictable ways” (Inglehart 1997: 7), demographic development of European societies also shapes many types of societal changes. Many of contemporary economic, cultural, political and other changes connected to demographic development are outlined in theory of Second Demographic Transition (van de Kaa 1997; Lesthaeghe 2010, 2011; Sobotka 2008b) and related theory of value change towards post-materialism (Inglehart 1977, 1990). However, many practical implications of demographic changes and newly developed discourses have not been conclusively determined. The thesis aims to examine these practical implications in area of ageing and changing roles in later life.

All demographic changes in Europe most often labelled as population ageing, demographically speaking, are a consequence of two interrelated processes – declining mortality followed by even more profound decline of fertility (Sobotka 2008a; Timonen 2008). One seems to be a consequence of the other – people invest more resources to fewer children under condition of their almost certain survival (Becker and Lewis 1974; Brand and Davis 2011). Reduced mortality and increasing longevity are one of the largest achievements of human kind (Timonen 2008), but resulting ageing of population is often interpreted as a large challenge or even a thread (Grundy 2008; Sobotka 2008a). The risk of economic, welfare, and societal unsustainability is not formulated only in academic literature, but also in

popularizing book *The empty cradle: how falling birth rates threaten world prosperity* by Phillip Longman. In contrast, Phil Mullan presents the same topic from different perspective in *The imaginary time bomb: why an ageing population is not a social problem* (Grundy 2008). In any case, population ageing in Europe brings many practical changes in workforce and welfare systems (Ebbinghaus 2012b; Maltby et al. 2017), family structure, and availability of informal care (Bengtson and Martin 2001; Grundy 2008), but also changes of values and perceptions of ageing itself (Antonucci, Jackson, and Biggs 2007; Bengtson 2001; Foster and Walker 2015; Hyde et al. 2003).

Importance of population ageing of European societies has been also reflected by many initiatives at a level of EU politics and political initiatives. EU labelled year 1993 as European Year of Older People and Solidarity between Generations (McInerney 1993) and year 2012 as European Year for Active Ageing and Solidarity between Generations (EU Council 2012) to raise an issue of societal ageing and its sustainability. These initiatives contained many projects and innovations supporting active and healthy life style among older adults at supranational, national, regional, and local level (Commission of the European Communities 2002; EU Council 2012; European Commission 2013; European Union 2012). The main aims of the years devoted to ageing were “mobilising the full potential of people of all ages” (Commission of the European Communities 2002: 5), respectively “Enhancing and highlighting the useful contributions that older people make to society and economy, improving their independence, as well as strengthening solidarity between generations” (EU Council 2012: 2). Apart from these initiatives, the principle of solidarity between generations is even a part of Lisbon Treaty (EEPA 2013). Finally, EU addresses population ageing in cooperation with other supranational organizations, such as World Health Organization (WHO 2002, 2012) or United Nations (UN 2002; UNECE 2013). For instance, Madrid International Plan of Action on Ageing has been developed by UN in cooperation with

European Commission (Commission of the European Communities 2002; UN 2002). Nevertheless, this dissertation focuses solely on European context.

Population ageing in Europe can be illustrated by a relative increase of older age groups or an increase of dependency ratio. Population over 65 years of age comprised about 19 percent of EU population in 2016, while the same indicator is projected to 29 percent in 2050. The group of people over 80 years would grow even faster – from 5.4 percent to 12.7 between 2016 and 2050 (Eurostat 2017b). Finally, the number of centenarians worldwide is even projected to increase from 167,000 in 2000 to 3.3 million in 2050 (Timonen 2008). The so-called Old-age Dependency Ratio is defined by the number of people 65+ divided by the number of people 18-65. The value of this indicator is expected to double until half of the century – today the income of one pensioner depend on four people in supposedly productive age, while it would be 1:2 in 2050 (Eurostat 2017a; Harper 2014).

## **Concept and policy of active ageing**

### *Perspectives on ageing and inception of active ageing paradigm*

Understanding of later life reflected in theories of ageing also substantially developed over the recent decades. The first major gerontological theory formulated by Cumming and Henry (1961) was called Theory of disengagement. This theory was driven by empirical findings and stated that “normal ageing is a mutual withdrawal or ‘disengagement’ between the ageing person and others in the social system” (Cumming 1963: 377). The theory of disengagement considered abandonment of social roles and relationships as functional for both older people and society – older adults adapt to their limited capacity and prepare for the end of their life this way, while the society provides productive roles to younger generations (Cumming 1963; Cumming and Henry 1961). These statements provoked immediate criticism and started debates about various ways of ageing that have not been finished yet.

Robert Havighurst (1961) reacted on the formulation of disengagement theory by an essay on what does it mean to age successfully. He reflects the opposite views of successful ageing from the position of disengagement theory and newly formulated activity theory. The activity theory extends previous findings that some roles are reduced and some intensified in later life (Havighurst 1954) and define successful ageing as “the maintenance as far and as long as possible of the activities and attitudes of middle age”, while the disengagement theory defined successful ageing as “the acceptance and the desire for a process of disengagement from active life” (Havighurst 1961: 8). “The Activity Theory is favoured by most of the practical workers in the field of gerontology” (Havighurst 1961: 8), as maintaining or replacing roles makes later life enjoyable. This theory refers to empirical reality, but focuses more on ageing that is beneficial than ageing that is more prevalent. The notion of gerontology as a science “helping people to enjoy life” (Havighurst 1961: 8) contains normativity important for further discussion.

The activity theory as more positive alternative received the higher attention of academics and practitioners, even though it has not retained its dominant position and lead to several reformulations. Conceptual frameworks and approaches to social policy inspired by the activity theory contain positive, healthy, productive, optimal, successful, and active ageing among others. Each of these approaches has its specifics, but they are all intertwined using activity, health, resources, and quality of life as either determinants or outcomes (Cosco, Stephan, and Brayne 2013; Foster and Walker 2015; Timonen 2016). All of them also prescribe right or beneficial ways of ageing well. As (Timonen 2016: 87) puts it, “all these concepts attempt to *model* ageing as a phenomenon and a stage of life that is perceived to be in need of direction, reshaping and control”.

Successful ageing and active ageing are most influential concepts of all approaches modelling ageing, though each of them is applied in different context – successful ageing



have become dominant in the US, while active ageing approach formerly developed by WHO has been an official approach to ageing in EU (Foster and Walker 2015; Paúl, Ribeiro, and Teixeira 2012; Timonen 2016).

Successful ageing formulated by Rowe and Kahn (1987) was a reaction to notions of ageing as a process connected to losses and health problems. In opposition to this, successful ageing reflects the heterogeneity of older adults and their agency in achieving more positive outcomes. Model of successful ageing contains three components of this concept: “low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life” (Rowe and Kahn 1997: 433) – the last item is composed of intergenerational relationships and productive activities. This definition of the model has been holding and receiving institutional support until the present, though the authors reflect a large amount of critique the model has received (Rowe and Kahn 2015). Rowe and Kahn (2015: 593) perceive the critique in calling for “greater consideration of subjective components (...), other expansions to the model, (...and) a more inclusive definition of successful aging”. While the authors this that successful ageing can oppose the criticism or incorporate it to the model, some authors believe the drawbacks of this concept are too serious (Bowling 2007; Foster and Walker 2015; Holstein and Minkler 2003; Liang and Luo 2012; Timonen 2016; Walker 2005a). This critique addresses normativity, individualism, and ethnocentrism of this concept, its objective conceptualization based on outcomes beyond individual control, or ignorance towards a context in terms of “gender, class, ethnicity, neighbourhood and other social location” (Timonen 2016: 17).

Active ageing is a proclaimed successor of successful ageing, which “presents a more holistic, life course–oriented approach than successful aging” (Foster and Walker 2015b: 83) now representing “a multi-layered policy-oriented model with a strong life course perspective” (Zaidi and Howse 2017: 7). The active ageing approach focuses both on the

promotion of employment in the third age and health and community participation prioritized in the fourth age (Walker 2005a). From this point of view, active ageing is much more inclusive and sensitive to diverse needs of the older adults, though this potential of active ageing is usually not successfully translated to particular social policies (Foster and Walker 2015). In contrast, Timonen (2016) claims that active ageing is successful ageing translated into the policy sphere and share the same drawbacks and unintended consequences – in other words, these approaches are just two examples of model ageing. Therefore, active ageing and successful ageing are similar approaches, but the first has much more profound implications in the ageing experience of European older adults.

#### *Development of active ageing and activities promoted by this approach*

Active ageing as an approach addressing ageing has been developed within cooperation of United Nations (UN 2002; UNECE 2013), World Health Organization (WHO 1999, 2002), and EU (Commission of the European Communities 2002; EU Council 2012; European Commission 2013) – all these supranational bodies develop active ageing framework as their official approach to population ageing. The EU have gone further in cross-national measurement (Eurobarometer 2012; European Commission 2013; Zaidi 2015) and implementation (Ebbinghaus 2012b; EU Council 2012; Foster and Walker 2015) of active ageing practices since it possesses a real executive power amid the continent with the oldest demographic structure.

Active ageing in EU consists of three main pillars – employment, social participation, and independent living – as defined in the Guiding Principles for Active Ageing and Solidarity between Generations (EU Council 2012) or other official documents (AGE platform Europe 2011; European Commission 2013; European Union 2012; Eurostat 2012). The pillar of employment contains support of older people in labour market via increasing the retirement age, fighting age discrimination, and providing education and training. This

domain of active ageing aiming for economic sustainability of population ageing is often criticized for domination over the whole discourse (Boudiny 2013; Foster and Walker 2015). The pillar of social participation consists of various activities (volunteering, lifelong learning, caregiving, political participation, and networking generally) and the pillar of independent living of health, autonomy, consumption, housing, transportation, and house-friendly environment (AGE platform Europe 2011; EU Council 2012; Eurostat 2012). The EU supports these three dimensions of active ageing by various means at different geographical levels of the country members (AGE platform Europe 2011; European Union 2012; Zaidi and Howse 2017).

The EU regularly evaluates a fulfilment of the active ageing goals and the recent progress in its countries via Active Ageing Index (AAI). The AAI, which is one of the outcomes of the European Year for Active Ageing and Solidarity between Generations in 2012, consists of quantitative indicators from several sources representing main three domains and subdomains of active ageing (European Commission 2013; Zaidi 2015). Hence, the overview of the AAI can show which specific outcomes at the country-level are desirable amid this social policy approach. The indicators are employment levels for four older age groups in the area of employment, volunteering, two types of caregiving, and political participation representing social participation, and physical exercise, lifelong learning, access to health services and independent living, and physical and financial security in a group of independent living. Additionally, the AAI has a fourth dimension – capacity and enabling environment – indicating a capacity to age actively through indicators of life expectancy, well-being, use of ICT, social connectedness, or educational attainment (European Commission 2013).

The AAI is used extensively in areas of research and social policy (Hess, Nauman, and Steinkopf 2017; Perek-Białas et al. 2017; Zaidi 2015; Zaidi and Howse 2017), while its

content is criticized from several points of view. The critique addresses methodological and statistical issues of AAI, its applicability to regional levels, fit to specific subpopulations, its mix of conditions and outcomes, desirability of and potential conflict between some promoted activities, and its too narrow conceptualization (Dykstra and Fleischmann 2016; Karpinska and Dykstra 2014; Petrová Kafková 2016a; São José et al. 2017; Zaidi and Howse 2017). Irrespective of validity and usefulness of the AAI, this tool shows what outcomes of active ageing are assessed at the national level. The most emphasized is employment, caregiving, and financial security (each represented by more indicators) followed by several activities, individual outcomes, and environmental factors (European Commission 2013). This composition implies that social policies should to these outcomes in any country-specific ways, while the availability of these outcomes or their contribution to older adults is often not considered. Nevertheless, these are some of the drawbacks of the active ageing approach generally, which are reflected after the presentation of its main statements.

The main claims of the active ageing concept overlap with assumptions of activity theory and successful ageing approach. The basic statement is that creating opportunities for continuing engagement and preventing dependence in later life is beneficial both for older adults and the society. Older people can improve health and quality of life through keeping themselves active, while the society profit from their paid and unpaid work in a form of an additional workforce and lower burden for social and health systems (Foster and Walker 2015; Walker and Maltby 2012; Zaidi and Howse 2017). The beneficial effect of activities in later life is not doubted within the active ageing paradigm, while an agreement upon promoted activities does not exist (Timonen 2016). On the one hand, more subjectivist approach is presented by Bowling (2008, 2009) or Walker and Maltby (2012: S126) stating “that ‘activity’ should comprise all meaningful pursuits that contribute to the well-being of the individual concerned, his or her family, local community or society at large”, which is

repeated by Foster and Walker (2015). On the other hand, other resources (some of them more connected to social policy) elaborated earlier provide a list of supported activities and Foster and Walker (2015: 87) themselves write about “obligations to take advantage of education and training opportunities and, wherever possible, to remain active in other ways”. Therefore, this dissertation works with a set of activities supported rhetorically and via various programmes, initiatives, and legislation, which has a real impact on the citizens of the EU.

### *Prevalence of activities in the data*

A description of the prevalence of activities among older adults in respective countries provides an important outlook to the topic. How often are activities supported by active ageing performed within the target population? The question should be answered on the same data used by other parts of the dissertation. Thus, the following tables use data from wave 6 of the Survey of Health, Ageing and Retirement in Europe (SHARE) collected in 2015 (Börsch-Supan et al. 2013; Börsch-Supan 2017e) – data source described more in the methodological chapter. The sample from wave 6 consists of 65,036 respondents from 17 countries over 50 years of age with the mean age 68.0 and median age 67 years and prevalence of women with a ratio 55:45. The mean age moderately varies across countries from 65.4 (Croatia) and 70.4 (Spain) due to differences in demographic structure and sampling methods. Thus, the figures provide more general tendencies than precise information for the whole populations – in fact, this is true for the whole dissertation. Countries in all figures are sorted into four regions used later in the thesis. These regions are Nordic countries (Denmark and Sweden), Western Europe (Austria, Belgium, France, Germany, Luxembourg, and Switzerland), Southern Europe (Greece, Italy, Portugal, and Spain), and Post-communist countries (Croatia, Czechia, Estonia, Poland, and Slovenia). The regions are most of all defined geographically, but also based on a typology of European welfare regimes (Ebbinghaus 2012b, 2012a; Esping-Andersen 1990; Fenger 2007) and empirical similarities and differences in contextual factors

and individual behaviours of older adults (Albertini and Kohli 2013; Borges Neves et al. 2013; Gierveld and Tesch-Römer 2012; Hank 2011; Hofäcker 2015; Igel and Szydlik 2011; Di Novi, Jacobs, and Migheli 2015).

All following statistics use sample weights correcting for both nonresponse factor and sampling procedure, and thus the results can be generalized to regional and national populations. Figure 1 shows the share of respondents participating in a labour market. Orange colour illustrates that older adults work most often in Nordic countries (34 percent of people over 50 years of age), while their unemployment is the lowest in the same region (about 2 percent from all of them, respectively 5 percent those economically active). While the ratio of permanently sick or disabled is similar across regions, the category of homemakers is by far most prevalent (20 percent compared to 0, 8, and 3 percent) in Southern Europe with more traditional gender norms. The differences in current working status across European regions could be attributed to pension systems, economic situation, the health status of older adults, values connected to work or ageism on the labour market (Di Gessa and Grundy 2013; Hofäcker 2015; Neuberger and Haberkern 2014; Petrová Kafková and Rabušic 2010; Radl 2013). In any case, these differences are nonnegligible.

**Figure 1: Distribution of population 50+ by current working status in four European regions**



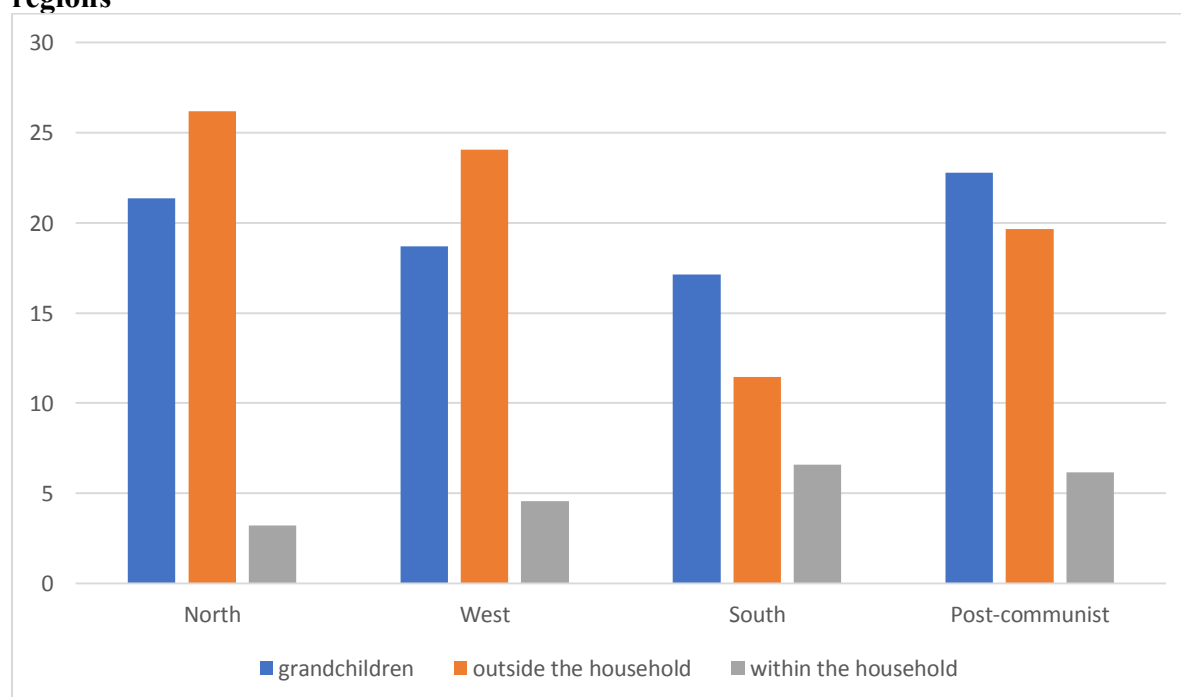
*Source:* These calculations use data from SHARE, wave 6.

Figure 2 displays prevalence of three types of care provided by older adults. The first type is caregiving for grandchildren without a presence of parents provided monthly or more often. This indicator varies between 17 and 23 percent among regions for all older adults including those without children or grandchildren and is slightly higher in Nordic and Post-communist countries. The second type is care provided monthly to any person outside household except grandchildren. This type of caregiving is more prevalent in Northern and Western Europe. The third type of care is a more personal daily care for a person within a household – typically spouse or parent with limitations in daily life. Caregiving within a household is in contrast more prevalent in Southern Europe and Post-communist counties, though this prevalence is only between 3 and 7 percent.

Overall, the patterns of care provision across Europe seems inconsistent, but they are congruent with the previous research usually comparing Northern and Southern Europe (Albertini and Kohli 2013; Albertini, Kohli, and Vogel 2007; Hank 2011; Hank and Buber 2009; Igel et al. 2009; Igel and Szydlik 2011). On the one hand, Southern Europe evinces low prevalence of occasional care and high prevalence of regular care due to strong familial norms

and intergenerational transfers based on co-residence, which lead to intensive interactions based on functional dependence without motivating towards more casual and voluntary interactions. On the other hand, strong welfare states and weak familial norms in Nordic countries reduce a burden of caregiving and create an environment enabling occasional interactions including a provision of care. Western countries are somewhere between these ideal types and a situation in Post-communist countries has not been examined much so far (Albertini and Kohli 2013; Albertini et al. 2007; Hank 2011; Hank and Buber 2009; Igel et al. 2009; Igel and Szydlik 2011). Nevertheless, Figure 2 suggests that Western Europe is closer to Nordic countries and Post-communist countries to Southern Europe in this regard.

**Figure 2: Prevalence of three types of care provided by population 50+ in four European regions**



*Source:* These calculations use data from SHARE, wave 6.

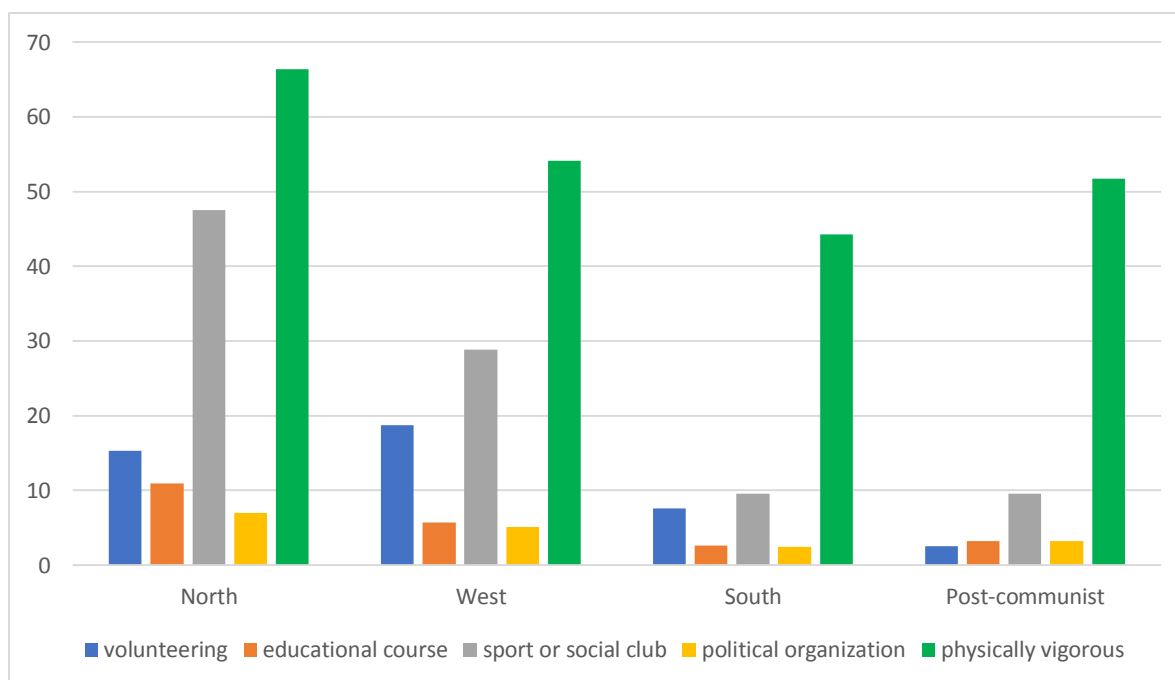
The active ageing policy supports also other activities than work and caregiving. This concerns most of all physical and social activities; the prevalence of the most important examples is displayed in Figure 3. SHARE contains questions ‘Which of the activities (...) have you done in the last twelve months?’ and ‘How often do you engage in vigorous



physical activity, such as sports, heavy housework, or a job that involves physical labour?'. The question on the activities is followed by the items 'Done voluntary or charity work', 'Attended an educational or training course', 'Gone to a sport, social or other kind of club', and 'Taken part in a political or community-related organization', which are the only options present in all waves. Figure 3 contains only activities performed at least monthly as positive answers. Clearly, vigorous physical activity is the most prevalent of the five activities among older adults, as it includes demanding sports, labour, and housework. Prevalence of participation in sport or social club together with volunteering are also not negligible, while taking educational courses and active political participation are rare.

Still, Figure 3 contains large regional differences. On the one hand, Nordic countries have the highest participation in most of the activities, followed by Western Europe. On the other hand, the participation in Southern Europe and Post-communist countries is lower in all included indicators except rather high physical activity in the Post-communist region, which could still contain physical labour or housework rather than some enjoyable activity. The differences striking especially for some activities like participation in sport or social club, which is performed by 48 percent older people from Nordic countries, 29 percent from Western Europe, and equally 10 percent from Southern Europe and Post-communist countries. These statistics are congruent with the highest AAI scores in Nordic countries, followed by Western-European countries and then by members South-Central-East macro-region (European Commission 2013; Zaidi 2015). In summary, the results indicate a) substantial regional differences across Europe and b) similarities between two pairs of regions, which may form some North-West/South-East axis.

**Figure 3: Prevalence of five activities promoted by the active ageing approach in population 50+ within four European regions**



*Source:* These calculations use data from SHARE, wave 6.

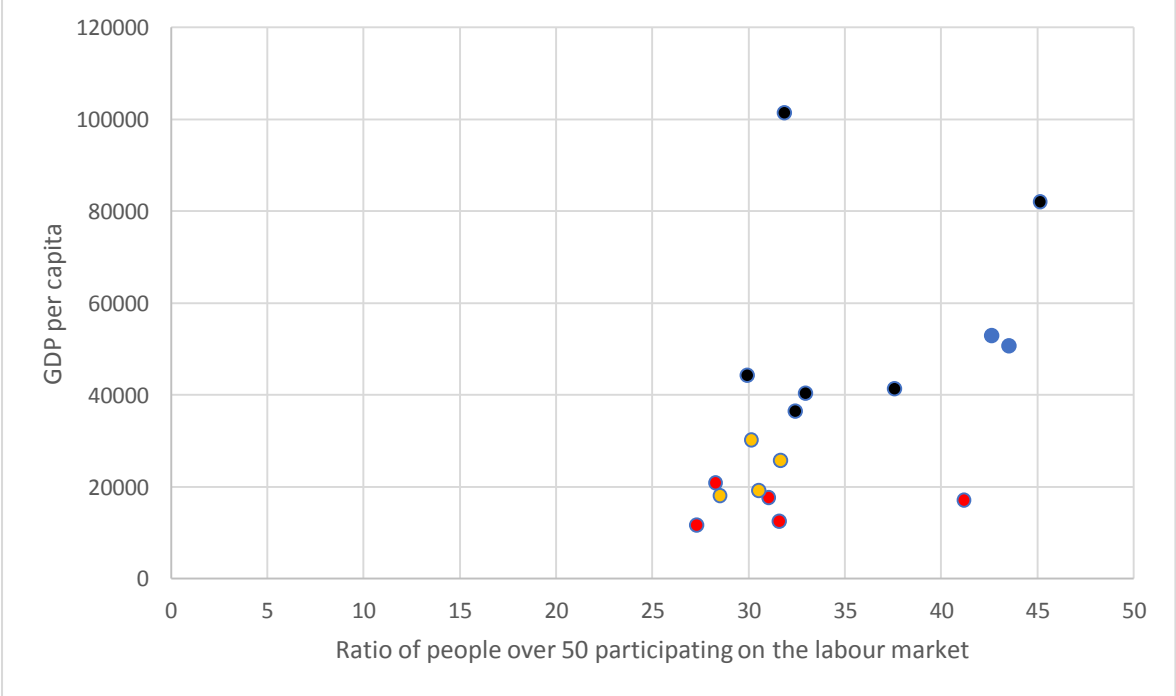
The differences in heterogeneous European context are easier to describe than explain. This part of the thesis does not follow such difficult goal; it rather aims to present some examples of relationships between contextual factors and aggregated individual behaviour in the forms of later life activities. Some of the relationships are then more elaborated in empirical chapters of the thesis.

Economic situation and development provides an important context for many areas of human existence (Alvard 2004; Inglehart 1977; Marx and Engels 1952) and the process of ageing is not an exception (Ebbinghaus 2012b; Hofäcker 2015; Phillips, Ajrouch, and Hillcoat-Nallétamby 2010; Timonen et al. 2013; Zaidi and Howse 2017). GDP per capita or another indicator of economic situation can be connected to many aspects of living in a given country and its connection to the situation on the labour market seems straightforward. Figure 4 shows this relationship on the country level using GDP per capita in dollars from 2015 (World Bank 2018) and the same indicator of the current job situation as Figure 1.

The relationship in Figure 4 is slightly positive with all Southern-European and Post-communist countries having lower GDP per capita and lower participation of older adults on

the labour market (about 30 percent). The only outlier is Slovenia with substantially higher labour force participation. The pattern is not strong, as we would expect much higher labour force participation in the richest country Luxemburg or in relative rich Austria. Nevetherless, the country group across regions in quite a predictable pattern.

**Figure 4: The relationship between GDP per capita and participation of older adults on the labour market for 17 European countries**



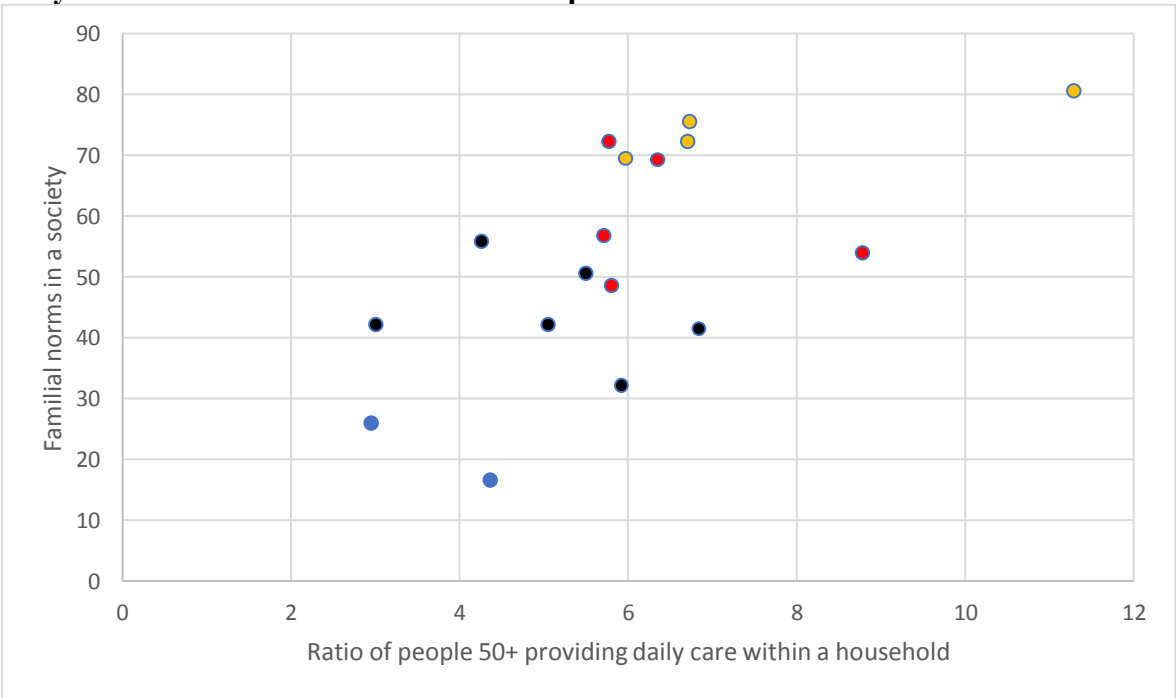
Source: These calculations use data from SHARE, wave 6.

Figure 5 elaborates the impact of the strength of familial norms in a society examined in a previous research (Kalmijn 2010; Neuberger and Haberkern 2014; Di Novi et al. 2015) on the provision of daily care within a household. This description shows if a bit higher tendency of Southern and Post-communist regions towards the daily care from Figure 2 holds on the country-level and if it is connected to some social norms labelled as familial.

The index of familialism was constructed from two items used in the last wave of European Values Study in 2008. Respondents evaluated items ‘Parents’ duty is to do their best for their children even at the expense of their own well-being’ and ‘Adult children have the duty to provide long-term care for their parents even at the expense of their own well-

being'. Figure 5 displays proportion of adults in each country, who agree to both of these statements. The strongest familial norms seem to be in Portugal (81 percent) and Italy (76 percent) with Denmark (17 percent) and Sweden (26 percent) at the opposite end of the distribution. The level of familialism expectedly relates to the provision of daily care within a household and four European regions are distinguishable in the two-dimensional space with overlap of Southern Europe and Post-communist countries.

**Figure 5: The relationship between the strength of familial norms and prevalence of daily care within a household for 17 European countries**

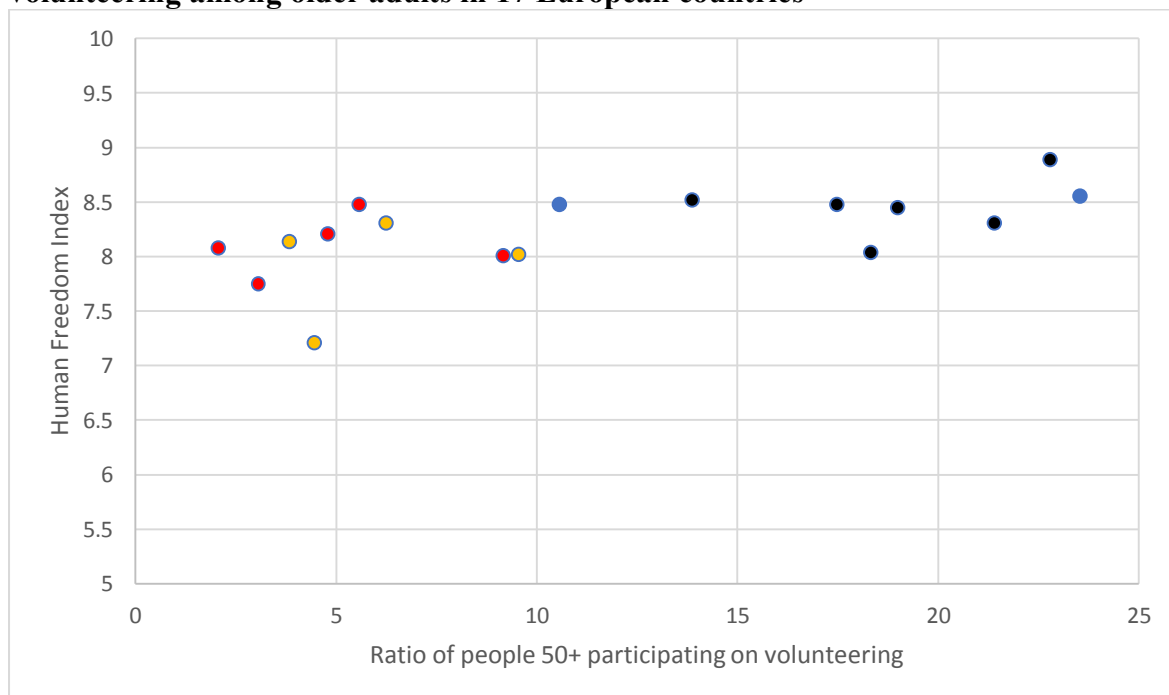


Source: These calculations use data from SHARE, wave 6.

Finally, Figure 6 presents the relationship proposed by Hank (2011) between a level of societal freedom and a prevalence of volunteering among older adults. The Human Freedom Index, which is published annually, indicates personal, civic, and economic freedom in each country (Vásquez and Porčnik 2017). The index has low variation among included countries with the highest value of 8.9 for Switzerland and the lowest value 7.21 for Greece. Despite this low variation, the level of freedom is related to the prevalence of volunteering with clear North-West/South-East division. Apart from some outliers like Estonia (higher freedom than

expected) and France (lower freedom than expected), this relationship between the macro-context and activity supported by active ageing is clear. Therefore, it seems from the presented figures that some longterm economic and cultural conditions shape the ageing process substantially.

**Figure 6: The relationship between Human Freedom Index and prevalence of volunteering among older adults in 17 European countries**



Source: These calculations use data from SHARE, wave 6.

### *Criticism of active ageing*

The active ageing approach despite its dominance in social gerontology and social policy (at least) in European context faces an extensive criticism. The most comprehensive critique of active ageing presents Virpi Timonen (2016) in her book *Beyond Successful and Active Ageing: A Theory of Model Ageing*. The author even formulates “a new theory of meso-level dynamics in ageing societies where particular sets of policy and marketing scripts are supposed to shape the lives of other people” (Timonen 2016: 5), in which active ageing represents one of the most important sets of these scripts. The main point of the critique is that active ageing is one of a group of model ageing approaches, which prescribe how to age well

and perceive later life “as a phenomenon and stage of life that is perceived to be in need of direction, reshaping and control” (Timonen 2016: 87). Furthermore, active ageing serves most of all the goals of three groups of actors – academics, selling their concept, companies selling products, and policymakers this way “justify the shift in responsibility towards older adults and their families” (Timonen 2016: 86). The active ageing approach is formulated by the privileged group of professionals following own mean, while it also serves to more well-off older people, who incline more to participate in prescribed activities and benefit from them. Finally, by neglecting dependence, contextuality, and all sources of inequalities, active ageing does bring anything positive (only exclusion) to groups that cannot or do not want to fulfil the goals of active ageing, and thus the approach increase inequalities in later life (Timonen 2016).

The normative dimension of active ageing as a tool excluding and stigmatizing older adults that do not age in a prescribed way is stressed by other authors too (Hasmanová Marhánková 2013, 2014; Moolaert and Paris 2013; Rozanova, Keating, and Eales 2012). Rozanova et al. (2012) present qualitative findings regarding older adults from Canadian rural areas, which are compatible with Timonen’s theory of model ageing. The results indicate that availability of activities promoted by active ageing is strongly shaped by structural factors (class, gender, age, health, location), as disadvantaged groups are often preoccupied with one not freely chosen activity or face constraints in a form of ageism, scarcity of resources, and available opportunities (Rozanova et al. 2012). Moreover, active ageing ends where the loss and dependency begin (Timonen 2016), as this policy is oriented only towards third age and “tends to bring all the negative stereotypes of old age into the fourth age” (Kafková 2016: 637).

### *Congruence of active ageing with role theories*

Active ageing face extensive critique referring to many problematic aspects, but it still holds a dominant position within social policy and social gerontology. One of the main reasons for this paradox is quite strong empirical evidence of the beneficial outcomes of activities in later life – for instance, Adams, Leibbrandt, and Moon (2011) present a review of 42 studies on this relationship and conclude that the effect of a whole range of social and leisure activities is consistently positive. The findings addressing other types of activities do not lead to clear conclusions, which is elaborated in specific parts of this thesis. The question is a) how additional roles in later life alter the subjective quality of life and b) in which direction this effect leads. First, the impact of additional activities has a physical, social, and psychological dimension with the satisfaction of needs, expansion of resources and identity formation as the main benefits, while the role conflict, strain or burden are potential drawbacks (Adams et al. 2011; Kim and Moen 2002). Second, the activities defined by active ageing are basically performances of roles – defined as a standardized behaviour shaped by social norms and positions, which (re)produces social structure (Eagly 1987; Merton 1957) – and thus theories specifically addressing the effects of roles may elucidate the central question.

A group of theories addressing the structure and interaction of roles within individual contains two opposing perspectives. William Goode (1960) formulated the theory of role strain “accepting dissensus, nonconformity, and conflicts among norms and roles as the usual state of affairs” (Goode 1960: 495). This theory describes how individuals bargain and organize incompatible role demands and perceive role conflicts under normal – one of a few exceptions in this can be a situation after retirement (Goode 1960). The theory of role strain opposing the main assumption of active ageing approach is also in contrast to the theory of role accumulation built as a direct reaction to Goode by Sieber (1974). This view claims “that role accumulation tends in principle to be more gratifying than stressful” (Sieber 1974: 577),

even though the importance of role strain and conflict has been dominant in sociological literature, because professional sociologists this way reflect their own experience of a high dedication to work resulting in perceived role strain (Marks 1977). Therefore, same roles can be both beneficial and harmful, depending on the situation and individual preferences (Marks 1977; Moen, Robison, and Dempster-McLain 1995).

## **Context-dependency of active ageing outcomes**

### *Theoretical alternatives expecting various outcomes of roles and activities*

The increasing share of publications – both theoretical and empirical – reflects that outcomes of additional roles in later life depend on many factors in terms of role content and (individual, group, and societal) context (Adams et al. 2011; Bronfenbrenner 1986; Kim and Moen 2001, 2002; Di Novi et al. 2015). (Phillips et al. 2010) write about this relativization of formerly absolute expectations as one of the key changes in the theory of social gerontology. The following overview of perspectives explicitly or implicitly expecting differing outcomes of activities in later life provides a theoretical framework for the rest of the dissertation.

The ecological perspective introduced by Urie Bronfenbrenner (1986) distinguish three environmental systems as a context of human development: mesosystem (e.g. school), exosystem (family), and chronosystem (individual transitions). This approach connecting individual transitions to “the social contexts of other roles, relationships, and developmental processes” (Kim and Moen 2001: 84) partly overlaps with the life-course perspective reflecting similar factors, but elaborating them into more detail.

The life-course perspective is oriented around themes of lives and historical time, the timing of lives, linked lives, and human agency (Elder 1994). Generally, all events in an individual life are connected to – and thus need to be interpreted in – the context of other individual events, a situation in a network of other people, and specific socio-historical



conditions (Elder 1994; Kim and Moen 2002). If these principles apply to the activities promoted by the active ageing approach, both the performance and effect of these activities should differ across the decisive factors. In fact, some studies of roles in later life have already found this perspective useful (Lowenstein 2007; Moen, Kim, and Hofmeister 2001; Szinovacz and Davey 2006).

The life-course perspective and ecological perspective are closely interlinked. Both state that individual transitions, such as retirement, are located situated in the contexts of other roles, relationships, and processes, and in the contexts of social and historical circumstances (Bronfenbrenner 1986; Elder 1994; Kim and Moen 2001, 2002). The dissertation tests these two approaches applicable to roles in later life against the theory of role strain (Goode 1960) and the theory of role accumulation (Sieber 1974), which expect the more consistent impact of roles.

### *Influential sociological theories and their implications for the active ageing paradigm*

The assumption of differences in perceptions of reality, tendencies to act, and outcomes of the same behaviour are present in an amount of sociological theory. Pierre Bourdieu (1984) coined the term habitus defined as “the systems of dispositions characteristic of different classes and class fractions” (Bourdieu 1984: 6). This means that position in a social field – dependent on magnitude of economic and cultural capital, gender, age, and geographical location – shapes social practices such as political opinions or cultural consumption, which “is an acquired disposition to differentiate and appreciate” (Bourdieu 1984: 266) that “fulfil a social function of legitimating social differences” (Bourdieu 1984: 7). These assumptions would make active ageing a product of habitus (*i.e.* a tendency in behaviour) that is defined and preferred by higher classes (Roanova et al. 2012; Timonen 2016) possessing the potential to legitimize differences in later life. Furthermore, active ageing could be just a reproductive strategy of dominant classes setting the fitting rules that enable to sustain or

increase inequalities among older adults. In words of Thorstein Veblen (2003), members of dominant classes conspicuously perform more socially visible activities and consume products of active ageing in order to present their social position.

Bourdieu's assumption that human behaviour and perception of reality is shaped by formative environment including educational process, and then by social position is shared by Ronald Inglehart (1990). Inglehart has spent most of his career by formulating the theory of value change from materialist to postmaterialist value orientation, its causes, and consequences of this change (Alexander, Inglehart, and Welzel 2016; Inglehart 1971, 1977, 1990, 1997, 2008; Inglehart and Norris 2003). The change is supposedly caused by the unprecedented era of prosperity, safety, and stability within developed societies, which creates conditions for a shift of priorities from lower towards higher values at the Maslow's pyramid of needs (Inglehart 1977; Maslow 1943). Under these conditions, prioritized values shift from concerns with economic stability and economic safety to stress on quality of life, political and human rights, gender equality, self-realization, and self-fulfilment. As Inglehart (1990: 5) puts it, 'economic and physical security continue to be valued positively, but their relative priority is lower than in the past'. The so-called 'silent revolution' transforms values in society via intergenerational exchange (Inglehart 1971, 2008), as the individual value system is shaped in formative years and remains stable for the rest of the life (Inglehart 1977, 1981, 1985; Rokeach 1979; Schwartz 2005). In short, macro-conditions shape individual values, perceptions, and tendencies for certain behaviour, which simultaneously reproduce and change macro-conditions. Some of these thoughts on individual value systems as an important building block of stable society are present in classical sociology (Elster 1989; Goode 1960; Parsons 1951), though the shift from materialist to postmaterialist value orientation is Inglehart's contribution.

The Inglehart's theory of value change has received critical responses addressing both its conceptual (Todosijević 2014; Warwick 1998) and methodological part (Ippel, Gelissen, and Moors 2014; Knutsen 1990; Moors and Vermunt 2007). Some researchers oppose the assumption of importance of formative years and stability of value orientation during life course (Bardi et al. 2009, 2014; Davis 1996; Lesthaeghe and Moors 2002; Rokeach 1985; Warwick 1998), while others doubt that there are some coherent value systems (Davis 2000; Ippel et al. 2014; Rossteutscher 2004) – see Abramson (2011) for overview of the critique. Nevertheless, many researchers find the theory valid and invest substantial energy in its application and development (Abramson 2011; Aguila et al. 2008; Basáñez 2015; Promislo et al. 2010). Furthermore, the theory of value change is compatible to other theories of modernization and post-modernization processes, such as the theory of SDT, development towards post-industrial societies (Bell 1973) based on liquid identities (Bauman 2006) and intimate relationships (Giddens 1997) that can be diagnosed as narcissistic societies (Lasch 1991). Finally, the theory of change towards postmaterialist value orientations provide a useful framework for this dissertation.

The assumption that formative conditions shape values, perceptions of reality, and behaviour has important implications for the active ageing approach. If differences in life experience influence lifestyle, life aspirations and types of adaptation to a deprivation of some needs (Inglehart 1990, 1997, 2010), the uniform approach in social policy across countries and generation cannot be fully successful. As Timonen (2016) states, active ageing was formulated by a privileged group of actors, which are younger, wealthier, and more educated than the target group of the active ageing policy. Hence, it is possible to label them as more postmaterialist, with different formative experience, values, aspirations, living conditions, etc. Ultimately, the active ageing approach may be compatible only with the worldview of privileged groups that can much more profit from the policy approach produced by these

groups themselves. The application of Inglehart's work to active ageing approach thus leads to similar conclusions as works of Bourdieu (1984) or Timonen (2016).

Is active ageing a postmaterialist approach? Three points support this claim, though the third one only partially. First, active ageing is formulated in a gender-neutral way – neither supported activities nor their outcomes are expected to differ between sexes (Foster and Walker 2013, 2015). Similarly, shift from materialist to postmaterialist societies is also shift from strict traditional gender norms and behaviours towards gender equality, tolerance of deviations from traditional gender norms, and generally convergence of expectations placed on men and women in terms of roles, aspirations, and opportunities (Alexander et al. 2016; Inglehart 1997; Inglehart and Norris 2003).

Second, the most profound aim of active ageing approach is the higher subjective quality of life in older ages (Commission of the European Communities 2002; Walker 2005b; WHO 2002; Zaidi and Howse 2017). This outcome is labelled as subjective well-being, life satisfaction, meaning in life or generally quality of life, which are related concepts (Katz 2009; Mcilvane, Ajrouch, and Antonucci 2007; Roll and Litwin 2013) that are also prioritized by postmaterialist value orientation in a form of subjective well-being, quality of life, and self-realization (Inglehart 1990, 1997; Promislo et al. 2010). Additionally, subjective quality of life of older adults is often measured by the CASP scale, which is partly grounded on the theory of postmaterialist value orientation (Higgs et al. 2003a; Hyde et al. 2003). CASP is an acronym for control, autonomy, self-realization, and pleasure, which are four theoretically grounded and empirically tested domains of subjective quality of life in old age. CASP was designed in opposition to a former practice to measure QoL by health or longevity. This scale contains ontologically grounded domains based on the pyramid of needs (Maslow 1943) and aspire for a scale that can be used universally – at least for people in the third age – and provide comparable scores across contexts (Higgs et al. 2003a; Hyde et al. 2003). However,

CASP is applicable mostly for third age as a specific life stage – ‘the time of personal self-realization and fulfilment, comes after our children left us’ (Laslett 1991: vii). In contrast, older people experiencing fourth age are concerned rather with securing basic needs, such as health (Hyde et al. 2003). The arguments imply that subjective QoL and its prevalent measurement is connected to postmaterialism and more well-off older adults, while it does not seem a priority for people with health limitations, financial problems or materialist value orientation.

Third, roles promoted by active ageing are closer to postmaterialist than materialist value orientation. Prolonged working career is a seemingly materialist aim, since income is the strongest incentive to paid work (Promislo et al. 2010) and materialism is a strong motivator towards entrepreneurship (Uhlener and Thurik 2004). However, paid work is also motivated by a need of appreciation (Promislo et al. 2010), belonging, meaning, and other intrinsic motivators (Adams et al. 2011; Kim and Moen 2002) contained in the postmaterialist orientation. Activities like volunteering, lifelong learning, doing sports, and active political participation are more postmaterialist (Aguila et al. 2008; Barrett and Zani 2015; Bekkers 2005; Inglehart 1990), while physical activities in agriculture and participation in religious organization seems materialist (Aguila et al. 2008; Inglehart 1990, 1997, 2010). Then, provision of care and help to others can be motivated both by traditional family norms (Neuberger and Haberkern 2014) and by willingness to improve interpersonal relationships and individual quality of life (Promislo et al. 2010), which makes it an activity ‘in between’. Generally, most of the activities can be based on either materialist or postmaterialist motives, so the context is always crucial. Nevertheless, the way of promoting these activities within the active ageing framework, its gender-neutrality, and the stress on subjective quality of life as the most desirable outcome reflect postmaterialism as the relatively more prevalent value orientation among creators of this approach.

In terms of Maslow's hierarchy of needs, Inglehart gives the value changes from career pursuit and tradition norms towards the struggle for appreciation and self-realization rather positive connotations, while the interpretation of these phenomena by Christopher Lasch (1991) is opposite. Lasch (1991) diagnose the contemporary US society as the *Culture of Narcissism*. This diagnosis is based on a shift of the most prevalent psychological and psychiatric individual diagnosis from obsessions and neuroses towards narcissism. Lasch (1991) supposes that the most prevalent diagnosis is the most prevalent type of personality in a society as well as the characteristic of the whole society. These levels of social reality are interconnected, because 'new social forms require new forms of personality, new modes of socialization, new ways of organizing experience' (Lasch 1991: 50), while each society shapes its members in a desirable way in the process of socialization. The new social form requiring narcissist personality is most of all the late capitalism, which benefit from a spread of narcissism both in production and consumption. Firstly, the narcissist is an ideal employee for an unstable labour market dominated by large corporations and bureaucratic organizations, since he is flexible, good in manipulation with others, entering an only shallow relationship, driven more by external condition than own corruptible personality, and longing for appreciation from others. Secondly, increasing consumption in a narcissistic society aims for escape from work, fulfilling inner self by the satisfaction of new needs invented by advertising, and getting an appreciation of others for a consumption of the right products in the right way (Lasch 1991).

Apart from describing cultural processes in the capitalist society, Lasch (1991) also makes some provocative statements about groups of people involved in the production and consumption. First, one of the consequences of a shift from paternalism towards individualism and gender equality is enabling women and children to be emancipated producers and consumers. Second, the same can be said about older people, though Lasch

(1991) does not mention that explicitly. Old age and death are the largest dread of the society, in which members long for appreciation from others based on youth, charm, and beauty. A sense of generational discontinuity leads each generation to struggle for its own preservation and each individual to avoid ageing through keeping themselves active, starting new life projects, and striving for quality of life instead of meaning and acceptance of new roles (Lasch 1991).

The accusation of the system from taking increasingly more control over individual lives has a strong tradition in the field of sociology. More recent examples are colonization of the lifeworld (Habermas 1987), systematization and categorization of the world in a process of modernization (Bauman 1993) or disciplination by power and knowledge (Foucault 1979). Even the classical piece *The protestant ethic and the spirit of capitalism* (Weber 2001) describes how every aspect of life among working population has become shaped by rationality connected to self-discipline. Max Weber (2001) illustrates how new vigorous working ethic emerged from religious ethic, which consequently drove lives of working population without a further need of religious foundations and became an iron cage of rationalism. This working ethic brought principles of rationality, control, effectiveness, and standardization that determined foundations of modern societies in the 20<sup>th</sup> century (Ritzer 1993), until they have become deteriorating under the emergence of the value shift (Bell 1976; Inglehart 1990; Lasch 1991; Ritzer 1993).

The system became with control of the workforce as a crucial part of the early capitalism. Afterwards, it took process of socialization from families and started to shape needs of consumers of various age and gender (Fromm 1965; Lasch 1991). Currently, the system has devoted increasing attention to a colonization of older age as a stage of life, which was omitted for a long time but became important with its increasing potential to deliver new producers and consumers (Liu and Lou 2016; Timonen 2008, 2016; Zaidi and Howse 2017).

The process of colonization of the lifeworld is connected to increasing importance of experts for all areas of life (Giddens 2003; Lasch 1991). Consequently, these social processes lead to the interpretation of active ageing approach as another tool for retaking control by system represented by various experts, which draws on the current dread from ageing and death.

*The Culture of Narcissism* (Lasch 1991) was written in the 70s before the formulation of active ageing approach by international bodies, but the resemblance is striking. This illustrates how active ageing is the product of a certain socio-cultural context or a segment of people living in this context (Inglehart 1990; Lasch 1991; Timonen 2016). Moreover, this specific segment of people located in a social structure possesses own goals and worldviews (Bar-Tal 2000; Inglehart 1977; Mannheim 1936) that can be expressed and followed through active ageing approach more than any needs of older adults or other external actors (Ebbinghaus 2012b; Rozanova et al. 2012; Timonen 2016). Proponents of active ageing disagree with similar accusations by referring to beneficial effects of promoted activities (Adams et al. 2011; European Commission 2013; Marsillas et al. 2017; Zaidi 2015) or by presenting similarities between the expert and lay notions of a good later life (Foster and Walker 2015; Timonen 2016; Walker 2005a).

Regardless of the question whether creators of active ageing approach follow more their own interests (Rozanova et al. 2012; Timonen 2016) or interests of older adults (Avramov and Maskova 2003; Foster and Walker 2015; Marsillas et al. 2017; WHO 2002), this approach is strongly context dependent. This effort to change the perception of ageing and ageing experience itself emerged in the era of material prosperity, population ageing, and a shift in understanding of life and its meaning (Alexander et al. 2016; Inglehart and Norris 2003; van de Kaa 2001; Lesthaeghe 2010; Surkyn, Deboosere, and van Bavel 2008). Active ageing is a partly ideational and partly pragmatic approach adapting societies to changing conditions. Its ideational part relates to increasing stress on quality of life represented for



instance by social indicators movement (Diener and Suh 1997; Noll 2004) and cultural shift in understanding of the old age (Laslett 1991; Petrová Kafková 2016b). The context-dependence of active ageing policies brings a question in which contexts and to which people it is applicable. The policy approach generally ignores this question and spreads throughout geographical and cultural contexts, and thus it puts in doubt its proclaimed beneficial effects. In sum, the consequences of any policy tool can be anticipated only if we know for under which (individual and societal) conditions this tool works as expected.

### *Individual factors shaping outcomes of activities*

The dependence of the effect and prevalence of specific activities on context have been illustrated both by theories and own descriptive results. Figures 1 to 6 show how are activities promoted by active ageing approach unequally distributed across countries. Moreover, the chance of devoting to particular activities in later life is also shaped by individual and relational characteristics, such as class, gender, age, geographical location, education, and social capital (Galenkamp and Deeg 2016; Holstein and Minkler 2003; Rozanova et al. 2012; Serrat, Villar, and Celdrán 2015; Siegrist and Wahrendorf 2009; Timonen 2016). The same characteristics also shape the outcomes of activities (Adams et al. 2011; Ho, You, and Fung 2012; Maier and Klumb 2005), as the same role can have different meaning for different people (Adams et al. 2011; Bourdieu 1984; Inglehart 1990; Neuberger and Haberkern 2014; Timonen 2016).

First, the effect of prolonged employment versus retirement as the most central role (George 1993) is formed by characteristics of individual, activity, situation, and activity partners (Adams et al. 2011). Individual characteristics influencing the effect are gender, health, income, education, and marital status (Bender 2012; Clark and Fawaz 2009; Kim and Moen 2002; Pinguart and Schindler 2007; Wong and Earl 2009). The voluntariness of retirement and type of job are some of the intervening characteristics of activity (Bender

2012; Börsch-Supan and Jürges 2009; Clark and Fawaz 2009; Kubicek, Korunka, and Raymo 2010). Finally, examples of situational factors are pension characteristics, level of QoL before retirement, marital satisfaction, family situation, and retirement phase (Atchley 1989; Bender 2012; Horner 2014; Kim and Moen 2002; Pinquart and Schindler 2007; Schulz et al. 2004).

Second, a similar division of intervening factors as for the effect of prolonged employment can be applied to the effect of caregiving in later life. The more positive effect of providing care concerns women, those with a lower level of education, religiously involved older adults, and individuals occupying fewer roles (Broese van Groenou, de Boer, and Iedema 2013; Kim and Moen 2002). Regarding characteristics of caregiving, the less intensive (Broe *et al.* 1999; Broese van Groenou *et al.* 2013; Colombo *et al.* 2011) and more voluntary (Broese van Groenou *et al.* 2013; Lowenstein *et al.* 2008) provision of care seems to have more positive outcomes, while the effect of multiplicity of care remains unclear (Chassin et al. 2010; De Jong Gierveld and Dykstra 2008). Another important factor is the relationship to a receiver of care, since the effect is more beneficial if there is a strong bond between caregiver and receiver, but also if they are not partners and if the exchanges of help are close to balanced (Broese van Groenou et al. 2013; De Jong Gierveld and Dykstra 2008).

Third, the effect of social activities is shaped by various circumstances as well (Adams et al. 2011). The literature review of Adams et al. (2011) focus on the mediators and moderators of the impact of social and physical activities in later life and conclude “that the activity/wellbeing relationship must take into account background variables or moderators, the type of activity, including its content and context, and potential mediators in the form of cognitive appraisals of the activity’s benefits to the individual” (Adams et al. 2011: 706). Ho et al. (2012) add another study and conclude that volunteering is more beneficial for younger and middle-aged than older volunteers. Finally, as the life course perspective assumes (George 1993; Kim and Moen 2002; Szinovacz and Davey 2006), outcomes of one activity

can be shaped by presence or absence by other activities. This is supported by Potočnik and Sonnentag (2013), who found the positive effect of volunteering, going to sports, and providing help for retirees but not for working individuals of comparable characteristics.

### *Macro-factors shaping outcomes of activities*

The outcomes of activities promoted by active ageing approach are also influenced by macro-factors. This area of research is not so developed as both cross-national data and techniques for its analysis has become broadly available only recently. Hence, this thesis capitalizes on the current opportunities for quantitative analysis in this area and takes the impact of macro-factors on activity outcome as one of its crucial aims. Still, some more or less direct findings that can inspire future research already exist for each type of the most important activities in later life.

First, the importance of paid work in later life may depend on several economic, institutional, and cultural factors. Older adults with a higher risk of poverty, long-term unemployment, unstable job situation, and those living alone financially depend more on a paid job (Ebbinghaus 2012b; Hofäcker 2015; Hofäcker and Naumann 2015). This may be a factor motivating them to work longer and benefit from the employment by maintaining some living standard, though the prolonged working career is rather forced by circumstances in such cases. The outcomes of working versus retirement can be also shaped by institutional settings including pension system and official retirement age, which vary considerably in the European context (Ebbinghaus 2012b; Horner 2014; Trading Economics 2017). Finally, important parts of the cultural framework are in this case value of work in a society and meanings connected to a paid job (Inglehart 1990; Moulaert and Biggs 2013; Rabušić 2004).

Second, outcomes of caregiving depend on social norms, and subsequently on the availability of formal care in a given country (Neuberger and Haberkern 2014; Di Novi et al. 2015). Neuberger and Haberkern (2014) identified the more beneficial provision of care in

countries with stronger familial norms, because caregivers more comply both to individual and social values, but also because reference category of people not providing care fail to follow the norm in such a case. Similar effect as strong familial norms has a weaker welfare state and lower availability of formal care, as the latter is a consequence of the former (Sobotka 2008a). Thus, lower availability of formal care creates an environment, in which intensive caregiving leads to higher feelings of pleasure and self-realisation, but also to lower control and autonomy (Di Novi et al. 2015).

Third, Hank (2011) illustrates that volunteering and informal help is more prevalent in societies with higher civil and political liberties and in countries with the stronger welfare state. He concludes that ‘both longstanding cultural elements of a society, such as its religious tradition, as well as contemporary welfare state interventions constitute reference frames’ (Hank 2011: 536) for social participation of older adults. The research directly examining the contextual differences of the effect of social participation is missing. Nevertheless, we may assume that the outcome of particular activities depends on individual/social values, their congruence with the activity, and its meaning under given conditions (Inglehart 1990; Neuberger and Haberkern 2014; Paúl et al. 2012; Timonen 2016).

### **Aims of the dissertation**

The thesis *Role dynamics of older adults and their consequences* aims to utilize the existing knowledge and the current possibilities of quantitative analysis in several ways. First, it focuses only on roles (performed in a form of activities) supported by active ageing policies, as these roles are most relevant for contemporary older Europeans. Second, each part of the text is devoted to a different set of activities, their benefits and detriments according to existing research. Third, the dissertation examines the effect of each type of activity by the most appropriate method statistical analysis in order to improve current knowledge and

inspire future research to a use of less orthodox and more beneficial methods. In this way, the dissertation tries to make its best from the prescribed format by providing as complex picture of consequences produced by an implementation of active ageing as possible.

## Chapter 2: Data and methods

### Data

This dissertation tests the assumption that the roles supported by active ageing approach are beneficial for older adults in the European context. Employing contextual approach (Bronfenbrenner 1986; Marks 1977), the study also examines in more detail which supported roles are beneficial under what circumstances. The assumed associations are tested within a quantitative paradigm on a cross-national panel data from the project Survey of Health, Ageing and Retirement in Europe (SHARE).

SHARE is a panel survey conducted since 2004 in many European countries. Overall, 21 countries participated in at least one wave of data collection and 9 countries participated in all six waves. labelled as ‘one of the crucial pillars of the European Research Area’ (Börsch-Supan et al. 2013: 993) and listed on the roadmap of the European Strategy Forum on Research Infrastructures the as the only project devoted to population ageing (ESFRI 2016). The project provides data on health, employment, family, cognitive skills, activities, quality of life, and other areas of life connected to ageing. Data are collected on the national samples of the 50+ population through a method of Computer-Assisted Personal Interviews repeated over time. Wave 3 contains a different set of questions, while other five waves conducted between 2004 and 2015 contain the same questions (Malter and Börsch-Supan 2015), which enables to study individual changes over time.

Six waves of SHARE were conducted in 2004, 2007, 2009, 2011, 2013, and 2015 with potential overlap to the next year in some countries. 9 countries participated in six waves – Austria, Belgium, Denmark, France, Germany, Italy, Spain, Sweden, and Switzerland – and two countries in five of them – Czechia and the Netherlands. In a prospect of time, especially

countries from Post-communist part of Europe joined the project, which now provides the data from countries representing main European regions.

Countries participating in SHARE use their own methods of sampling, but each of them uses household as a sample unit and interviews all household members 50+ and their spouses within a randomly chose households. Details on national-specific sampling, sample sizes, response rates, and other methodological details are presented in Bergmann et al. (2017). Sample sizes differ across waves and countries, as the shared methodological approach is developed successively. Nevertheless, the general approach of the project is refreshing the panel samples whenever possible and interviewing a few thousands of respondents for each country (Bergmann et al. 2017) to enable more complex statistical procedures performed also on specific subsamples.

The goal of this study is to inquire the effect of each examined activity/set of activities in a way that seems the most beneficial for a current state of the knowledge. Therefore, various analytical methods address various specific problems and data from SHARE are used both in cross-national and longitudinal form. While it is a usual practice to analyse SHARE data together as one sample of European populations (Arpino and Bordone 2017; Litwin and Stoeckel 2013; Potočnik and Sonnentag 2013), this study aims to examine the impact of macro-context on the central relationship of activities and subjective quality of life. Hence, it is suitable that SHARE comprises countries from all European regions – this fact makes possible to study the relationship within specific economic, structural, and cultural contexts.

19 countries participating in SHARE are members of the EU (Israel is dropped from all analyses, while West-European Switzerland constitutes the 20<sup>th</sup> country). Thus, social policies, public discourse, and social norms of all included countries are influenced by active ageing policies as the official approach of EU to the topic of sustainable ageing (Commission of the European Communities 2002; EU Council 2012). Furthermore, active ageing approach

usually set up no upper age limit its target population (EU Council 2012; Foster and Walker 2015; Marsillas et al. 2017), while the bottom age limit can be 50 (Börsch-Supan et al. 2013; Sonnega et al. 2014) or 55 (European Commission 2013; Zaidi 2015). Based on this geographical and age definition of active ageing as the official approach, data of the national samples representative for populations 50+ provided by SHARE suits to the goals of this thesis. SHARE does not include all EU members, and even if it did, it would not be possible to reach something as results representative for EU population. This is not possible even more, since the whole sample is rarely analysed together and the results for subsamples usually vary. Hence, the results refer to national populations involved in a particular analysis and the findings of the dissertation provide evidence on difference within EU and within national states, so a higher level of generalization would be inadequate.

The main topic of this work is the effect of roles supported by the policy of active ageing in later life on subjective quality of life and it obviously needs indicators of the main concepts. SHARE asks on performance and its frequency of all main activities connected to active ageing, as mentioned in the main documents (Avramov and Maskova 2003; EU Council 2012; Eurostat 2012; Sidorenko and Zaidi 2013) or measured in Active Ageing Index (European Commission 2013; Zaidi 2015). The activities are namely labour force participation, caregiving (more types), volunteering, political participation, educational courses, participation in religious, sport or social organization, and physical activities.

## **Methods**

The thesis uses only the quantitative methods of data analysis, while its empirical parts are both led by and contrasted with existing theories and qualitative studies. The analyses are processed with the help of two statistical programmes – Stata 12 and IBM SPSS Statistics 24



– as a) each of them is suitable for other statistical techniques and b) some analyses could be replicated in the second software to check errors in coding.

This work contains different forms of comparative analysis, which is omnipresent in the sociology in its broader form but forms a specific area of social research in its narrower form. The narrower conception of comparative analysis in social sciences can be defined as ‘the description and explanation of similarities and differences (mainly differences) of conditions or outcomes among large-scale social units, usually regions, nations, societies and cultures’ (Smelser 2003: 645). Comparative analysis in this sense contains mostly quantitative studies of cross-national phenomena. This type of research should avoid both radical positivism in a form of an irreflexive use of the same indicators across different contexts and radical relativism seen by Smelser (2003) as ‘a misguided extension of a valid critique to a point of anti-scientism and methodological paralysis’ (Smelser 2003: 649). This dissertation takes a position of post-positivism reflecting potential biases of human knowledge, but also considering quantitative analysis as the best technique for understanding certain questions, if it is used cautiously and connected to theory and qualitative studies. The comparative analysis here employs the existing data collected by international experts, the presence of some unifying features of the European context, and also the methodologically sensitive approach of the author using a different type of analysis for each research question.

The four main empirical parts capitalize on four different statistical techniques, which all aim to answer a research question in possibly the most precise and comprehensible way. Each of these techniques is briefly overviewed. The chosen methods and procedures of statistical analysis have several aims:

- 1) to bring a valuable contribution to the existing literature
- 2) examine the relationship between roles and quality of life in a methodologically vigorous way

- 3) reflect the role of individual characteristics and inequalities within societies
- 4) reflect the role of macro-conditions and inequalities between societies
- 5) build a causal relationship, if possible

Chapter 3 uses multilevel logistic regression with one macro-variable and one cross-level interaction. Multilevel modelling in this analysis enables to control for both individual and national factors and their interaction (Rabe-Hesketh and Skrondal 2008). More specifically, it is a mean towards establishing the effect of availability of formal care on a) QoL and b) on the effect of informal care itself. The method produces valuable empirical findings, though the number of available SHARE countries enables to have only one macro-predictor (Hank 2011). Further, Bryan and Jenkins (2016) argue that coefficients are generally unstable with less than 25 countries. Therefore, other chapters of the dissertation explore other methods of determining the effect of macro-context.

Chapter 4 does not estimate any macro-effect directly, but it produces separate results for four socio-culturally distinguishable European regions. Economically active and inactive respondents are matched into pairs in each region by propensity score matching to produce pairs comparable in all known characteristics except the treatment variable – prolonged working career (Guo and Fraser 2010; Rosenbaum and Rubin 1983). After reducing bias by a successful matching, the expected effect of staying in a labour force on four domains of QoL is produced. This procedure, very similar to procedure applied by Di Novi, Jacobs, and Migheli (2015) for estimating the effect of caregiving, set the differences in the key effect across Europe and their possible explanations.

The differences in the effect of social participation are presented in a more descriptive way in chapter 5. The analysis capitalizes on a consistent beneficial effect of social participation in later life from previous research (Adams et al. 2011; Cattan, Hogg, and Hardill 2011; Potočnik and Sonnentag 2013) and examines who can benefit from these

activities most often. Prevalence of social participation and its development over time is graphically displayed for five countries representing 5 welfare regimes (Ebbinghaus 2012a; Esping-Andersen 1990; Fenger 2007). Moreover, the chapter present inequalities of the access to social participation based on education, financial situation, and health, and intersections of the inequalities for the selected countries. Hence, description of the key indicator over time and theoretically grounded contexts are preferred here to more complex analysis.

Finally, chapter 6 aims to unify separate analyses of particular roles into one model controlling for interactions and intersections between the activities. Additionally, this last statistical section follows changes in activities and QoL within respondent over time. These goals are reached by using fixed effects regression, which controls for all (un)observed relatively stable characteristics (Allison 2009) including macro-context, family structure, or value orientation of a respondent. The analysis contains separate results for two European regions and two educational groups to illustrate different effects of role across these factors. The fixed effects models provide less efficient estimates, but they produce complex results that are unlikely biased or spurious (Allison 2009).

This section provides a basic overview of the used data, statistical methods, addressed topics, and most of all – goals that are intended to be achieved by these means. It also outlines the main structure of empirical chapter. The other details of these issues, as well as the results and their contribution to the state of the art, are developed in the rest of the thesis.

## **Chapter 3: The consequences of prolonged working life for a subjective quality of life across Europe**

### **Abstract**

This paper examines the effect of prolonged working careers on a subjective quality of life (QoL) in four European regions. The basic assumption of the role accumulation theory and the active ageing approach that additional roles – including prolonged working careers – are beneficial for the quality of life of older people is tested. The method of propensity score matching is conducted on SHARE data for four European regions with distinctive economic, institutional, and cultural context connected to paid work. The results show different effects of prolonged working for different European regions and different domains of the subjective quality of life, which indicate a context-sensitivity of this effect. On the one hand, the effect of prolonged labour force participation on QoL as a whole, control over life, and pleasure is positive in regions with a financial need as more important motivation to work than some nonmaterial needs. On the other hand, the effect on QoL and autonomy is negative in wealthier and more developed European regions. The paper concludes that the main motivation for prolonged working careers seems avoidance of deteriorated living standard, and thus satisfactory conditions of retirement should be an aim complementary to working incentives for those, who are willing and able to work longer.

**KEY WORDS:** prolonged working careers, quality of life, active ageing, ecological perspective, European regions

## **Introduction**

The population development of the last decades has been characterized by two main features: declining fertility and declining mortality. These two global processes, often labelled as demographic transitions, are the key sources of the global phenomenon of population ageing. Population ageing is marked as a significant success of humankind, as more people live longer and potentially healthier lives, but also as a challenge and potential threat to economies, social systems, and societal development (Timonen 2008). Hence, many theoretical and practical reactions aim to address the challenge of population ageing. The concept and policy of active ageing is the dominant perspective addressing population ageing at both theoretical and practical level (Timonen 2016). The active ageing approach is especially pronounced in Europe, which as the oldest continent tries to develop a joint solution to this challenge (Foster and Walker 2015).

The main motto of the active ageing initiative is to ‘add life to years’, which is the idea proclaimed by the World Health Organization and European Union (Walker 2002a; WHO 2012). Active way of ageing is presented as a source of many benefits for both older people and societies. The guiding principles of active ageing – employment, participation in society, and independent living – should contribute to creating more inclusive societies with a sufficient amount of labour force at the societal level and healthier older people with higher quality of life (QoL) at the individual level (Avramov and Maskova 2003; EU Council 2012; European Commission 2013).

One of the crucial sources of the beneficial prospects presented by proponents of active ageing is prolonged labour force participation of older people, which is claimed to be a source of financial security, identity, social contacts, prestige, and physical activity (Andersson 2004; Di Gessa and Grundy 2013; Horner 2014; Walker 2004). On the contrary,

retirement is also empirically connected to many beneficial effects of withdrawal from demanding employment and increase of free time, represented by a temporary improvement in health and life satisfaction (Andersson 2004; Horner 2014; Weidekamp-Maicher and Reichert 2004). Generally, some studies stress the beneficial effect of working longer (Daatland, Veenstra, and Lima 2010; Di Gessa and Grundy 2013), while other papers present the opposite message (Gorry, Gorry, and Slavov 2015; Horner 2014; Latif 2011). Hence, the effect of prolonged employment vs. retirement seems to be dependent on some other factors, such as age discrimination on a labour market, attitudes towards retirement, level of QoL before retirement, voluntariness of retirement, role centrality, and many individual characteristics and resources (Bender 2012; Johnson 2009; Latif 2011; Weidekamp-Maicher and Reichert 2004; Wong and Earl 2009).

This paper tests the assumption of active ageing approach and related theories, such as role theory and role enhancement theory, that labour force participation in later life improves subjective QoL. The assumption is tested for different European regions to reflect various meanings of work in lives of older people in various societal settings and three types of settings – economic, institutional, and cultural – are considered for the interpretation of regional differences. The QoL in workers and retirees of matched individual characteristics is compared by the method propensity score matching using data from the Survey of Health, Ageing and Retirement in Europe (SHARE). The results illustrate that *the labour force participation among older people improves subjective QoL in Southern Europe and Post-communist countries, while this effect tends to be opposite in Northern and Western Europe.* The effect of working is not strong, but the pattern is consistent across several domains of the subjective QoL relevant for older people. The most probable explanation of more positive effect in less wealthy part of Europe is deteriorating QoL of retirees motivating people to work longer to sustain a higher level of pleasure and control over life. Therefore, a potential

contribution of active ageing approach to QoL in this area is not fulfilled and satisfactory conditions of retirement seem more beneficial.

### **The relationship between labour force participation and QoL**

The potential of more roles to enhance or deteriorate QoL has been discussed for several decades. The role strain theory coined by Goode (1960) stresses the limited capacity of time and energy within individual and conflicting demands and obligations of competing roles as the common experience. The theory of role accumulation (Sieber 1974) has the opposite view and presents an energy-creation theory of multiple roles. Marks (1977) claims that sociologists constructed the role strain theory, because they are themselves highly dedicated to a carrier and lack resources. The theory of role accumulation finds the necessary role of activity in the production of human energy and shares its main approach with the concept of active ageing (Marks 1977). Thereafter, two theories that could be placed in between the role strain and the role accumulation were formulated and labelled as the continuity theory and the ecological or life-course perspective. The continuity theory argues that withdrawal from one role can be adjusted without disequilibrium through other roles or adaptive strategies (Atchley 1989). Finally, the ecological perspective – which is theoretically close to the life-course perspective – considers the context of roles and role transitions as a decisive factor determining the form of their outcomes (Bronfenbrenner 1986; Kim and Moen 2001).

The employment is specific in three main ways among other roles. First, it is usually the most time-consuming role from a set of roles that an individual possesses. This implies that employment has a higher potential for conflict with other roles and a transition to retirement can be a welcomed withdrawal from this intensive demand (Kim and Moen 2002; Michinov, Fouquereau, and Fernandez 2008). Second, the role of paid worker is the most central role and the crucial part of identity for many people, although the importance of

employment and other roles for personal identity varies among individuals. From this point of view, the effect of retirement is worse for people with employment as the central role than for people possessing a higher number of more balanced roles (Havighurst 1954). This difference can be translated into the difference between the role theory and the continuity theory (Latif 2011). Third, the employment is often the main source of income. Hence, the financial well-being may get worse significantly after retirement, and this is especially true if income from a job is not sufficiently compensated by the retirement pension and savings or other combination of resources (Halpern-Manners et al. 2015).

Plenty of studies examined the relationship between employment/retirement and subjective QoL, and thus they directly or indirectly tested the relevance of the role strain theory, the role accumulation theory, and other theories for the explanation of this crucial life transition. Some of the researchers made clear statement that retirement is beneficial (Gorry et al. 2015; Horner 2014; Latif 2011) or harmful (Daatland et al. 2010; Di Gessa and Grundy 2013) for QoL. However, some studies present the results illustrating more phases of the QoL development after retirement (Nordenmark and Stattin 2009; Szinovacz and Davey 2004), and then some studies found specific context of retirement (Kim and Moen 2002; Szinovacz and Davey 2006), characteristics of the retirement transition (Bender 2012; Nordenmark and Stattin 2009; Pinguart and Schindler 2007) or characteristics of the individual (Bender 2012; Clark and Fawaz 2009; Wong and Earl 2009) that decisively shape the various outcomes of retirement. This complex area of research produces seemingly contradictory findings and no conclusive answer on the effect of retirement has been found yet. Hence, this effect seems highly micro-, mezzo-, and macro-context dependent and the ecological perspective seems necessary in examining this relationship.

The ecological perspective formulated by Bronfenbrenner (1986) claims that transitions over life course are inherently linked to intrafamilial processes and environmental



events. The life-course perspective and ecological perspective are closely interlinked and both state that individual transitions, such as retirement, are located in the contexts of other roles, relationships and processes, but also in the contexts of social and historical circumstances (George 1993; Kim and Moen 2001, 2002). While the factors mediating the effect of retirement on subjective QoL at the individual or household level have been analysed repeatedly (Bender 2012; Nordenmark and Stattin 2009; Szinovacz and Davey 2004, 2006; Wong and Earl 2009), there is almost no research on macro-level mediators of this relationship, and this is true even though the engagement of older people in caregiving (Neuberger and Haberkern 2014; Di Novi et al. 2015) or more types of activities (Di Gessa and Grundy 2013) have contrasting outcomes across different European regions. The study of the macro-effects on subjective QoL is nowadays not only more feasible due to more developed statistical techniques and more accessible pan-European quantitative data, but also a highly relevant topic for the development of both social theory and social policies (George 2010; Neuberger and Haberkern 2014; Di Novi et al. 2015). Therefore, this study compares the effect of prolonged working careers on QoL across European regions.

### **Different meaning and value of work across Europe**

The macro-conditions shaping retirement decisions and consequences of prolonged labour force participation can be divided into economic, institutional, and cultural factors. First, economic factors relate to the economic development of the country and its indicators are wages, pensions, private savings, employment rate, and inequalities (Hofäcker 2015). Second, institutional conditions affecting retirement decisions are legal retirement age, early retirement options, and pension schemes (Börsch-Supan, Brugiavini, and Croda 2009; Di Gessa and Grundy 2013). Third, cultural factors contain values and norms connected to work and retirement (Petrová Kafková and Rabušic 2010). Some ways how these three groups of

macro-factors they can shape retirement decisions and outcomes are elaborated in the next paragraphs. Additionally, a focus on differences among European countries in these factors helps to formulate some expectations about the differences in the effect of prolonged working life across Europe.

The economic conditions, which have been better in Northern and Western, have a large explanatory potential for other areas of life (Inglehart 1990, 1997). Neves et al. (2013) found a higher risk of depression among unemployed 50+ in Southern and Eastern Europe, while there was no such effect in the rest of the continent. The authors do not provide any explanation, but the difference could be explained by a higher dependence on paid work in less wealthy countries. Furthermore, people from Southern Europe and Post-communist countries plan to work longer and seek for an extra job after retirement more often than people from other regions (Eurostat 2012). Thus, older workers from less wealthy countries can benefit more from paid work, as they get more financially secured than those who are not willing/able to work in the same age (Hofäcker 2015).

Institutional conditions of retirement are usually represented by a legal retirement age. However, this indicator has only moderate variations across Europe (Trading Economics 2017) caused mostly by the differences in a life expectancy (Salomon et al. 2012). The more relevant factor for this study is availability of early retirement, which is more prevalent in west and south than in other European regions (Eurostat 2014). Early retirement can be caused by negative conditions like higher unemployment or bad health status (Börsch-Supan et al. 2009; Radl 2013), but it often indicates the retirement by a choice and this more positive way is expected to prevail in countries with more available early retirement (Van Bavel and De Winter 2013; Dorn and Sousa-Poza 2010). Hence, the retirement expectedly has a more positive effect, if the early retirement possibility is more available.

Finally, the cultural settings can be also relevant for the studied relationship. The key value here is the value of work in a society, as more socially appreciated activity is often more beneficial for QoL (Neuberger and Haberkern 2014). Unfortunately, a research on cross-national differences in work values in later life is scarce. The research on the pre-retirement population in Czechia found that this age group is generally eager to retire (Rabušic 2004) and that their work values, satisfaction, and ambitions decrease in time (Petrová Kafková and Rabušic 2010). The last data collection of European Values Study indicates that older people experience higher value of work in Nordic countries than in Post-communist countries with the remaining two regions in the middle (EVS 2011). The differences of value of work between regions can be connected to a higher potential of work for self-expression and self-development, which are more important motivations in more developed countries (Inglehart 1990; Moulaert and Biggs 2013). Therefore, working longer can be more beneficial in Nordic countries due to more intrinsic and generally higher motivation to work with the Post-communist countries on the other end of the continuum.

Based on the presented literature, the effect of working on QoL is not expected to be strong, as both retirement and working have several beneficial and harmful effects. However, this paper prefers the ecological model to theory of role strain and theory of role enhancement as more plausible framework and expects the effect of working/retirement to differ across European regions. Then, the study hypothesizes more positive effect of working in countries with a better economic situation, less available early retirement, and more prevalent intrinsic motivation for work.

## **Data and methods**

## *Data*

This paper employs data from SHARE, which is a cross-national panel survey using computer-assisted personal interviews on probability samples of populations over the age of 50 and their partners. This project is unique in collecting information about a variety of topics relevant in later life, such as employment, living standard, health, social participation, social support, family structure, and QoL. So far, six waves of data collection were conducted between 2004 and 2015 with 21 countries participating in at least one wave (Börsch-Supan et al. 2013; Börsch-Supan 2017e). This study uses data from wave 6 collected in 2015 and released in 2017 to capitalize on the most current data from this project.

In total, 18 countries participated in wave 6 of SHARE. These countries are namely Austria, Belgium, Croatia, Czechia, Denmark, Estonia, France, Germany, Greece, Israel, Italy, Luxembourg, Portugal, Poland, Slovenia, Spain, Sweden, and Switzerland. This study focuses on the situation in different European regions. Hence, a) Israel as a non-European country was dropped from the sample and b) other countries were classified into the following regions: Nordic countries (Denmark and Sweden), Western Europe (Austria, Belgium, France, Germany, Luxembourg, and Switzerland), Southern Europe (Greece, Italy, Portugal, and Spain), and Post-communist countries (Croatia, Czechia, Estonia, Poland, and Slovenia).

The final sample contains respondents from 17 countries. Only respondents around the retirement age are used in the analysis, as the purpose of this study is to compare employed and retired older people of comparable characteristics. Regarding the institutional retirement age across examined countries (Trading Economics 2017) and distribution of the retirement age in SHARE data, respondents between 57 and 65 years of age were kept for the analysis. This age definition produced a sample with comparable numbers of working and retired respondents for three European regions. However, Nordic countries were the exception in this regularity – there were five times more workers than retirees of this age. This ratio lead to a

very ineffective matching, and also questioned the assumptions that mostly people around retirement exit are included. Therefore, the age range for this region was defined from 61 to 68 years to aim for a group of respondents around the retirement exit and get much more effective matching.

The last correction of the sample serves to the effort to make workers and retirees comparable in terms of health status. People who cannot work due to their health status seems to be in a different situation than those who work or those who entered the retirement for other than health reasons. Thus, respondents describing their working situation as being ‘permanently sick or disabled’ or choosing the option ‘own ill health’ as the main reason for early retirement were dropped from the sample. The final sample for the analysis contains 16,884 respondents from 17 countries after the described changes. 8,537 of them were identified as economically inactive and 8,447 as economically active.

### *Method*

The method of the analysis is presented first, as the chosen method predetermine selection, definition, and usage of variables. The main criterium of the method selection is the ability to address the research question – What is the effect of labour force participation in later life on the QoL compared to retirement – as plausibly as possible. The best way would be to compare the QoL of working person with the QoL of the same person in the same situation, when the only difference is being retired. This is not possible, but propensity score matching follows the same logic by matching individuals balanced in all relevant characteristics and creating counterfactuals, which are potential ‘state(s) of affairs that would have happened in the absence of the cause’ (Guo and Fraser 2010: 24).

Propensity score matching is a technique developed most of all by Rosenbaum and Rubin (1983, 1984, 1985), which aims for causal inference based on a comparison of two groups of individuals in the observational type of study. This method has been popular

especially in economics and medicine (Austin 2007; Becker and Ichino 2002; Guo and Fraser 2010), as it is designed for comparing outcomes between two groups without studying other effects, which also fits well with this study. The first step of propensity score matching is specifying the propensity score, which is defined as ‘the conditional probability of assignment to a particular treatment given a vector of observed covariates’ (Rosenbaum and Rubin 1984: 516), by estimating a treatment probability by potentially confounding variables. Propensity scores were estimated via probit model with retired/working as a dependent binary variable. The value of propensity score enables to match respondents from treated (work) and nontreated (retirement) group into pairs with balanced characteristics. The matching can be done by more techniques of pairing individuals. In order to eliminate a number of respondents dropped from the sample and to avoid matching of too distant observations at the same time, this paper uses two methods – Kernel matching and Radius matching with replacement. Radius matching uses caliper equal to 0.25 of the standard deviation of the propensity score (Rosenbaum and Rubin 1985), as this solution balanced two groups and reduced bias much better than caliper equal to 0.2 of the standard deviation of the logit of the propensity score suggested by Austin (2011). Finally, the average treatment effect with bootstrapped standard errors is estimated to indicate the effect of staying in the labour force.

The described procedure aims to address frequent threats to nonexperimental data, such as endogeneity, potential reversed causality (Di Novi et al. 2015), a possible bias from unspecified model (Posner et al. 2001), and inability to compare two groups of individuals based on one defining characteristic (Crown 2014; Zanutto 2006). Propensity score matching has also some drawbacks, such as omitting unobserved variables from the matching procedure (Crown 2014; Zanutto 2006) and a sample reduction due to unmatched individuals (Di Novi et al. 2015; Posner et al. 2001). Still, this analysis contains the most important predictors of QoL in older ages and techniques like linear regression are not better in controlling for

unobserved factors. Then, Radius matching keeps most of the respondents in the sample, while it drops only those outside the caliper. Additionally, groups of workers and retirees are of a comparable size in all regions, and the sample is thus not reduced substantively.

### *Outcome variable*

The subjective QoL measured by the CASP-12 scale is the outcome (*i.e.* dependent variable) of this study. CASP-12, which is a shortened version of original CASP-19, is the scale specifically developed ‘to measure the fulfilment of those human needs which are particularly relevant in later life’ (Platts et al. 2015: 2). These needs comprise four domains – control, autonomy, self-realization, and pleasure – and four letters of the CASP acronym. This measurement is theoretically grounded and empirically tested and makes a popular alternative to approaches reducing the QoL in older ages to health and disease (Higgs et al. 2003b).

CASP-12 is a summation scale comprised of four-point Likert-scale items, in which each of four domains is indicated by three items. Hence, CASP-12 has values from 12 to 48 with a higher score indicating higher QoL. This paper takes the approach of Di Novi, Jacobs, and Migheli (2015) and compares not only the overall CASP-12 score for working and retired, but also scores for particular domains of CASP-12. The four subscales then take values 4-12 and are considered as interval in the analysis. This approach makes possible to identify differences between workers and retired people in dimensions of QoL, which is one of the purposes of multidimensional scales like this (George 2010).

### *Treatment variable*

Older adults working around retirement age are defined as ‘treated’ by active ageing policy and policy of increasing retirement age in Europe. These people are treated in a sense that they continue to work (although they would probably retire without the mentioned policies) amid the promise of improved QoL. Retired people of the defined age range are taken as a

‘control group’, which indicates the QoL without a presence of the treatment. The retired/working variable originates from the current job status variable with categories ‘retired’ and ‘homemaker’ merged into ‘retired’ and categories ‘employed or self-employed’ and ‘unemployed’ merged into ‘working’. As already mentioned, respondents from category ‘permanently sick or disabled’ were dropped, since they are technically retired, but retired from specific reasons strongly shaping their QoL.

### *Covariates*

The propensity score matching technique used by this study uses covariates/independent variables for matching workers and retirees of the same characteristics. Thus, these variables are not used for predicting an outcome as in a regression-type of analysis, but rather for predicting the propensity score. The assumption is that respondents matched together on possible predictors of QoL in older ages differ only in their employment status, and thus can be compared in QoL without distortion (Austin 2007; Guo and Fraser 2010). Propensity score estimation should use covariates, which are strongly associated with both treatment and outcome, while it is preferable to include rather less than more variables (Caliendo and Kopeinig 2008). Therefore, the analysis utilizes the following variables, which are according to the literature (Daatland et al. 2010; Platts et al. 2015; Potočnik and Sonnentag 2013) the main possible cofounders of the studied relationship.

Probit models estimating propensity scores contain three continuous, two dichotomous, and two formerly categorical predictors transformed to dummy variables. The continuous predictors are age, years of education and net household assets (assets seem better for indicating material resources than income on the threshold of retirement). Gender (male/female) and partner in the household (no/yes) are the employed dichotomous variables. Finally, health (fair or poor/good/very good/excellent) and countries in a region listed in the data section are used as dummy variables.

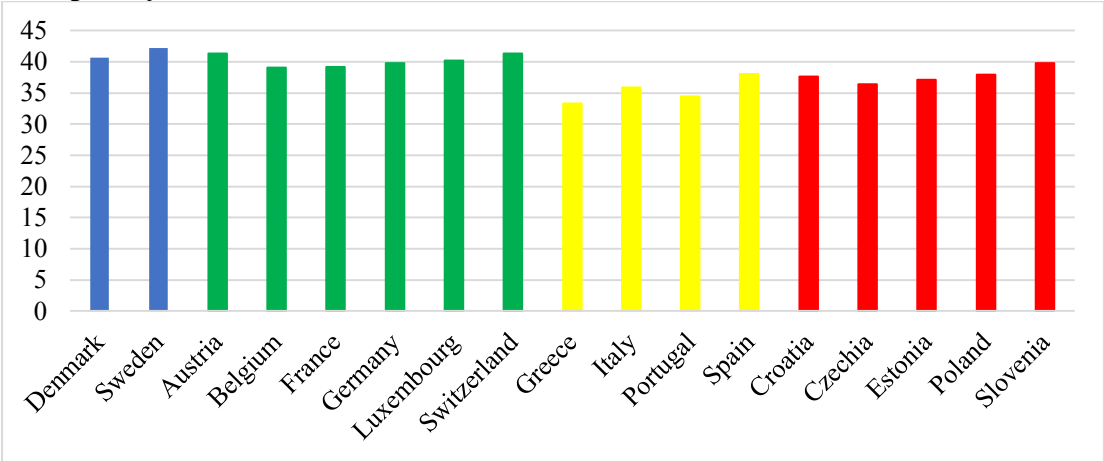


**Results**

*Description of the outcome variable*

The scale CASP-12 indicating the subjective QoL takes all possible value from 12 to 48 in the sample. It has mean value 38.2, median 39, and modus 42, which indicates that majority of respondents reached quite high value of QoL. Figure 7 displays differences of QoL across countries and regions in the sample. Countries from Northern Europe and Western Europe have higher means, while Post-communist countries have lower and Southern Europe the lowest. The differences have a clear pattern, although their magnitude is nor large regarding scale length and standard deviation 5.8. This overview shows that the four regions are quite consistent in the outcome and that the differences are not large, which are good assumptions for further analysis.

**Figure 7: Differences among countries and regions in subjective QoL measured by CASP-12. Nordic countries are coloured in blue, Western Europe in green, Southern Europe in yellow, and Post-communist countries in red.**



Source: These calculations use data from SHARE, wave 6.

*The process of matching*

The matching procedure has a meaning only if the treated and untreated groups differ in key cofounding characteristics. Table 1 shows that they differ considerably and in expected

directions across all four regions. Retired people are generally older, less educated, and possess fewer material resources than their working counterparts. Further, retirement is more frequent among women, people living without partners, and people with worse health status. Generally, the differences between retirees and workers have the same direction, but different magnitude across regions. The main difference seems to appear between Northern/Western Europe and Southern/Post-communist countries. The latter group of countries shows higher differences between retirees and workers in gender and education, which imply higher dependence of retirement decisions on these characteristics.

**Table 1: Descriptive statistics of pre-matched variables – means (for the first three variables) and column percentages**

		Total	Retired	Working
Nordic countries	Age	64.6	66.0	63.2
	Years of education	13.3	13.1	13.6
	Financial assets (thsd\$)	150.5	143.4	156.8
	Gender – female	52.0	55.8	48.2
	Living with partner	80.2	81.4	79.0
	Health – poor or fair	14.5	16.9	12.0
	good	28.3	28.6	27.9
	very good	34.1	34.9	33.3
	excellent	23.1	19.6	26.8
	Denmark	46.5	49.0	41.8
	Sweden	53.5	51.0	58.2
	N	1824	925	899
Western Europe	Age	61.1	62.5	59.4
	Years of education	12.0	11.6	12.4
	Financial assets (thsd\$)	100.5	84.3	115.8
	Gender – female	55.4	59.9	51.5
	Living with partner	77.7	80.0	75.7
	Health – poor or fair	20.2	22.9	18.0
	good	44.4	44.4	44.3
	very good	26.5	24.8	28.0
	excellent	8.9	7.9	9.7
	Austria	13.3	18.3	8.8
	Belgium	24.8	26.3	23.6
	France	18.4	21.7	15.5
	Germany	20.7	13.8	26.8
	Luxemburg	8.4	12.2	5.0
	Switzerland	14.4	7.7	20.3
N	5667	2662	3005	
Southern Europe	Age	61.2	61.9	60.3
	Years of education	10.3	9.6	11.0
	Financial assets (thsd\$)	15.2	11.6	19.0
	Gender – female	56.2	68.5	43.6
	Living with partner	83.9	85.4	82.4
	Health – poor or fair	25.5	28.4	22.5
good	42.0	41.1	42.9	

	very good	24.7	23.3	26.0
	excellent	7.8	7.2	8.5
	Greece	31.6	36.6	26.5
	Italy	30.0	30.7	29.3
	Portugal	9.1	8.5	9.7
	Spain	29.3	24.2	34.5
	N	4511	2287	2224
Post-com. countries	Age	61.2	62.4	59.8
	Years of education	11.9	11.2	12.8
	Financial assets (thsd)	5.9	5.3	6.8
	Gender – female	58.6	65.9	49.8
	Living with partner	78.9	79.3	78.4
	Health – poor or fair	38.5	39.0	36.8
	good	40.9	41.8	39.9
	very good	14.9	13.0	17.1
	excellent	5.7	5.2	6.2
	Croatia	15.3	15.8	14.6
	Czechia	25.5	26.2	24.7
	Estonia	24.0	14.5	35.4
	Poland	10.1	10.1	10.2
	Slovenia	25.1	33.4	15.1
	N	4882	2663	2219

*Source:* These calculations use data from SHARE, wave 6.

The main message of Table 1 is the presence of a different distribution of possible confounders between retired and working respondents. This creates bias in comparing the QoL between two groups, which is reduced by propensity score matching. Radius and Kernel matching were conducted for each region separately and were successfully balanced on the level  $p=0.001$ . Table 2 presents values of mean standardized bias and its reduction by two methods of matching in four European regions. The mean bias is reduced by around 80 per cent, which means the effective balancing of retirees and workers in the key characteristics. This statement is supported by the decrease of Pseudo R2 from values 0.17-0.34 to almost zero in all matching models. The decrease indicates that covariates lost their explanatory power during the matching process. The bias reduction is similar for Radius matching and Kernel matching, although it was much lower for Radius matching before usage of Rosenbaum and Rubin's (1985) specification of caliper width.

**Table 2: Results of covariate balancing test – difference between matched and unmatched sample across matching methods and regions**

		Before matching	After matching	
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		Pseudo R2	Mean bias	Pseudo R2	Mean bias	per cent of bias reduction
Nordic countries	Radius matching	0.32	25.7	0.01	7.0	72.8
	Kernel matching	0.32	25.7	0.01	5.4	79.0
Western Europe	Radius matching	0.30	22.0	0.01	4.2	80.9
	Kernel matching	0.30	22.0	0.01	3.9	82.3
Southern Europe	Radius matching	0.17	20.6	0.00	3.7	82.0
	Kernel matching	0.17	20.6	0.00	3.8	81.6
Post-com. countries	Radius matching	0.35	34.2	0.02	6.2	81.9
	Kernel matching	0.35	34.2	0.01	6.0	82.5

*Source:* These calculations use data from SHARE, wave 6.

### *The results of average treatment effect (ATT)*

Table 3 shows ATTs of labour force participation for four European regions. Radius matching uses caliper equal to 0.25 of the standard deviation of the propensity score (Rosenbaum and Rubin 1985), which takes values from 0.057 to 0.080 depending on a specific region. Kernel matching is similarly effective in the bias reduction as Radius matching (Table 2), but due to a different procedure produces slightly different results. Still, the direction of the effects is always the same, and thus the results are commented for both methods together. The employment of two methods using the different logic of matching aims for more robust results, since none of them is seen as a preferable option (Caliendo and Kopeinig 2008).

The ATT of employment on QoL in later life substantially differs across regions. On the one hand, the ATT is negative for Nordic countries and Western Europe, which is true mainly for the domain of autonomy and for the CASP-12 scale as a whole. On the other hand, data from Southern Europe and Post-communist countries shows the positive ATT of working on CASP-12 scale. This positive effect is more profound for dimensions control over life in both regions and pleasure together with self-realization in Post-communist countries. The results generally show moderate to weak ATT without strong substantive meaning and most of them is not highly statistically significant. Nevertheless, the pattern in the results seems clear and indicates the consistent effect of labour force participation on subjective QoL, which clearly differs on the north-west versus south-east European axis. Apart from this overall

pattern, some effects are stronger than other and consistent across regions and methods, and they thus can be interpreted in the discussion.

**Table 3: The effect of working in older ages on QoL – average treatment effects of Radius and Kernel matching in four European regions**

		Radius matching		Kernel matching	
		ATT	S.E.	ATT	S.E.
Nordic countries	CASP	-0.32	0.22	-0.63*	0.29
	Control	-0.10	0.09	-0.20+	0.11
	Autonomy	-0.15+	0.08	-0.18+	0.10
	Self-realization	-0.05	0.06	-0.13	0.08
	Pleasure	-0.03	0.08	-0.12	0.11
Western Europe	CASP	-0.32+	0.16	-0.34	0.24
	Control	-0.07	0.06	-0.07	0.09
	Autonomy	-0.15**	0.05	-0.10	0.08
	Self-realization	-0.06	0.05	-0.10	0.06
	Pleasure	-0.04	0.05	-0.07	0.05
Southern Europe	CASP	0.51**	0.17	0.12	0.21
	Control	0.22**	0.07	0.11	0.07
	Autonomy	0.10	0.06	-0.02	0.07
	Self-realization	0.08	0.05	0.02	0.06
	Pleasure	0.11+	0.06	0.01	0.07
Post-com. countries	CASP	0.63**	0.17	0.83***	0.19
	Control	0.22**	0.07	0.26*	0.11
	Autonomy	0.03	0.07	0.04	0.09
	Self-realization	0.11*	0.05	0.23*	0.11
	Pleasure	0.27***	0.06	0.30*	0.13

Source: These calculations use data from SHARE, wave 6.

Notes: + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

## Conclusion and discussion

*This paper tests the assumption of the active ageing approach that a prolonged working career improves the subjective QoL.* This assumption is evaluated for four European regions separately by comparing QoL of retirees and workers around retirement age, which are matched on possible confounding characteristics. The most recent wave of SHARE data containing countries from all main European regions is utilized for propensity score matching technique. Respondents from each European region separately are successfully matched, and then the effect of working (compared to retirement) clear of other main characteristics is estimated.

The effect of working in later life clearly differs across European regions. *The effect is positive in Southern Europe and Post-communist countries, while it tends to be negative in Nordic countries and Western Europe.* This implies a context-sensitive effect of working in later life as expected by the ecological perspective (Bronfenbrenner 1986) rather than more definite effect predicted by Goode (1960) or Sieber (1974). Importantly, most of the effects on subjective QoL and its dimensions are not large in their magnitude and significant at lower levels or not at all. Hence, the effect of working is not very strong for any region, which supports the assumption that the effect is a compilation of many both positive and negative effects (Andersson 2004; Di Gessa and Grundy 2013; Horner 2014; Walker 2004). Nevertheless, the tendency is consistent.

Working longer in Southern Europe and Post-communist countries means a higher QoL generally, but also higher control over life and pleasure. This can imply that some income from labour force participation is important for ensuring safety and a satisfactory living standard within these settings. In contrast, a prolonged working career in Nordic countries and Western Europe seems to mildly decrease QoL, and particularly a feeling of autonomy. Lower autonomy connected to working indicates that constraints connected to job duties are probably more important here than possibilities stemming from higher income. Further, the effect of working on pleasure and self-realization is also not positive, and thus the paid job is not a pre-requirement of the opportunities in these matters. In any case, *the effect of retirement/working is strongly context-dependent*, similarly as the effect of caregiving among older adults (Neuberger and Haberkern 2014; Di Novi et al. 2015).

This paper hypothesized that the effect of working in later life depends on economic, institutional, and cultural macro-conditions, while the analysis provides only indirect evidence of the importance of these factors. It seems that older people in regions with more intrinsic motivation to work – which is most of all Northern Europe – do not benefit from the labour

force participation. Possibly, people from this context have intrinsic motivation and enough resources to enjoy the retirement as well (Timonen 2016). More available early retirement in Western and Southern Europe also does not explain the differences among regions. Therefore, the positive effect of working in Southern Europe and Post-communist countries can be a result of an unsatisfactory income in retirement (this factor cannot be used for matching, as income in retirement is incomparable with wages). This explanation is supported by a) a higher need to work due to financial reasons in these regions (Eurostat 2012; Hofäcker and Naumann 2015) and b) beneficial effect of working on control over life and pleasure rather than autonomy and self-realization from the estimated factors of QoL.

*Importance of income* is likely to explain the regional differences in the effect of working. This rather denies a statement ‘that well-being in later life is associated not with social engagement per se but with engagement in activities that an individual chooses freely and finds meaningful’ (Roanova, Keating, and Eales 2012: 26) and supports a priority of material needs in case they are not fulfilled (Inglehart 1971, 1990; Maslow 1943). More importantly, such conclusion would have some implications for the active ageing approach, which presents prolonged labour force participation as a source of higher QoL (Avramov and Maskova 2003; EU Council 2012; European Commission 2013). The results suggest that this is true in Southern Europe and Post-communist countries, but probably only due to a provision of more satisfactory income. In that case, the prolonged careers would improve QoL only in a situation of an inadequate amount of pension/savings. This assumption may become increasingly relevant throughout Europe, if the privatization of pension systems proceeds (Ebbinghaus 2012b; Kohli and Arza 2010). Ultimately, ‘the increased reliance on employment-related or defined-contribution benefits will increase the risk of poverty and increase inequality in old age’ (Ebbinghaus 2012: 3). This inequality based rather on class than prolonged employment may be more present in the whole Europe, and thus *satisfactory*

*conditions of retirement should be an aim complementary to working incentives for those, who are willing and able to work longer.*

The conclusions of this study are limited in several ways. The first group of limitations concerns limitations of propensity score matching method: a) propensity score matching matches only on variables included in the predictive model; hopefully, the most important confounders are present in the analysis, although some loss of information is inevitable, b) the method reduces sample significantly, and thus makes the sample less representative – this is to some degree addressed by two different types of matching and constructing comparable groups of workers and retirees. The second group of limitations is related to the fact that the macro-effects cannot be directly observed in this study. The effort to distinguish interrelated effects of economic, institutional, and cultural factors is based more on thought experiments than on the ability to distinguish them in the data. Thus, their interpretation should be taken with caution and the illustrated existence of the regional differences is more an inspiration for a future research.



## **Chapter 4: Is Providing Informal Care a Path to Meaningful and Satisfying Ageing?**

**Abstract:** This study examines the relationship between the provision of informal care and three specific feelings important in later life – loneliness, meaningfulness of life, and overload. The paper contributes to the research of this frequently studied topic through examining effects of the intensity and multiplicity of care as well as the availability of formal care at the national level to consider the complexity and context-dependence of the effect of caregiving. Data from the Survey of Health, Ageing and Retirement in Europe for 14 countries is analysed using multilevel ordinal logistic regression. The general effect of providing care is enhancing and this effect is even more pronounced for multiple caregiving. However, this beneficial effect is weak or non-existent for very intensive care. Further, higher availability of formal care is beneficial, but the positive association between caregiving and quality of life is strengthened by this macro-factor only for less intensive care. Overall, the theory of role accumulation is more suitable to explain the provision of care at older ages than the theory of role strain, but available formal care is a suitable complement for situations in which the burden of caregiving is too high.

**Keywords:** caregiving; quality of life; active ageing; SHARE; cross-national research

## Introduction

Almost every population around the world is currently ageing, due to the demographic transition from high fertility and high mortality to low fertility and low mortality (Timonen 2008). Active ageing is both a concept and a policy that has been developed in response to these rapid changes in the age structures of populations in Europe and elsewhere. Active ageing approach supports several types of activities including caregiving in order to maximize quality of life (QoL) of older people. The consequences of all of these activities are expected to be predominantly positive; no variations in their aspects or impacts have been distinguished (EU Council 2012; European Commission 2013; Marsillas et al. 2017). Still, it can be supposed that, for example, the provision of care is often exhausting or dictated by circumstances. Caregiving has the potential to raise life satisfaction among older people, but only under certain conditions (Moen *et al.* 1995). Some of the most important conditions are mentioned in this paper and incorporated into the analysis.

This study investigates which dimensions of subjective QoL are connected to the provision of informal care and how this connection depends on the intensity, multiplicity, and voluntariness of the caregiving. Data from the Survey of Health, Ageing and Retirement in Europe (SHARE) are utilized to deal with this topic. The analysis, based on the data from 14 European countries, provides several contributions to existing research. First, the indicators of the provided care reflect all of the types of care provided to all potential recipients instead of just one type of care, and they also reflect the intensity and multiplicity of care. Second, the cross-national nature of the data makes it possible to control for the availability of formal care and its variations across Europe. Finally, some specific feelings that are important in later life (loneliness, meaningfulness of life, and overload) are examined, instead of the vague and multidimensional measurement of QoL used in most studies. The results indicate that *the*

*effect of providing care in later life is generally beneficial, although this is not true for very intensive care.* Further, multiple care is more beneficial than care provided to one recipient, and the accessibility of formal care strengthens the beneficial effect only under certain conditions.

## **Literature Review**

### *Costs and Benefits of Informal Caregiving*

The basic assumption of active ageing theory is the notion that higher level of participation leads to increased personal health and well-being (Marsillas et al. 2017; Walker 2009). This notion, supporting the performance of more roles in later life, is highly compatible with the main idea of the theory of role accumulation. This theory argues that role accumulation has mostly positive outcomes (Sieber 1974). The beneficial effect of additional roles is supported by some empirical research. In particular, studies focused on the effect on life satisfaction of caregiving at older ages have found that care provision has positive consequences (De Jong Gierveld and Dykstra 2008; Potočnik and Sonnentag 2013).

Not all authors agree with the beneficial effect of additional roles for older adults. According to the theory of role strain, involvement in multiple roles leads to conflicts in demands or obligations among competing roles under normal conditions (Goode 1960). Role strain for older caregivers is well-documented in empirical studies (Colombo et al. 2011; Mui 1995; Reid and Hardy 1999). It is evident from the results of these studies that the effect of caregiving (as well as many other roles) depends on the context. Moen et al. (1995) and Penning (1998) reach this same conclusion in their studies.

The effect of providing care on QoL in older carers indeed depends on specific conditions. This topic has not been systematically examined, but it seems that caregiving has more positive outcomes when it is less intensive (Broe *et al.* 1999; Broese van Groenou *et al.*

2013; Colombo *et al.* 2011) and more voluntary (Broese van Groenou *et al.* 2013; Lowenstein *et al.* 2008), while the effect of multiplicity of care remains unclear (Chassin *et al.* 2010; De Jong Gierveld and Dykstra 2008). The next section explains these factors in more detail.

### *Factors Affecting Caregiving Outcomes*

Several studies illustrate that intensive care has a detrimental effect on the consequences of caring (Broe *et al.* 1999; Broese van Groenou *et al.* 2013; Colombo *et al.* 2011). A direct explanation for this effect is the fact that more intensive caregiving consumes more time and energy (Broese van Groenou *et al.* 2013). Additionally, more intensive provision of care is often dictated by circumstances of less accessible formal care (Igel *et al.* 2009) or of fewer family members accessible for sharing family responsibilities (Broese van Groenou *et al.* 2013). These findings explain why more intensive care is associated with a higher burden and other negative consequences. Occasional care does not seem to significantly change subjective QoL (Broe *et al.* 1999; Colombo *et al.* 2011), and thus, this paper investigates the effect of intensity by comparing the effect of regular care performed almost weekly or more often to the effect of very intensive care performed almost daily or more often.

The multiplicity of care has an unclear impact on QoL. Multiple caregiving is beneficial according to De Jong Gierveld and Dykstra (2008) and Pines *et al.* (2011), but harmful according to studies by Chassin *et al.* (2010) and Remennick (1999). The findings seem to imply that the nature of the effect of providing care to multiple recipients is connected to the intensity of the care provided (De Jong Gierveld and Dykstra 2008).

Unfortunately, most of the cited studies do not mention a precise minimum intensity of care provided by those respondents defined as ‘caregivers’. This intensity, in various studies, seems to range from at least one hour per week (Chassin *et al.* 2010), to co-residence with children and at least a few hours of help to parents per week (Pines *et al.* 2011), to very intensive care for more family members (Remennick 1999). Hence, previous inconsistencies

among studies can be tentatively explained by stating that multiple caregiving is beneficial only to a certain level of intensity of caring. This paper is interested in the regular provision of care; accordingly, the effect of multiple caregiving is expected to be negative.

The effects of both intensity of care and multiplicity of care indicate similar characteristics of care, and thus, it might be redundant to investigate both. However, it seems that multiple caregiving is of a different quality than merely the sum of its frequencies, because more roles often exist in subjectively perceived tension or conflict (Boudiny 2013; Coverman 1989; Goode 1960), and a negative effect of multiple caregiving on health has been found even if the total amount of provided care is controlled (Chassin et al. 2010). Hence, this paper aims to examine the caregiving situation in its complexity by elaborating on both intensity of care and the number of caregiving relationships. Further, a broad definition of care provided within or outside the household to all possible family and nonfamily members is employed, so no caregiving activity is omitted in the analysis.

The broader definition of care prevents investigating the effect of the relationship between the caregiver and the care receiver on caregiving outcome, which has been found by other studies (Broese van Groenou et al. 2013; De Jong Gierveld and Dykstra 2008). The analysis would be too extensive for one paper if this factor is also included. However, it is not the aim of the paper to control for this already explored factor but to examine the effect of caregiving as a potentially beneficial activity in later life. Active ageing assumes a beneficial effect of providing care exists, irrespective of personal characteristics and the characteristics of caregiving (European Commission 2013; Zaidi 2015). Thus, it is legitimate to study the overall effect of caregiving in older adults and its potential explanations.

The last important factor of care addressed is voluntariness of care. Voluntary care means that a caregiver can manipulate role obligations and have some alternative options for satisfying them. The opposite is the case under the synonyms of involuntary (Schmid *et al.*

2012; Szinovacz 2008), normative (Lowenstein et al. 2008), or obligatory (Igel et al. 2009) care. Involuntary care exists mostly in situations in which formal care is not available and a caregiver is forced to provide (often intensive) practical help to someone close. Involuntary care could be a consequence of a lack of caregivers in the family (Broese van Groenou et al. 2013) or insufficient access to formal care. Involuntary care is more prevalent in countries with less available social services and stronger familial norms, in which individuals are more often pushed by circumstances into more demanding provision of care (Albertini *et al.* 2007; Igel *et al.* 2009).

The voluntariness of provided care seems to have a positive effect on care outcomes (Broese van Groenou et al. 2013; Lowenstein et al. 2008). However, it is difficult to indicate this characteristic of care in data, which is especially true at the individual level of survey data. Therefore, the voluntariness of provided care is indicated by the macro-level factor of availability of formal care, since a higher availability of formal care in a country creates an alternative for informal caregivers, and provision of care is thus more voluntary (Albertini et al. 2007; Igel et al. 2009; Motel-Klingebiel, Tesch-Roemer, and Von Kondratowitz 2005).

### *Subjective QoL and Related Concepts*

A general aim of many policy programmes focused on older people – including active ageing policy programmes – is to increase the QoL of the target population (Walker 2009). However, QoL is not easy to define, as it has been conceptualized and measured in many ways. Even with a focus on the subjective assessment of life in general, many concepts, such as subjective QoL, life satisfaction, well-being, psychological distress, happiness, mood, and affect, have been interpreted in very similar ways and used almost as synonyms (Katz 2009; Mcilvane et al. 2007; Roll and Litwin 2013). All of these concepts are general, vague, and potentially encompass several domains or dimensions (Bowling 2005).

This paper argues that, besides the extensive existing research examining life satisfaction generally, it is useful to research three specific domains QoL in older ages. First, De Jong Gierveld and Dykstra (2008) have found that (multiple) care provision substantially reduces loneliness, which is a very prevalent phenomenon in older ages (Shiovitz-Ezra 2013), strongly related to depression (Tsai *et al.* 2013). Second, meaningfulness of life is another important part of well-being and other desired outcomes of later life (Bauer and Park 2010; Boyle *et al.* 2009; van Kessel 2013; Krause 2009; Nygren *et al.* 2005). The effect of caregiving on meaningfulness of life may be positive, as providing care seems to be one of the possible answers to existential issues in late mid-life (Pines *et al.* 2011), and it enhances meaningfulness of life by fulfilling social roles and personal ethics (Di Novi *et al.* 2015). Third, previous research has found an association of intensive care with higher strain and burden (Broese van Groenou *et al.* 2013; Colombo *et al.* 2011; Reid and Hardy 1999), which may indicate a negative association between caregiving and overload corresponding to role strain theory (Goode 1960). Generally, the effect of providing regular care on loneliness, meaningfulness of life, and overload is expected to differ from the predominantly not significant (Baydar and Brooks-Gunn 1998; Siegrist and Wahrendorf 2009) or negative (Broe *et al.* 1999; Colombo *et al.* 2011; Ekwall *et al.* 2004) effect on subjective QoL in its vague and multidimensional conceptualizations.

This study examines the association between caregiving and three dimensions of subjective QoL. The paper hypothesizes that the regular provision of care reduces loneliness and increases meaningfulness of life (role enhancement hypothesis) but also increases perceived overload (role strain hypothesis). Furthermore, it is expected that the effect of caregiving on all three aspects of subjective QoL is more negative/less positive in situations in which the caregiver provides more intensive care and in which the caregiver provides care to more recipients. This paper also hypothesizes that the effect of caregiving is more

positive/less negative in countries with a higher availability of formal care, because the provision of care is more voluntary and optional under this condition.

## **Data, Measurement, and Methods**

### *Data*

This paper utilizes data from the Survey of Health, Ageing and Retirement in Europe (SHARE). SHARE is a panel cross-national project in which data are collected by computer-assisted personal interviews (Börsch-Supan et al. 2013; Börsch-Supan 2017d). This paper uses data from wave 5, which enables the analysis of recent data collected from large national samples from various parts of Europe at a single time point (Stolz 2015). Data from all 14 European countries participating in wave 5 (Austria, Belgium, Czechia, Denmark, Estonia, France, Italy, Germany, Luxembourg, Netherlands, Slovenia, Spain, Sweden, and Switzerland) are analysed in this study.

Descriptive statistics, including a list of the countries and their sample sizes, are included in Table 4. Some respondents from the sample have been dropped due to missing values and the spouses of original respondents under the age of 50 have also been omitted from the analysis. Then, respondents aged 90+, representing approximately one percent of the sample, have been excluded to avoid a distortion by extreme values. If there are more respondents for one couple, one person called the ‘family respondent’ is defined as the respondent who was interviewed first and answered the modules about care and relatives on behalf of her/his household. Every household in this study is represented by the family respondent. Hence, people from households with more than one respondent aged 50+ are not overrepresented in the final sample.

The entire sample consists of 40,748 respondents after deletions. The sample size for each country can be reconstructed from the size of the overall sample and the proportions of



the countries in the percentages displayed in Table 4 – the number of respondents per country varies from 1160 respondents for Luxembourg to 3770 respondents for Belgium. Other variables have plausible distributions and quite comprehensible values. The distribution of age is positively skewed among 51 and 90 years with a mean of 67 and a median of 66. Most of the independent variables are measured at the level of individuals, but one country-level variable and one cross-level interaction are also included in the analysis. Therefore, individuals and countries constitute two levels in a multilevel data structure. The only variable at the level of countries – percentage of employees in social services – has been standardized, and thus does not have comprehensible values. Nevertheless, the highest ratio of these employees is predictably in Sweden, the Netherlands, and Denmark, while Estonia, Slovenia, and Czechia have the lowest values.

**Table 4: Descriptive statistics of the cross-sectional sample of respondents used in an analysis**

Variable	Categories or range	Per cent or mean
Feelings of loneliness	Hardly ever or never	73.9
	Some of the time	18.9
	Often	7.2
Life has meaning	Never	2.4
	Hardly	6.4
	Sometimes	21.8
	Often	69.4
Do the things you want to do	Often	51.7
	Sometimes	28.8
	Hardly	13.3
	Never	6.2
Care activities – weekly or more	0	66.8
	1	22.7
	2	7.7
	3	2.1
	4 and more	0.7
Care activities – daily or more	0	84.6
	1	12.5
	2	2.4
	3 and more	0.5
Age	51 – 90	67.0
Gender	Male	41.5
	Female	58.5
Health	Unhealthy	37.2

	Healthy	62.8
Employment status	not working	69.0
	part-time	10.3
	full-time	20.7
Education (ISCED)	ISCED 0,1	20.3
	ISCED 2-4	56.4
	ISCED 5,6	23.3
Partner in the household	No	38.0
	Yes	62.0
Number of surviving parents	0 – 2	0.3
Number of siblings	0 – 9	1.9
Number of children	0 – 7	2.1
Number of grandchildren	0 – 13	2.5
Standardized proportion of employees in social services	-1.33 – 1.99	0.00
Country of residence	Austria	6.9
	Belgium	9.2
	Czechia	9.0
	Denmark	6.6
	Estonia	9.0
	France	7.3
	Germany	8.9
	Italy	7.0
	Luxembourg	2.8
	Netherlands	6.8
	Slovenia	5.1
	Spain	8.9
	Sweden	7.5
	Switzerland	5.0

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*Notes:* These calculations use data from SHARE, wave 5. N=40,748.

### *Dependent Variables*

Three single-item variables are employed to indicate the three selected dimensions of subjective QoL. Loneliness is measured by the question ‘How much of the time do you feel lonely? Often/Some of the time/Hardly ever or never’. This single-item measurement of loneliness is a valid measurement of loneliness, which highly correlates with the 20-item original UCLA scale of loneliness (Aartsen and Jylhä 2011; Park et al. 2013; Theeke 2009). Questions about the meaningfulness of life and overload are originally items from the CASP-12 scale measuring subjective QoL at older ages; items from this scale have been used repeatedly as indicators of specific concepts (Jansen et al. 2010; Towers et al. 2015). The item

‘I feel that my life has meaning’ indicates meaningfulness of life and a negative evaluation of the item ‘I can do the things that I want to do’ indicates overload in the analysis. Both items have options ‘Often/Sometimes/Not often/Never’. The original scales for indicators of loneliness and meaningfulness have been reversed, so higher values indicate higher loneliness, higher meaningfulness, and higher overload in the analysis.

### *Main Explanatory Variables*

The provision of care is measured by two different variables, which have been constructed from the SHARE module ‘Social support’, which examines the provision and intensity of caregiving to parents and parents-in-law, spouses, children, grandchildren, and many other relatives, as well as to friends and other nonrelatives. Three questions on caregiving are used to construct this broadly defined indicator of care provision: 1. ‘Which family member from outside the household, friend or neighbour have you helped in the last twelve months’; 2. ‘Which of your children is the parent of the grandchild you have looked after’; and 3. ‘Is there someone living in this household whom you have helped regularly during the last twelve months with personal care (...)’? Each of these questions is preceded by a general question on a given type of care and followed by a request to specify the intensity of activity. These questions measuring the number and intensity of caregiving relationships have been converted to an indicator of care provided almost weekly or more often (values are 0, 1, 2, 3, or 4 and more caregiving relationships of this intensity) and care provided almost daily or more often (values 0, 1, 2, or 3 and more caregiving relationships). These two explanatory variables directly determine the effect of care multiplicity by their values and indirectly obtain the effect of intensity of care by comparing their coefficients.

The two variables of caregiving described above indicate the frequency and multiplicity of care, while the percentage of employees in health and social services indicating the availability of formal care at the national level (OECD 2017) indirectly indicates the

voluntariness of care on the individual level. This variable is ‘the best measurable public substitute for practical support between generations’ (Brandt and Deindl 2013: 240) and apparently also the most frequently used one (Brandt and Deindl 2013; Igel et al. 2009; Schmid et al. 2012), as it focuses on time transfers instead of financial ones. The only macro-level variable has been standardized to make fixed effects more easily interpretable.

All of the models in the analysis contain the cross-level interaction between the availability of formal care and the care provided by respondents to find the differences in the effect of caregiving by the availability of formal care. The provision of care in the interaction is treated as a continuous variable, even though the main effect is treated as categorical. The linearity of the interaction has been checked. This step makes the results easily interpretable and more appropriate for testing the hypotheses without disadvantaging the models (Francoeur 2011; Pasta 2013).

### *Control Variables*

Various continuous and categorical control variables are used in the analysis, and almost all of them are characteristics of respondents measured at the first level of the data structure. Most of the continuous controls are measures of family structure: number of surviving parents, number of siblings, number of children, and number of grandchildren. These four variables are topcoded – approximately one percent of the highest and rarest values are merged into one category to eliminate outliers. The last measure of family structure is a binary variable: ‘partner lives in the same household’ (yes/no). Family members can increase the demands of caregiving, but they can also lower the care burden for the respondent through their own provision of care (Di Novi et al. 2015). Just two other continuous control variables remain on the list: age and age squared of the respondent. All continuous variables have been centred on their mean to make the results easily interpretable.

The remaining categorical controls are the following characteristics of the respondent: *sex* (male/female), *subjective health status* (the category ‘unhealthy’ consists of the categories *poor* and *fair*, the category ‘healthy’ from the options *good*, *very good*, and *excellent*; this dichotomization is widely used and does not affect results, see e.g. Contoyannis and Jones 2004; Di Novi *et al.* 2015; Piko 2007), *employment status* (not working, working part-time, working full-time), and finally, the *educational level* of the respondent (the ISCED scale is divided into three categories 0-1, 2-4, and 5-6; this categorization is the most meaningful, according to the International Labour Office 2012).

More macro-level variables than the indicator of the availability of formal care could have been added to the analysis as control variables to make use of the multilevel data structure. However, the most relevant macro-factors are closely interrelated, and multicollinearity appears to represent a serious issue. For instance, the percentage of employees in social services correlates 0.64 with GDP per capita, -0.79 with the strength of caregiving norms, and -0.84 with the level of familialism. None of these or the other macro-factors improve the models or produce significant findings in combination with the percentage of employees in social services.

## **Results**

The models for the three domains of QoL predicted by caregiving provided weekly or more often and by all control variables are presented in Table 5. The effect of caregiving is still strongly beneficial, with all coefficients highly significant. Furthermore, the approximately linear effect of caregiving illustrating the beneficial effect of multiple provision of care remains present in the models. Based on the significance levels, the strongest beneficial effect of caregiving is the effect on meaningfulness of life, followed by the effects on loneliness and overload in descending order, although the differences are small.

Most of the parameters in the three models are similar for loneliness, meaningfulness of life, and overload. The age of the respondent is related positively to a higher QoL with a reversal of that effect in very old age. Women feel lonelier than men, but perceive their lives as more meaningful; they do not differ in overload from men. Generally, beneficial effects are indicated by better health, higher education, active employment, and a partner in the household, with the last factor being especially important in reducing loneliness. Coefficients of the variables indicating family structure (number of surviving parents, siblings, children, and grandchildren) are mostly not significant, except for a moderate positive effect of siblings and a stronger positive effect of children on the meaningfulness of life.

The effects of special interest are represented by the coefficients of the macro-factors and especially the coefficients of the cross-level interaction. The higher proportion of employees in health and social services is beneficial for QoL in all three indicators (though the effect on loneliness is not significant, with  $p=0.205$ ). However, the coefficients of the cross-level interaction reveal more complicated findings. An increase in the accessibility of formal care for one standard deviation decreases the beneficial effect of caregiving on loneliness by 0.051, which makes the coefficient -0.032 for one caregiving relationship under this condition. In contrast, the same increase makes the provision of care more beneficial for meaningfulness and overload by approximately the same number. Hence, caregivers generally experience less loneliness, higher meaningfulness of life, and less overload than people not providing care; this beneficial effect is weaker for loneliness and stronger for the other two dependent variables in countries with more developed welfare services. Therefore, more voluntary care is more beneficial for two indicators of QoL out of three.

**Table 5: Ordinal multilevel logistic regression of three domains of subjective QoL – number of care activities performed almost every week or more often as the main explanatory variable**

	loneliness	meaning	overload
Care activities			

0 (reference category)			
1	-0.083**	0.159***	-0.079**
2	-0.196***	0.264***	-0.168***
3	-0.321***	0.548***	-0.134+
4 and more	-0.373*	0.433**	-0.280*
Age	-0.188***	0.171***	-0.255***
Age squared	0.001***	-0.001***	0.002***
Gender			
male (reference category)			
Female	0.215***	0.150***	0.000
Health			
unhealthy (reference category)			
Healthy	-0.735***	0.884***	-0.828***
Employment status			
not working (reference category)			
part-time job	-0.310***	0.380***	-0.367***
full-time job	-0.528***	0.528***	-0.371***
Education			
ISCED 0-1 (reference category)			
ISCED 2-4	-0.166***	0.251***	-0.230***
ISCED 5-6	-0.184***	0.520***	-0.513***
Partner in the household			
no (reference category)			
Yes	-1.418***	0.466***	-0.111***
Number of surviving parents	-0.065*	-0.009	-0.004
Number of siblings	0.012+	0.012+	0.007
Number of children	-0.013	0.065***	0.005
Number of grandchildren	0.004	0.004	0.000
Standardized proportion of employees in social services	-0.134	0.247**	-0.368***
Standardized proportion in social services*care activities	0.051**	0.032+	-0.032*
Cut point 1	-0.276*	-2.708***	-0.846***
Cut point 2	1.443***	-1.276***	0.712***
Cut point 3		0.415***	2.099***

*Notes:* These calculations use data from SHARE, wave 5.  
*Significance levels:* + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

The same three models for loneliness, meaningfulness of life, and overload as dependent variables, but with the number of care activities performed almost daily or more often as the main explanatory variable are presented in Table 6. The beneficial effect of caregiving from

the previous models does not emerge in this multivariate analysis. Care provided about daily reduces loneliness and improves meaningfulness of life, but half of the coefficients has a p value around 0.05 and the other half is not significant at all. Additionally, the coefficients of caregiving in the model for overload changes from negative to slightly positive. Hence, their character changes considerably, although the positive values indicating a higher overload are not significant at any level. Despite this weakening of all effects, the multiple provision of care still strengthens the effect of caregiving and this tendency is approximately linear.

The nature of other predictors of QoL indicators is basically the same as for the models with care activities performed at least weekly. The subjective QoL is enhanced by higher age (nonlinear effect), education, active employment, health, partnership, availability of formal care, and, in terms of the meaningfulness of life, by higher numbers of children and siblings. Again, women perceive higher loneliness and life as more meaningful than men.

The effect of formal care accessibility remains beneficial for the domains of QoL. However, the parameters of cross-level interaction differ substantially from the same parameters in the first set of multivariate models. The effect of caregiving on loneliness remains less pronounced in countries with a higher proportion of employees in social services, while the effect on overload changes direction and is less beneficial in countries with a higher availability of formal care. The former positive effect of cross-level interaction in the model for meaningfulness of life loses its significance. In sum, a stronger welfare state has a rather harmful mediating effect on the association between care provided daily and the three selected domains of QoL.

**Table 6: Ordinal multilevel logistic regression of three domains of subjective QoL – number of care activities performed almost every day or more often as the main explanatory variable**

	loneliness	meaning	overload
Care activities			
0 (reference category)			



1	-0.010	0.045	0.028
2	-0.093	0.182*	0.063
3 and more	-0.331+	0.337*	0.069
Age	-0.195***	0.182***	-0.262***
Age squared	0.001***	-0.001***	0.002***
Gender			
male (reference category)			
Female	0.204***	0.164***	-0.010
Health			
unhealthy (reference category)			
Healthy	-0.740***	0.890***	-0.831***
Employment status			
not working (reference category)			
part-time job	-0.312***	0.383***	-0.368***
full-time job	-0.523***	0.519***	-0.362***
Education			
ISCED 0-1 (reference category)			
ISCED 2-4	-0.168***	0.256***	-0.232***
ISCED 5-6	-0.186***	0.524***	-0.515***
Partner in the household			
no (reference category)			
Yes	-1.426***	0.479***	-0.122***
Number of surviving parents	-0.073**	0.003	-0.012
Number of siblings	0.012+	0.012+	0.007
Number of children	-0.013	0.064***	0.006
Number of grandchildren	0.001	0.009	-0.003
Standardized proportion employees in social services	-0.126	0.262**	-0.388***
Standardized proportion in social services*care activities	0.082**	-0.005	0.053*
Cut point 1	-0.258*	-2.739***	-0.824***
Cut point 2	1.458***	-1.308***	0.734***
Cut point 3		0.382***	2.120***

*Notes:* These calculations use data from SHARE, wave 5.

*Significance levels:* + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

## Conclusion and Discussion

This study has investigated the effect of caregiving on three domains of QoL among older people. This paper contributes to this frequently researched topic in the following ways: a)

care for all possible types of recipients is considered; b) the frequency, multiplicity, and voluntariness of caregiving are included in the analysis as characteristics of care, mediating its outcomes; c) specific domains of QoL relevant for later life are used instead of some vague concept; and d) the effect of macro-context is investigated in the analysis through the availability of formal care as a precondition for voluntary provision of care. The paper uses data from SHARE and draws the following conclusions.

*The effect of caregiving on the three domains of QoL is generally beneficial.* The multivariate association between provision of care and desirable outcomes in terms of reduced loneliness, more meaningfulness in life, and lower overload is positive. It is not possible to empirically test a causal relationship here, but the theory and previous research claim that this association mostly works in terms of the caregiving influencing subjective QoL (Colombo et al. 2011; De Jong Gierveld and Dykstra 2008). Most of these findings are in accordance with expectations, but the fact that the provision of care reduces overload contrasts with the assumption of the theory of role strain (Colombo et al. 2011; Goode 1960). The results overall indicate that the theory of role accumulation is more suitable for explaining caregiving in older ages than the theory of role strain.

Second, the multivariate association between the provision of care and QoL *depends on characteristics of the provided care.* The effect of care provided weekly or more often is strongly beneficial, while the effect of caregiving daily is much weaker. Surprisingly, the enhancing effect is more pronounced for the provision of care to more recipients – more care activities result in a more beneficial effect. This finding is valid even for very intensive care and is in accordance with the study by De Jong Gierveld and Dykstra (2008), which interprets lower loneliness among people supporting more generations in terms of altruistic theory. The enhancing effects of multiple caregiving in this study could be interpreted in terms of

maintaining more close contacts, performing meaningful activities, and following cultural norms (Neuberger and Haberkern 2014).

Third, the paper shows that the effect of *caregiving performed at least weekly on overload and meaningfulness of life is more beneficial in countries with a higher availability of formal care*, but this association is *reversed or disappeared for care provided daily*. It is possible that an occasional caregiver in a country with a strong social welfare system performs the most prevalent form of activity supported by both norms and social services. In contrast, a person providing very intensive care in the context of available formal care differs from the cultural pattern and may be in some way different or left behind by the social system (Fokkema *et al.* 2008; Igel and Szydlik 2011; Neuberger and Haberkern 2014). Then, the consistently less enhancing effect of caregiving on loneliness under the conditions of more available formal care may imply that a welfare state reduces a citizen's motivation toward this form of social contact or activity. The fact that the effect of accessibility of formal care on QoL is consistently beneficial may support the usefulness of a strong welfare state. In any case, more research on this topic is needed.

There are two main limitations of this study. The first limitation concerns the *omission of the caregiver-care receiver relationship* information from the analysis. Daily care for a spouse has obviously different consequences than daily babysitting of a grandchild (Broese van Groenou *et al.* 2013; De Jong Gierveld and Dykstra 2008). However, this article has aimed at testing the overall effect of caregiving as a set of possible roles among older adults, as the active ageing approach defines the consequences as generally positive (European Commission 2013; Zaidi 2015). Furthermore, the analysis has already proven to be context-sensitive in relation to other factors – caregiving intensity, multiplicity, and voluntariness, family structure, etc. – and is not able to address this dimension as well. These findings thus

may be utilized by future research focusing more on the caregiving relationship than on other contextual factors.

The second limitation originates from the fact that it is not possible to indicate the level of voluntariness of care more directly than via an *external macro-level variable* with the use of SHARE data. It is not possible to determine empirically how well this macro-factor indicates the voluntariness of informal care. This study at least outlines some possible effects of more voluntary care, which may increase loneliness through the elimination of some incentives to meet other people. However, this and the other findings and ideas of this paper must be tested with other methods and data sources in order to further validate them.

## **Chapter 5: Unequal accessibility of social participation in later life across European welfare regimes**

**Abstract:** Social participation amongst older adults is considered generally beneficial and supported by active ageing policies within the European context. However, this effort to increase the quality of life and enhance ageing experience may have an unintended consequence of increasing later life inequalities. As some groups of older adults incline more to this type of activities, they may benefit more from the policy initiatives. This study uses four waves from Survey of Health, Ageing and Retirement in Europe to illustrate how the social participation develops over time and how it is structured by education, financial situation, and health in the context of four European welfare regimes. The social participation strongly differs across both contexts and individual characteristics, while these structuring effects are cumulative. Further, the level of participation slightly increases over time for a population 50+, while the inequalities in access to them and their outcomes remain stable. Therefore, support of these activities does not strengthen inequalities among older adults according to these findings, but it neither reduces them.

**KEY WORDS** – social participation, active ageing, later life, inequalities, welfare regimes, SHARE

## **Introduction**

Population ageing is one of the most prominent contemporary challenges of both developed and developing societies (Timonen 2008). As a reaction, a range of scientific theories as well as a variety of social policies addresses the issue of population ageing. The active ageing policy is, among other approaches, probably the most prevalent and the best-developed set of claims, recommendations, and practices aiming the population ageing. This theory-driven approach has been repeatedly articulated and implemented by several bodies of the World Health Organization (2002) and European Union (2012). Further, the active ageing policy can be, at least in the European context, certainly labelled as an official set of policies established to address the pressing problems connected to active ageing. The active ageing policies are intended to improve health and quality of life of older adults (Walker and Maltby 2012).

According to Avramov and Maskova (2003) or EU Council (2012), the three main pillars of the active ageing policy are independent living, labour force participation, and social participation. While the beneficial effect of some activities promoted by this approach (employment, caregiving) are under dispute (Di Gessa and Grundy 2013; Kim and Moen 2001), the beneficial effect of social participation is more evident (Adams et al. 2011; Cattan et al. 2011; Potočnik and Sonnentag 2013). However, even the support of social participation does not fulfil proclaimed goals of active ageing policy to provide a general good (Walker 2002a). These goals illustrates for instance a central claim of the European Commission that ‘mobilising the potential of both older women and men is crucial to ensure prosperity for all generations in ageing societies’ (European Comission 2013: 1). It seems that more well-off part of older adults can benefit much more from support of social participation, as others are not willing or cannot participate, because opportunities for social participation are strongly connected to macro-context (Hank 2011; Warburton and Jeppsson Grassman 2011) and individual resources (Serrat et al. 2015; Siegrist and Wahrendorf 2009; Timonen 2016). To

examine this issue, the paper is answering the following question: *How is participation in social activities in later life structured by macro-context and individual resources and how these inequalities develop over time?*

This research answers the question through a secondary data analysis of the Survey of Health, Ageing and Retirement in Europe (SHARE). This source of data enables to study the development of social participation over time in various socio-geographical contexts within various social groups. The results, which are generally descriptive to illustrate the real-life differences, show that social participation is strongly structured by welfare regime, education, financial situation, and health status. Then, these structuring societal and individual conditions have a cumulative effect when combined. While the prevalence of social participation among retired older people moderately increased in time, the inequalities in access to beneficial activities remain stable, but still strong. Hence, *the active ageing policy does not strengthen inequalities among older adults according to these findings, but it neither reduces them.*

## **Literature review**

*What is active ageing and social participation?*

Active ageing has many definitions created by academics, bodies of social policy, and even older adults themselves (Timonen 2016). Therefore, some definitions are based on research conceptualization, some on programmes and interventions based on principles of active ageing, and other on lay perspectives of what is perceived as ageing actively. Still, we can at least say that this concept and policy tool has roots in the academic discussion from the early 1960s, when Havighurst (1961) in his article *Successful aging* formulated activity theory as a reaction to the dominant disengagement theory stated by Cumming and Henry (1961). This connection between activity and successful ageing then became an evergreen of gerontological debates (Timonen 2016). These debates were subsequently implemented into

official statements and policy tools of the World Health Organization (2002), European Union (2012), and local governments (Ministry of Labour and Social Affairs 2008) and then criticized from several points of view – for instance by claim that active ageing approach constructed by ‘experts’ do not reflect perceptions of older people themselves (Bowling 2008; Stenner, McFarquhar, and Bowling 2011).

The aim of this article is to assess some possible consequences of active ageing as the dominant approach in (not only) European social gerontology and social policy and not to encompass the whole development and set of definitions formed so far. Thus, the paper uses the definitions of active ageing with the highest societal impact. The active ageing approach ‘led the transition from the perception of older adults as largely passive recipients of welfare to a more active’ (Walker and Maltby 2012: 127) participants on social, economic, and political life, which makes older people healthier, more satisfied, and more useful (EU Council 2012; Walker 2002a). These goals should be accomplished by support of the following areas of life of older adults: independent living, labour force participation, and social participation (Avramov and Maskova 2003; EU Council 2012).

The political will to support these so-called pillars of active ageing is strong, which is also reflected in the Active Ageing Index (AAI) initiative. AAI measures the level of success in these three areas (and area ‘enabling environment’) for all EU and some non-EU countries every two years and (European Commission 2013). Moreover, the initiative evaluates the rate of success of every country and appeals for increase of these indicators (Zaidi 2015). The focus of this paper is to assess potential consequences of the support of social participation via active ageing policy.

Social participation has several types of definitions in a similar way to active ageing, but it is generally understood as ‘the person’s involvement in activities providing interactions with others in society or the community’ (Levasseur et al. 2010: 2146), which has various



levels of (in)formality (Adams et al. 2011; Jang et al. 2004). This definition usually involves different forms of interactions, leisure activities, and participating in the operation of clubs or organizations. Many studies employing existing data on ageing (mostly the SHARE data) use indicators of social activities measured by a survey (Croezen, Avendano, and Burdorf 2013; Potočnik and Sonnentag 2013; Siegrist and Wahrendorf 2009; Zaidi 2015). This is also the case of this paper, which indicates four components of social participation – being active in volunteering, learning, social club, or political organization.

### *Effect of social participation and its conditioning*

The first question we need to ask is, if the social participation is really beneficial for health and quality of life of older adults. While the beneficial effect of another pillars of active ageing is highly speculative for labour force participation (Di Gessa and Grundy 2013; Kim and Moen 2001) and independent living is more the outcome dependent on structural conditions than activity (Karpinska and Dykstra 2014), this effect seems to be relative confirmed for social participation. Adams et al. (2011) reviewed 42 studies published between 1995 and 2009, which focus on the connection between social and leisure activities and wellbeing. This review encompasses various conceptualizations of mentioned activities and outcome (wellbeing includes affect, satisfaction, health, and survival), but the general tendency of the results is quite clear. The authors conclude that ‘methodologically rigorous studies generally find positive associations between activity and wellbeing’ (Adams et al. 2011: 704).

More recent articles investigating the effect of social participation on wellbeing after the review of Adams and colleagues (2011) reached very similar conclusions. Potočnik and Sonnentag (2013) on a sample from 11 European countries found a positive effect of volunteering, going to sports and providing help in retirees (and no effect in older workers). Another study of cross-national data indicated a positive effect of church activities on

depression (Croezen et al. 2013) and researchers from the U.S. found higher well-being even among more active older adults with cognitive impairment (Johnson, Whitlatch, and Menne 2014). Finally, one review focused on the effect of volunteering (which is one of the social activities) on older people's quality of life and indicated a predominantly positive relationship in 27 reviewed articles (Cattan et al. 2011).

What benefits of social participation imply? Does this mean that making these activities accessible (or even obligatory) for every older person overtake the negative side of ageing? Although this assumption is often present in the heart of active ageing approach (EU Council 2012; Walker 2005a), several problems are connected to it in the real world: the issue of normativity, the issue of macro-contextual factors shaping opportunities for social participation, and the issue of individual resources connected to them.

### *Three concerns with support of social participation*

First, several authors noted that active ageing present ageing through activities as the only good way how to age without reflections of consequences of this approach (Hasmanová Marhánková 2013; Holstein and Minkler 2003; Leinonen 2011; Mendes 2013; Timonen 2016). Timonen (2016) argues that some older people cannot and some do not want to participate in these activities, which should be both legitimate options. Other authors write about active ageing as a strongly normative discourse of self-discipline (Hasmanová Marhánková 2013; Leinonen 2011), which is more a duty than a right, and this duty can lead to an exclusion of these, who do not fulfil it (Mendes 2013). As a result, those who cannot participate, such as the poor, older women, and people of colour, are marginalized even more than without this social policy approach (Holstein and Minkler 2003). This critique concerns mostly active ageing as a whole, but it can be applied just to social participation as well.

The second problem with promoting social participation is that some contexts create more opportunities than others. 'Both longstanding cultural elements of a society, such as its

religious tradition, as well as contemporary welfare state interventions constitute reference frames' (Hank 2011: 536) for social participation of older adults. Prevalence of social activities in later life varies strongly across countries (Warburton and Jeppsson Grassman 2011), which is structured especially by the north/south (and potentially west/east) axis formatting a whole set of societal characteristics (Walker 2004). This variation can be illustrated by correlations of AAI with GDP per capita and average life satisfaction, which are 0.52 and 0.78, respectively (European Commission 2013). Strong context-dependence of social participation means that not all countries can easily support these activities. Hence, strong support for social participation may even strengthen inequalities among countries, as this support is more probable (i.e. more feasible and more legitimate) in countries with already established opportunities for social participation of older people. This paper illustrates the effect of macro-context by separate analysis for representatives of all European welfare regimes (Esping-Andersen 1990).

Finally, opportunities for social participation (as well as an option not to participate) are strongly connected to individual resources (Timonen 2016). These resources are not only represented by different location within country (Bowling and Stafford 2007), but also by a set of individual characteristics. These characteristics are for instance gender, ethnicity (Holstein and Minkler 2003), age (Ho et al. 2012), socio-economic status (Hodge et al. 2013; Serrat et al. 2015; Siegrist and Wahrendorf 2009), and health (Galenkamp et al. 2016; Galenkamp and Deeg 2016). These characteristics are so important that they can mediate the presumed beneficial effect of social activities in later life (Ho et al. 2012; Maier and Klumb 2005).

Social class and health are characteristics which really matter in Europe, as the studies cited in the previous paragraph suggest (opposite to ethnicity, which is hard to study quantitatively in these settings). Thus, the impact of social class and health are studied by this

paper, which states the following hypotheses. 1. Older adults with a) higher education, b) more satisfactory financial situation, and c) better health have higher levels of social participation. 2. These differences become even larger if the prevalence of social participation increases in time (since some groups of population can capitalize on new opportunities more). 3. The disadvantages in social participation connected to the three individual characteristics are cumulative. 4. The differences are also magnified by differences in welfare regime.

## **Data, measurement, and methods**

### *Data*

This paper tests its assumptions and hypotheses with the data from SHARE. SHARE is a longitudinal survey of ageing collecting the cross-national panel data by computer-assisted personal interviews (Börsch-Supan et al. 2013; Börsch-Supan 2017b, 2017c, 2017d, 2017e). SHARE has already performed 6 waves of data collection from its initiation in 2004 and overall 21 (mostly) European countries participated in at least one of them. This research excluded wave 1 due to an absence of Post-communist countries and wave 3 due to different content of interviews from its analysis. Hence, we have a comparable information from four time-points collected in 2007, 2011, 2013, and 2015. As a result, the data enable us to observe not just differences between countries, but also a development over time.

The whole SHARE dataset comes from a culturally diverse set of countries and its analysis can hide an important variability among contexts. Further, the aim of this paper is to consider the effect of cultural and societal settings depicted by types of welfare states. Thus, the final sample contains one typical representative of each welfare regime as defined by Esping-Andersen (1990) – Sweden as a Social Democratic state, Switzerland as a Liberal state, and Austria as a representative of Conservative welfare state. Additionally, two types of welfare states – South European and Post-communist state – defined later by other authors

(Ebbinghaus 2012a; Fenger 2007; Frisina 2004) are represented by Italy and Czechia. These countries are the most typical representatives of particular welfare regimes available in the dataset. Altogether, the SHARE data for five selected countries and four waves of the data collection is utilized for the analysis.

The final sample includes respondents in old age retirement, as the beneficial effect of social participation is stronger and more relevant for retirees (Liu and Lou 2016; Potočník and Sonnentag 2013), as it helps them to adapt to a loss of one of the crucial roles (Lemon, Bengtson, and Peterson 1972; Warburton and Winterton 2010). Retirement rules and options vary strongly across countries and gender – from 55 years to 66 years of age for a selected period – and change in time (Finnish Centre for Pensions 2017). Then, SHARE puts into one category respondents that are fully retired, semi-retired, pre-retired, and early retired, which lead to an age-diverse group of people. Some respondents were considerably younger than the general group of retirees, and people below 55 years of age (about 1% of respondents) were thus excluded from the sample as well as people over 90 years (also about 1% of respondents) to eliminate the effect of outliers. After these adjustments and deleting about 3 % of respondents due to missing values, the final sample for Sweden, Switzerland, Austria, Italy, and Czechia has size between 6,153 and 13,514 adults 55+ for each wave. The main characteristics of the sample for each wave are presented in Table 7.

Table 7 illustrates that basic characteristics of the sample used in this article are quite stable across waves. Some more consistent changes of the sample are a decrease of respondents with primary education from 37 % in 2007 to 23 % in 2015 and a similar decrease of respondents in bad financial situation with the respective values of 39 and 25 %. This development can be explained by younger and more educated cohorts entering the retirement over time. Further, this increase of individual resources could explain the increase of social participation among retirees, but this issue will be more elaborated on in the analysis.

For now, we can say that the prevalence of social participation is increasing, although the differences are rather small. Finally, the irregular changes of proportions for countries are caused by differences in sample maintenance among waves and countries.

**Table 7: Descriptive statistics for all utilized waves – respective means (only for age) or proportions**

Variable	Categories or range	Wave 2	Wave 4	Wave 5	Wave 6
Age	55 – 90	70.4	70.7	71.4	72.2
Gender	Male	48.3	46.6	46.8	46.7
	Female	51.7	53.4	53.2	52.9
Education (ISCED)	ISCED 0,1	36.9	24.8	24.0	23.2
	ISCED 2-4	52.1	60.1	59.0	59.3
	ISCED 5,6	11.0	15.1	17.0	17.5
Financial situation	Bad	39.4	32.3	29.0	24.8
	Good	37.0	37.1	33.3	33.1
	Very good	23.6	30.6	37.7	42.1
Health	Fair or poor	41.7	39.1	38.0	38.4
	Good	36.9	37.2	37.7	37.5
	Very good	21.4	23.7	24.3	24.1
Social participation	No	72.0	66.8	64.4	63.5
	Yes	28.0	33.2	35.6	36.5
Country	Austria	12.7	26.7	20.8	18.3
	Sweden	24.3	11.2	20.8	20.9
	Italy	25.6	16.0	17.9	19.9
	Switzerland	9.8	14.1	11.0	11.9
	Czechia	27.6	32.0	29.5	29.0
Number of respondents		6,153	11,665	13,514	12,331

*Notes:* These calculations use data from SHARE, waves 2, 4, 5, and 6.

### *Dependent variable*

The analysis uses all four variables measured in all 4 waves of SHARE indicating the social participation of older adults. These variables were measured by question ‘Have you done any of these activities in the last month? 1. Done voluntary or charity work, 4. Attended an educational or training course, 5. Gone to a sport, social or other kind of club, 7. Taken part in a political or community-related organization’ in wave 2 and by question ‘Which of these activities – if any – have you done in the past twelve months?’ with the same four options in waves 4, 5, and 6.

This paper is interested only in social participation done on least monthly basis. The reasons for this are twofold: a) the time frame for wave 2 was the last month, while it was last 12 months with an additional question for a frequency of the activity for other waves, and b) activity performed less often than monthly does not seem to have a noticeable effect. As all four activities fulfil characteristics of social participation (Adams et al. 2011) and any of them prevail in the sample quite rarely, they have been recoded into one dependent variable, which distinguishes respondents performing at least one of these activities from those performing none of them. This step of creating one dependent variable also makes the analysis and interpretation more concise and understandable, though it leads to some information reduction.

### *Independent variables*

First, the results are sorted by country to illustrate similarities and differences across welfare regimes, and thus country is employed as one of the main explanatory variables. Then, the other explanatory variables are three characteristics – health, education, and income – that seems to be most significant in shaping the lifestyles and opportunities of older adults. For most of the time, the impact of these three predictors is analysed separately, but in a matter of fact, they are strongly interlinked and can intersect into cumulative advantages or disadvantages (Hatch 2005), which is also reflected in a part of the analysis.

This research capitalizes on several findings illustrating that subjective perceptions of living conditions are in their consequences more important than objectified measurement of the same (Bowling and Stafford 2007; Walker 2004, 2005a). Financial situation and health status are thus measured by the subjective question, while this is not feasible for education, which is indicated on the International Standard Classification of Education (ISCED) scale. All three characteristics were recoded into three categories (similar in size) to define few groups of respondents that can be compared to each other. The financial situation was asked

by the question ‘Thinking of your household's total monthly income, would you say that your household is able to make ends meet... 1. With great difficulty, 2. With some difficulty, 3. Fairly easily, 4. Easily’ and the first two categories were merged. The health status was asked: ‘Would you say your health is 1. Excellent, 2. Very good, 3. Good, 4. Fair, 5. Poor’, from which the first two, as well as the last two categories were merged. Finally, ISCED scale of education was recoded into categories primary education (ISCED 0 and 1), secondary (ISCED 2-4), and tertiary education (ISCED 5-6), which is the most meaningful categorization (International Labour Office 2012).

It is important to keep in mind that division between dependent and independent variables is not ultimate, since these categories are difficult to separate in complexities of social reality. The possibilities of simple covariance or reversed causality – for instance, that social participation improves health instead of the other way around – are hard to exclude with the available data. Still, the use of these categories, which structure the analysis, is driven by their common theoretical and empirical interpretation, *i.e.* individual resources (cultural capital, economic capital, and health) create opportunities to social participation (Serrat et al. 2015; Timonen 2016).

### *Methods*

Descriptive techniques of data analysis test the presented hypotheses. The results are made for each country separately to illustrate differences among welfare regimes and include following steps. First, the visuals display proportions of retired older adults engaged in predefined social participation and its development in time. Second, the same proportions are presented for subgroups defined by health, income, and education to determine how the social participation depends on these characteristics. The development of these proportions in time then indicate if unequal engagement in social participation decreases or increases with the changing prevalence of these activities. Third, the proportions of retired older adults engaged in social

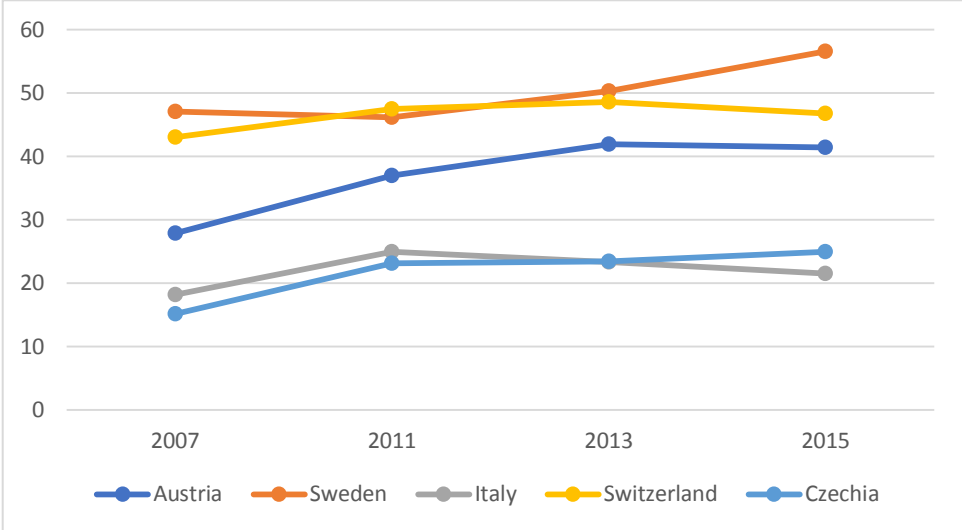


participation are also presented for individuals with more (dis)advantages to see how the unequal access to the social participation can be cumulative under certain conditions.

**Results**

The first step of the analysis is to obtain the prevalence of social participation in given countries and its development over time. This information is displayed in Figure 8. The differences in social participation in later life among representatives of five welfare regimes are hard to ignore. Regarding the most recent data from 2015, the proportion of retirees involved in social participation is up to 60 % for Sweden, followed by Switzerland, Austria, Czechia, and Italy with respective values of 47, 41, 25, and 22 %. Therefore, the macro-context matters a lot for these activities. The proportions are slightly decreasing over time, but this decrease is neither large nor regular. The public policy initiatives and increasing individual resources are thus not strongly reflected in a prevalence of social participation.

**Figure 8: Proportional differences in social participation between tertiary and primary education**



Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

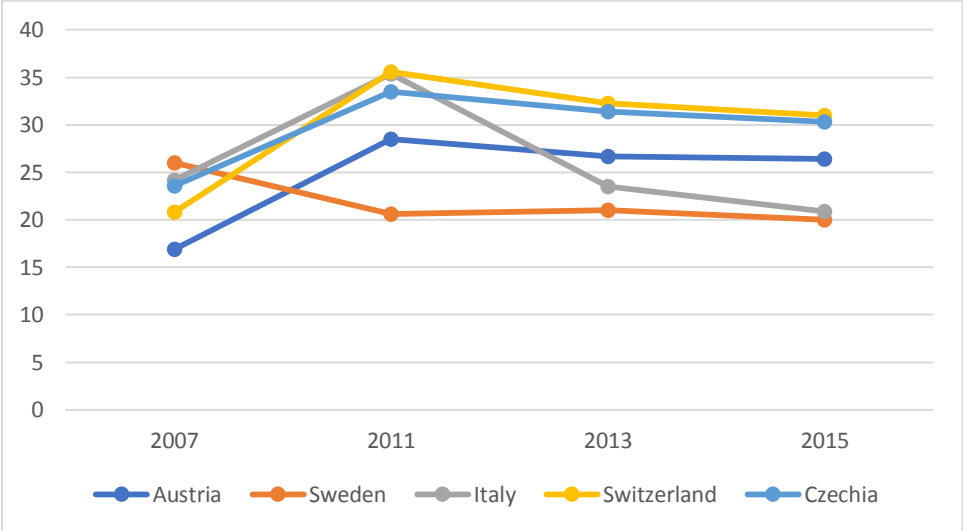
The next step is to analyse how individual characteristics – education, financial situation, and health – structure social participation among older adults. All three of them have three

categories, which would make figures with five countries and four time-points excessively complex. However, all of them have a regular positive effect on social participation (i.e. older adults in the middle category participate more often than retirees in lower category and less than retirees in higher category). Hence, the analysis can use just proportions for the lower and the higher category without some extensive loss of information, which is also a base of a further analysis.

Figure 9 depicts the differences in prevalence of social participation between tertiary and primary education. The differences between these two educational categories are decisive – among 20 and 35 %. However, the country differences are hard to identify in this figure and the development of education effect over time is also unclear (apart from almost universal increase of inequalities during the economic crisis between 2007 and 2011). No significant pattern in the results may be caused by the procedure, which do not consider the differences in overall level of social participation among countries. This aims to be corrected in Figure 10.

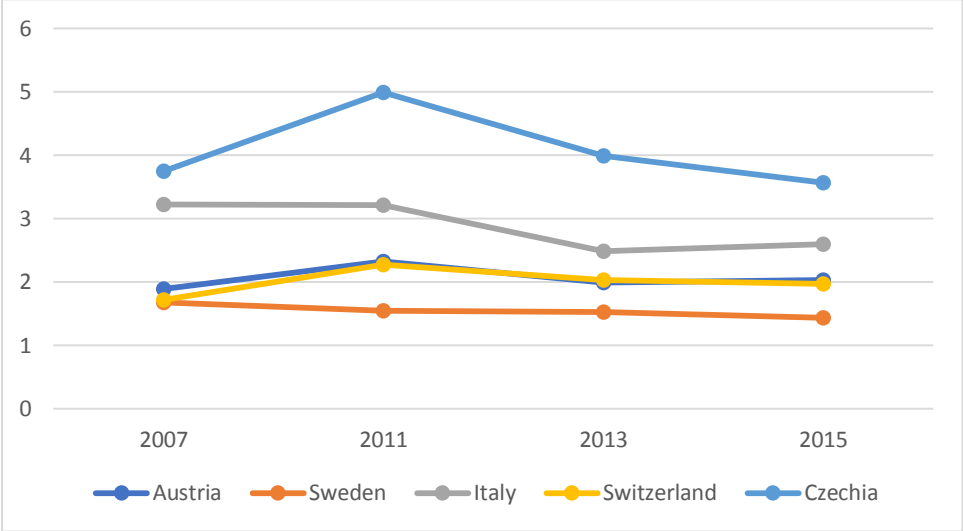
Figure 10 does not give us the absolute, but ‘relative’ differences between tertiary and primary education – the first is divided by the latter one. Thus, for instance in Czechia, the chance of participation was almost four times higher for a respondent with tertiary education than for a respondent with primary education in 2007. This method brought some meaningful patterns into results. The highest inequalities based on the level of education were found in Post-communist Czechia and the lowest inequalities in Social Democratic Sweden. These inequalities are quite stable over time and relatively large for all countries except of Sweden. However, this method does not provide some information generated by simply dividing percentages of two groups of respondents from Figure 9. Hence, each of the methods is useful from some point of view and the paper use both for testing all three individual characteristics that are elaborated here.

**Figure 9: Proportional differences in social participation between tertiary and primary education**



Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

**Figure 10: Ratios of social participation between tertiary and primary education**

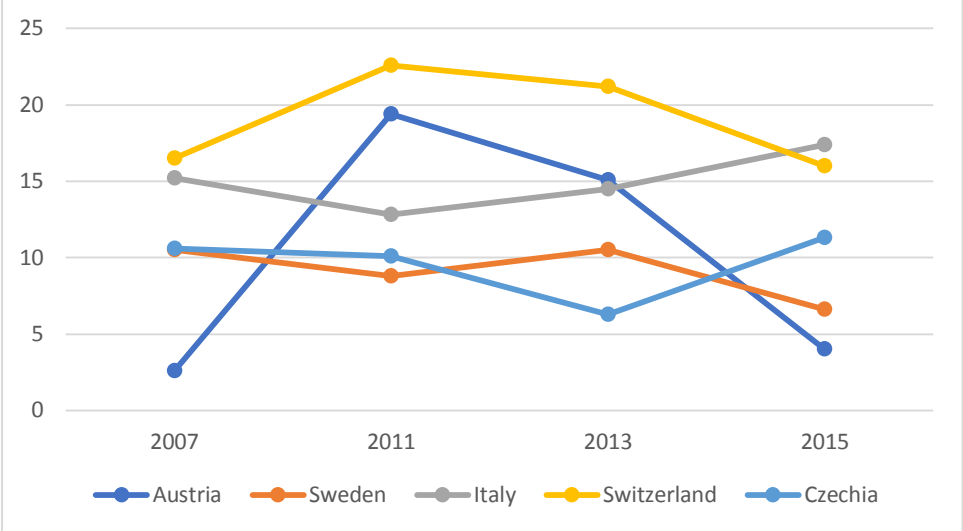


Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

The financial situation is the second indicator of social class, and thus it is expected to have a similar effect on social participation as the level of education. Nevertheless, Figure 11 shows that this is not the case. Difference between respondents in bad and respondents in very good financial situation are much lower – from 3 to 23 % - and not stable in time. Liberal Switzerland has somewhat higher inequalities in social participation based on financial situation, which is the only distinctive country difference. Figure 12 also shows the weak effect of financial situation. Respondents in the very good situation generally had about 1.5

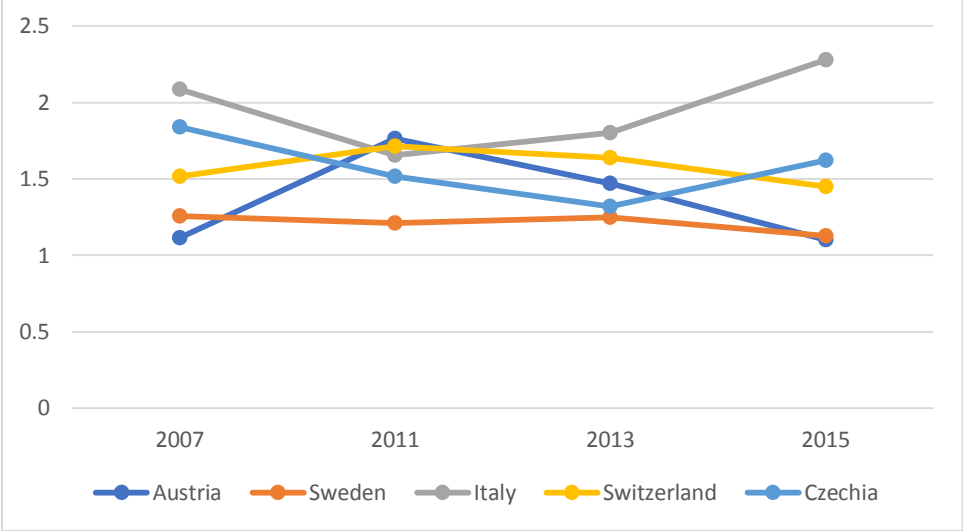
higher chance on social participation than respondents in the bad financial situation. These differences did not develop systematically over time. The inequalities tend to be higher in Italy and lower in Sweden, but the differences are not strong.

**Figure 11: Proportional differences in social participation between very good and bad financial situation**



Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

**Figure 12: Ratios of social participation between very good and bad financial situation**

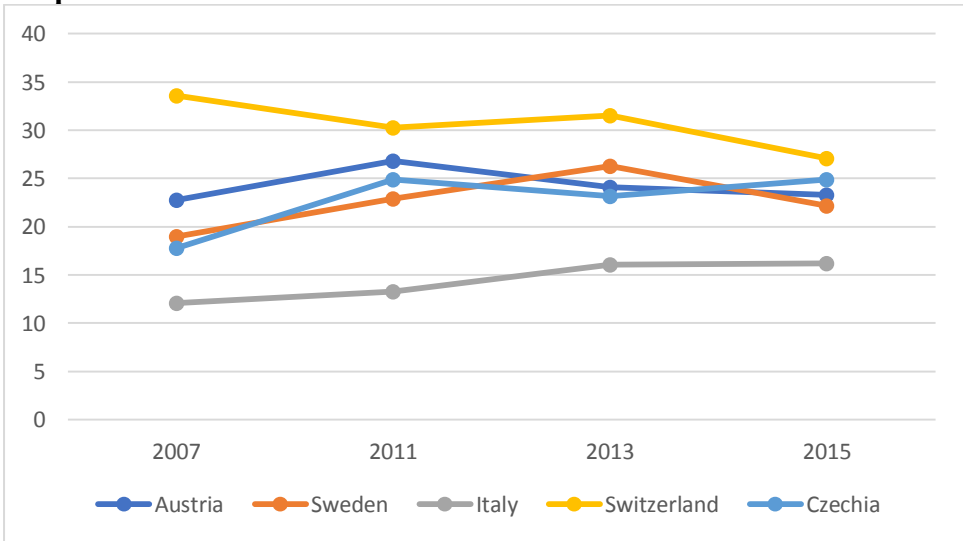


Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

Figure 13 illustrate the effect of health on social participation. The chance of social participation for respondents with the fair or poor subjective health is significantly lower than for respondents with the very good health – the difference varied from 12 to 34 %. The

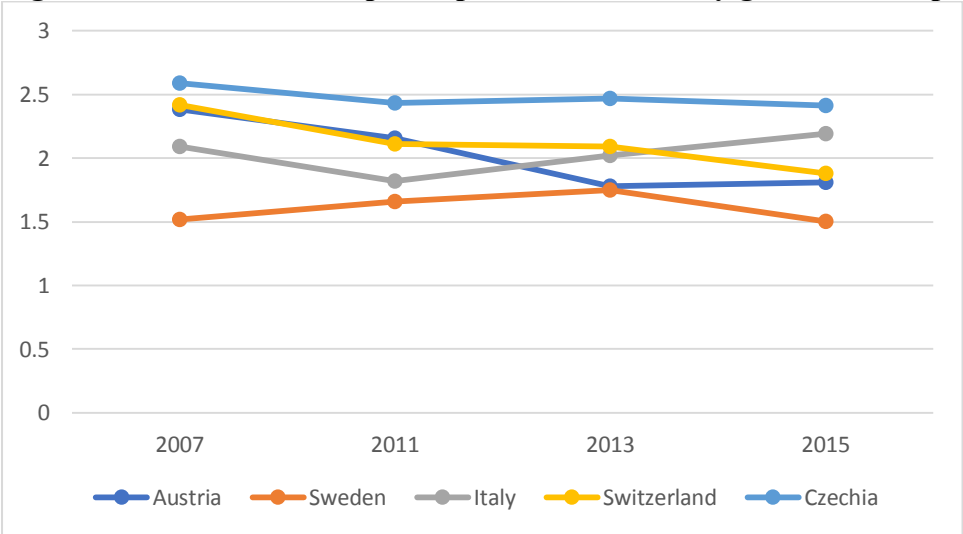
difference is highest in Switzerland and lowest in Italy, which is probably related to the overall prevalence of social participation in these countries. Figure 14 confirms quite strong inequalities in social participation based on subjective health from Figure 13. Older adults with the very good health participate on social activities about two times more often than these with the fair or poor health. As for education, the differences in ratio of social participation are lowest in Sweden and highest in Czechia and are quite stable over time.

**Figure 13: Proportional differences in social participation between very good and fair/poor health**



Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

**Figure 14: Ratios of social participation between very good and fair/poor health**

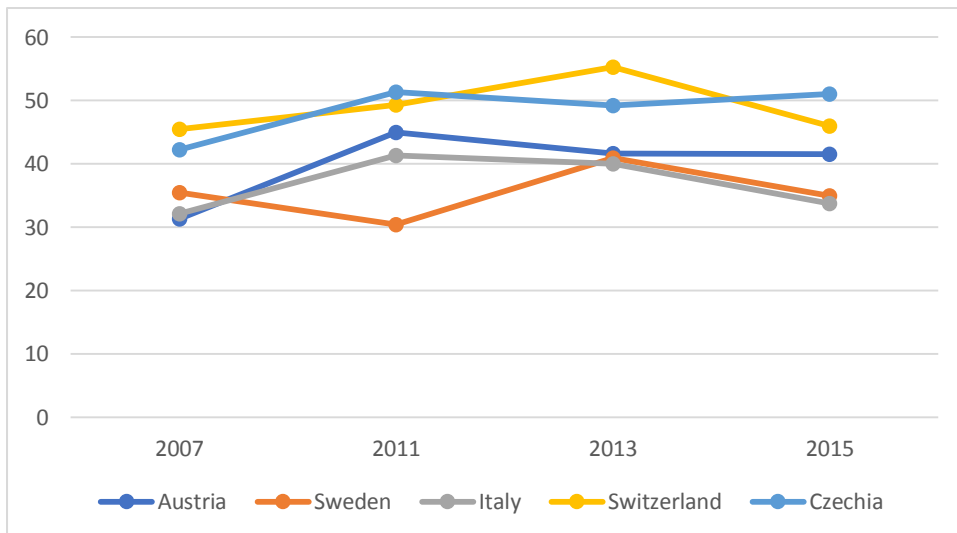


Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

The final step of the analysis is to test, whether the effects of individual characteristics – and individual resources connected to them – are cumulative. Pairing of three structuring characteristics into all possible combinations would mean analysis of the effect of three pairs: education and financial situation, education and health, and financial situation and health. However, the financial situation a) did not have a strong effect in previous analysis and b) like education, it is also the indicator of the social structure. Therefore, this paper presents results only for the most promising cumulative effect between education and health to save space.

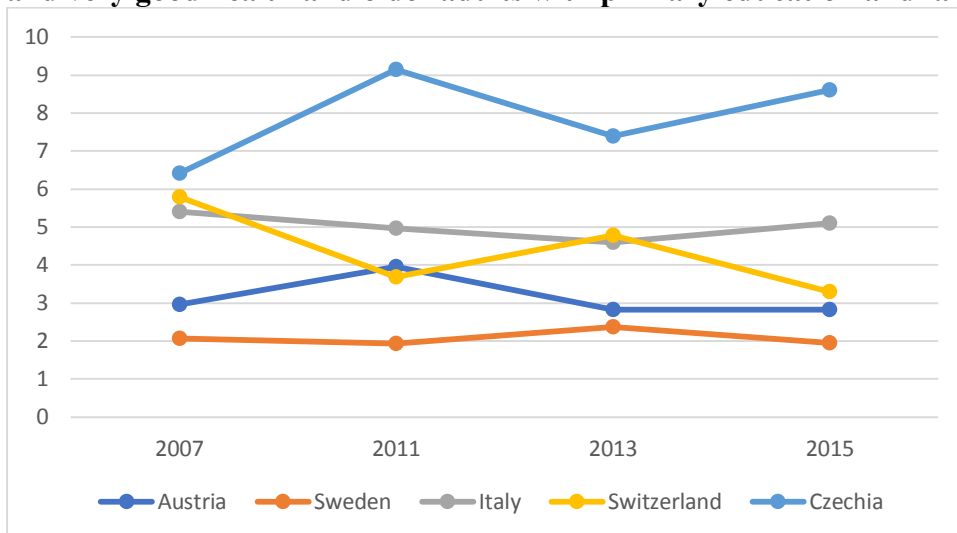
Figure 15 compares differences between the highest and the lowest category as usual, but this time the categories are made of combination of two variables. Thus, retirees with tertiary education and the very good health are compared to those with primary education and fair or poor health. As expected, these differences are much higher than before – among 30 and 55 %. Figure 16 presents the ratios of the two categories and summarizes the previous findings. The highest inequalities according to this indicator are in Czechia (chance of social participation is about eight times higher for retirees with tertiary education and the very good health) and the lowest inequalities are in Sweden (two times higher chance of the respective category). To present the actual numbers for 2015, the proportions of the most and the least well-of older adults participating on the social activities are 6 and 56 % in Czechia and 36 and 72 % in Sweden. Hence, the ratios are strikingly different, even though the absolute differences among categories are close to each other.

**Figure 15: Proportional differences in social participation between older adults with tertiary education and very good health and older adults with primary education and fair/poor health**



Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

**Figure 16: Ratios of social participation between older adults with tertiary education and very good health and older adults with primary education and fair/poor health**



Notes: These calculations use data from SHARE, waves 2, 4, 5, and 6.

## Conclusions and discussion

This study argues that the social participation supported by active ageing policy is strongly determined both by individual characteristics and macro-context. Further, the paper tests the assumption of Timonen (2016) that if the prevalence of social participation in later life and the inequality in access to these beneficial activities increase in time, the unintended consequence of the active ageing policy is the growth of inequalities among older adults in Europe. The paper uses data from SHARE to test these assumptions in descriptive analysis,

which focuses especially on producing understandable results. The results concerning the four hypotheses are discussed further.

First, *the individual resources of older adults strongly structure their social participation*. Especially the effects of education and health are large and robust across time and welfare regimes. The effect of financial situation is surprisingly weaker than the effect of education, although both these variables indicate social class (Brand and Davis 2011). This difference can be tentatively explained by the fact that the level of education is connected to other factors than income – such as social capital, cultural capital, knowledge, lifestyle, values, and attitudes (Bourdieu 1986, Lesthaeghe 2011) – which seem to be at least of the same importance for the chance of social participation as the financial situation.

Second, *the prevalence of social participation moderately rose over time, but the inequalities in the access to it based on individual resources remained stable*. Moreover, the increase of social participation, which is expected due to a) a systematic support on the level of policies (Zaidi 2015) and b) more well-off people entering the retirement, was not even found in all countries. Hence, the level of social participation and its distribution in older population is quite stable, though the opportunities of social participation should be rising. It is thus possible that personal preferences also decisively shape the social participation and that making these activities more accessible affects all social classes to a similar extent. On the one hand, no evidence for rising inequalities in this matter was presented. On the other hand, the inequalities are still strong and persistent, and thus they are not reduced in the current situation in Europe.

Third, *the effects of health and education on social participation have strong intersections*. The inequalities in social participation from the analysis of health and the analysis of education magnified, when these two characteristics were analysed together. This most striking example was picked to illustrate the general tendency that more sources of



disadvantages have even more decisive effect when combined (Choo and Ferree 2010). This claim can be applied for other personal characteristics like gender, age, ethnicity, and rural residence, but this paper is limited in scope and works with supposedly three most essential characteristics for this topic and geographical context.

Fourth, *the effect of macro-context is usually strong, although not very systematic.* From five countries representing five types of European welfare regime (see Esping-Andersen 1990 or Ebbinghaus 2012), Social Democratic Sweden has the highest level of social participation and the lowest relative differences in participation of older people with different characteristics. This is not surprising, given the prosperity, egalitarian principles, and vital civic society of Nordic countries (Wollebæk and Selle 2008; Zaidi 2015), while it is impossible to compare here the importance of these three factors. In contrast, the lowest participation was found in Southern European Italy and Post-communist Czechia. The other differences among countries were not very systematic, but the inequalities in participation were probably highest in Czechia. This could be interpreted by arguments that Czechia has the most recent experience with population ageing or that some types of organized participation were discredited during communist regimes (Howard 2003) and new have been not established yet.

A possible limitation of this study is that it made several rather arbitrary decisions on transformation of variables or construction of sample. These choices were made with the aim to adapt on limitations of available data and to present some culturally sensitive data produced by more exploratory way of analysis. The results of this paper cannot be generalized on the whole Europe, but on the five chosen countries at the best. Then, especially the differences among groups of older adults in social participation can be mediated by a range of other personal and contextual characteristics. Nevertheless, the aim of the study is not to elaborate a complex network of relation among many variables, but to present some differences in access

to beneficial activities in a way they can be perceived in the reality and to show these differences as clearly as possible. Finally, this research area offers many ways how to approach the topic and hopefully more studies will be done in the future, as the quality of life in older people has become increasingly pressing societal issue (Timonen 2016).

# **Chapter 6: Individual consequences of activities prescribed by active ageing and their differences based on value orientation**

**Abstract:** The active ageing approach supports a set of activities, which are supposed to be beneficial for older adults. This paper reassesses the benefits of activities for quality of life by a) analysing many activities at the same time to control for their interdependencies, b) using panel data to detect individual changes over time, and c) employing the theory of value change to explain differences in effects of activities by a value orientation of each individual. The effects of roles in later life are tested through fixed effects regression with data from three waves of the SHARE project. The results show that some of the activities – volunteering, participation in sport or social club, and physical activity – increase the quality of life, while caregiving within the household has the opposite effect. Moreover, the beneficial effects are much weaker and less stable than would some spurious techniques like OLS regression suggest, they are beneficial only for older adults of some specific education and region, and their effect is much weaker than the effect of other variables – age, health, and economic situations. The activities supported by active ageing approach fit the needs of only certain types of older adults, even though this approach is formulated as universal and strongly normative recommendation how to age well. Therefore, the active ageing approach should reflect more various living conditions, values, and needs of older adults to formulate more context-sensitive and less normative policy recommendations.

**KEY WORDS** – roles, active ageing, quality of life, value orientation, SHARE, context-specificity

## **Introduction**

Promoting employment and social participation amongst older people is the dominant reaction to the ageing of populations both in the academic sphere and in social policies (Timonen 2016; Walker and Maltby 2012). A higher level of productive activities in later life is usually presented as a solution where everyone benefits (Avramov and Maskova 2003). Firstly, the active participation of older people is beneficial to the whole of society, because it increases labour force participation, the amount of accessible informal care and inclusive civic engagement (Foster and Walker 2015). Secondly, participation in society in later life is also beneficial to older people themselves. Social participation of older people has enhancing effect on their physical health (Thomas 2011), mental health (Englehardt et al. 2010; Olesen and Berry 2011), and life satisfaction (Adams et al. 2011; Gergen and Gergen 2006; Potočník and Sonnentag 2013), and also mitigate intergenerational conflict in society (Hess et al. 2017).

The increasingly popular notion of activities as a way to make societal ageing sustainable and even beneficial became the main assumption of ‘activity theory’ (Havighurst 1961) and the concept of active ageing (Walker 2002b). The concept of active ageing was in large part developed outside of the academia by the World Health Organization (WHO 2002) and the European Union (Commission of the European Communities 2002). These efforts should not only have implications for the quality of life (QoL) of older adults and the size of the labour market. Consequently, they should lead to the ‘transition from the perception of older adults as largely passive recipients of welfare’ (Walker and Maltby 2012: S127) to a more positive image of older people as citizens involved in many areas of society.

Activities encompassed by active ageing differ by source of information, but EU supports mainly prolonged employment, participation in society, and physical activity. Category participation in society then includes caregiving, volunteering, lifelong learning, and

political activities (EU Council 2012; Eurostat 2012). This diverse list of activities is connected by the presumed utility for both individuals and society. However, specific activities can have a different meaning for different older adults, and thus also different consequences for QoL. A value shift from materialist to postmaterialist values (Inglehart 1971, 1990) is used as a theoretical frame of these differences, which are expected to cause a variance in effects of the supported activities.

*The main aim of this study is to determine the effect of activities prescribed by active ageing approach on QoL.* The paper argues that neither possible intersections and interdependencies between activities nor a different meaning of activities for different groups of older people have been adequately addressed by previous research. Hence, the analysis of Survey of Health, Ageing and Retirement in Europe (SHARE) follows changes in employment, social participation, physical activities and caregiving over time and their effect while controlling for each other. The results show that a) the effects of some activities differ across European regions and educational groups, and b) these effects are rather positive, but much weaker than effects of main individual characteristics. The paper argues that active ageing approach was formulated mostly by middle-aged professionals, who can possess different values and meanings than many older people. Therefore, active ageing should develop into a more context-sensitive data-driven perspective.

## **Literature review**

### *Activities supported by active ageing approach and their measurement*

EU Council (2012) adopted three dimensions of the Guiding Principles for Active Ageing and Solidarity between Generations: Employment, participation in society, and independent living. The prolonged labour force participation has the category by itself, while participation in society contains social inclusion specified as cultural, political, and social activities, senior

volunteering, lifelong learning and informal caregiving and independent living should create opportunities for physical activities (EU Council 2012). All these activities are mentioned in other documents as well (Avramov and Maskova 2003; Eurostat 2012; Sidorenko and Zaidi 2013).

EU vigorously supports policies of active ageing, which is illustrated by designating the year 2012 as *European Year for Active Ageing and Solidarity between Generations*. This initiative aimed to ‘contribute to raising awareness on the European as well as the international discourse on active ageing and also in informing the policy interventions required’ (Sidorenko and Zaidi 2013: 1). The effort resulted into thousands of events and programmes on all geographical levels of the European continent and a development of Active Ageing Index (AAI) was among the most ambitious of them (European Commission 2013; Sidorenko and Zaidi 2013).

The AAI has been developed as a multidimensional operationalization of active ageing and works as a ‘tool that monitors overall progress and identifies where challenges remain across European countries’ (Zaidi 2015: 3). As such, this endeavour reflects the need to measure the level of active ageing in several dimensions across countries to identify the current situation and potential for improvement in each EU member state (European Commission 2013; Karpinska and Dykstra 2014). AAI comprises 22 indicators sorted into four domains of active ageing: 1) employment, 2) social participation, 3) independent living, and 4) capacity for active ageing (Zaidi 2015), and thus bring together most of ‘positive aspects of life of older people’ (Zaidi and Howse 2017: 3). All domains are supposed to increase their values (degree of active ageing capacities) in the future and the AAI should help to monitor this increase and identify the remaining challenges for each country within the EU (European Commission 2013). So far, three waves of results are available for 28 EU members

and a further geographical extension and application of results has been currently implemented (São José et al. 2017).

The first three domains of AAI indicate outcomes/experience of active ageing, while the fourth refers to the capacity of individuals and environment. Clearly, three outcome domains fully overlap with three guiding principles of active ageing defined by (European Union 2012). Indicators also comprise the same activities as the range of EU documents. These are a) employment rate for four age groups over 55, b) voluntary activities, care to children and grandchildren, care to older adults, and political participation indicating social participation, and c) physical exercise and lifelong learning from the domain of independent living (Zaidi 2015). All the indicators are used from external sources – the indicators of activity levels are from EQLS, Eurobarometer, and EU-LFS (Perek-Białas et al. 2017). SHARE, which is a longitudinal cross-national project labelled as ‘one of the crucial pillars of the European Research Area’ (Börsch-Supan et al. 2013: 993), measures basically the same activities, although it asked also on taking part in a religious organization in former waves (Börsch-Supan 2017d, 2017a). This paper takes two important points from this overview of the extensive European projects addressing ageing. First, all targeted activities are aimed to spread over time irrespective of the possible conflicting demands. Second, the set of supported activities was chosen by a certain people with certain worldviews and motivations, which is not sufficiently reflected.

#### *Role complementarities and conflicts among supported activities*

Proponents of active ageing and AAI aim for increasing prevalence of all activities, which can be problematic, if the proposed types of activities – employment, caregiving, and social participation – are not compatible. Karpinska and Dykstra (2014) in their evaluation of AAI emphasize that ‘in designing policy measures to increase active ageing potential, policy makers need to take possible competing outcomes into account’ (Karpinska and Dykstra

2014: 19), such as employment and the provision of care. (Zaidi and Howse 2017) argue that some countries reach higher scores in all domains. However, this indicates rather a compatibility within society than assumed compatibility within the individual.

The possibility of competing roles has been already formulated within the theory of role strain (Goode 1960). Role conflict in demands, obligations, time, place, or resources is a common type of role strain, because this theory accepts 'dissensus, nonconformity, and conflicts among norms and roles as the usual state of affairs' (Goode 1960: 495). Therefore, the concept of role conflict assumes that engagement in one activity can prevent individuals from other activities. In contrast, role accumulation and role complementarity approaches take the opposite stance and assume that more roles can be mutually compatible. Furthermore, the multiplicity of roles creates more types of positive outcomes, which usually outweigh possible role strain (Sieber 1974). Marks (1977) suggests that each activity both produces and consumes energy and we need to examine which is dominant under varying conditions.

Role outcomes and complementarities are connected to the intensity of the roles. While a labour force participation is usually most demanding (Kim and Moen 2002; Michinov et al. 2008), provision of care takes various intensities, which affects its subsequent complementarity (Hank and Buber 2009; Lakomý and Kreidl 2015), and social participation is usually less intensive than the previous two (Potočnik and Sonnentag 2013). This simplified categorization thus implies that paid work and caregiving have the highest potential for role conflict, which is also supported by the literature. The employment of older adults seems to be in conflict both with care provided to grandchildren (Aassve, Meroni, and Pronzato 2012; Hank and Buber 2009; Lakomý and Kreidl 2015; Luo et al. 2012) and with care provided to parents (Bolin, Lindgren, and Lundborg 2008; Colombo et al. 2011; Leinonen 2011). Hecht (2001) analysed data from a survey of Canadian mothers and found that those who provide more hours of caregiving, longer working hours and lower job flexibility feel the role conflict



more often. Therefore, the role conflict is not just a theoretical construction, but a phenomenon perceived by people.

Other types of social participation include activities such as volunteering, lifelong learning, and political, religious, or sport club participation. These activities are usually less frequent and not considered as conflicting with others (Potočnik and Sonnentag 2013). However, (Arpino and Bordone 2017) found lower social participation of caregivers in volunteering, education, and political organizations and the same authors found a distinction between older people involved in kin oriented and those involved in non-kin-oriented activities via Latent Class Analysis (Arpino and Bordone 2015). Further, volunteering is less prevalent among workers, but education and political participation are, in contrast, less prevalent among retirees (Arpino and Bordone 2017). Other authors found a positive association of political participation with volunteering, attending courses and recreational centres (Serrat et al. 2015) and positive association between volunteer work, informal help, and care (Hank and Stuck 2007). Roles generally can support or exclude themselves, which depends on their demands and other situational factors. It seems that older people want to keep their productive activities, but not at the expense of their individually defined 'personal time' (Leinonen 2011).

Roles in later life are clearly interdependent, and thus they should be contained in the same model when their impact on QoL is evaluated. So far, many papers examined the effect of employment/retirement (Di Gessa and Grundy 2013; Horner 2014; Latif 2011), provision of care (Broese van Groenou et al. 2013; Colombo et al. 2011), and activities of social participation (Adams et al. 2011; Cattani et al. 2011) on QoL, but none of them included all effects into one model, even though change in one role can affect the outcome of others.

### *Meaning of activities based on social position*

The role outcomes may not depend only on their compatibility with other roles, but also on the meaning they have for the individual (Pines et al. 2011). Hence, the effect of activities supported by active ageing approach can be more beneficial for older people of certain characteristics. These activities have been chosen by a group of academics, practitioners, and politicians, who are supposedly younger, wealthier, and more educated than a typical representative of the target population. Furthermore, authors of the approach are a group of actors with their own values, goals, and motivations (Bar-Tal 2000; Inglehart 1971; Mannheim 1936). Therefore, ‘the social construct of active ageing is ‘put to work’ to achieve the aims of the actors who cultivate the term’ (Timonen 2016: 36).

Older people as the target group of active ageing approach differ in values from its originators. Moreover, activities supported by active ageing can suit some groups of older people more than others. This paper utilizes the theory of a shift from materialist to postmaterialist values coined by (Inglehart 1971, 1977, 1990, 2008) as a framework describing connections among social position and individual values and priorities.

### *Theory of postmaterialism and its assumptions about benefits of activities*

Ronald Inglehart (1971) in the early seventies first described broad cultural changes in Western societies and labelled them as a ‘Silent revolution’. Since then, he and his colleagues connect these cultural changes from materialist to postmaterialist value orientation with various areas of life and continually test their propositions on an extensive quantitative data (Inglehart 1977, 1990, 1997, 2008). This theory continually holds two main propositions that a) value change is driven by unprecedented era safety and economic prosperity enabling orientation to other than material values and that b) individual value system is formed during socialization and afterwards becomes stable. Therefore, the postmaterialist value orientation

spreads over time via a mechanism of generational exchange, if the condition of safety and economic stability is satisfied (Inglehart 1977, 1990).

The prevalence of postmaterialist value orientation depends on macro-conditions, but also on individual characteristics – it is connected to lower age, higher education and income, lower religiosity, lower fertility, and many other characteristics predicted by the theory of value change (Inglehart 1971, 1990, 1997). Hence, creators and proponents of active ageing approach are supposedly more postmaterialist, as they are generally younger, more educated, and wealthier than older people as recipients of this policy. Some proponents of active ageing present an empirical evidence on the benefits of roles supported by active ageing (Marsillas et al. 2017; Reichert and Weidekamp-Maicher 2004; Walker 2005a), but a) this empirical evidence is usually got from the most prosperous countries and b) research procedures and interpretation of results are affected by a worldview of a researcher anyway (Bar-Tal 2000; Mannheim 1936; Matic 2017). Additionally, one postmaterialist element of active ageing is its gender-neutral definition of activities (Alexander et al. 2016; Inglehart and Norris 2003). Therefore, the roles supported by active ageing approach may not be beneficial for all groups of older people in the same way, since they may be more beneficial for those groups more similar to proponents of this approach.

The theory of value change provides a useful framework also to this paper, as it helps to create clear assumptions of what types of older people benefit more from specific roles. The employment as a role most emphasized by active ageing policy (Foster and Walker 2015) is connected more to materialist than postmaterialist values. Income and appearance are the primary incentives of paid work, and thus work more interfere with private life in materialists (Promislo et al. 2010) and materialism is also a strong motivator for being active in entrepreneurship (Uhlener and Thurik 2004). Moreover, materialists are facing a lack of economic resources more often (Inglehart 1990; Warwick 1998) and poorer older people

depend more on a stable income (Hofäcker and Naumann 2015). Regarding all the arguments, older workers should benefit more from this activity when possessing materialist value system.

Caregiving is connected to traditional family norms (Neuberger and Haberkern 2014), but also to interpersonal relations and quality of life (Promislo et al. 2010). Thus, the provision of care depends on a context and its form and it is not connected more to materialist or postmaterialist values. Postmaterialists should benefit more from volunteering, active political participation, and lifelong learning, as these activities are more prevalent for them and more fitting to their values (Aguila et al. 2008; Barrett and Zani 2015; Bekkers 2005; Inglehart 1990). In contrast, materialists incline more to conventional political participation (Aguila et al. 2008; Inglehart 1990). Finally, physical activity can be connected both to materialist (agriculture, competition in sports) and postmaterialist values (meeting friends, self-expression), which do not create specific expectations for this activity (Aguila et al. 2008).

This study is not able to indicate the value system directly, but rather compare outcomes of roles supported by active ageing between older people with lower and higher education and between people living in less and more prosperous countries. Level of education and country prosperity are probably the strongest factors connected to materialist/postmaterialist value system (Inglehart 2008; Uhlaner and Thurik 2004), and thus the effect of these factors could be ascribed to individual values, if no other explanation fits better to the discovered pattern.

This paper hypothesizes that the effects of roles supported by active ageing are predominantly positive, if we estimate the effects within individuals. Moreover, this effect seems to be more beneficial for older people with higher education and those from wealthier countries in case of volunteering and learning and less beneficial in case of participation in labour force, organized politics, and sport clubs. The paper also hypothesizes that the effect

does not differ for the provision of care and physical activity, as it is not possible to formulate a coherent assumption for these activities.

## **Data, methods, and variables**

### *Data and sample*

This study uses data from the SHARE project, which is a large European project, in which respondents from nationally representative samples of the population over 50 years and their spouses are interviewed every two years. SHARE dataset contains information on health, family, social networks, and economic situation of respondents and it also provides information on the intensity of performed activities and more measurement of subjective quality of life. So far, six waves of the SHARE data collection have been conducted (with wave 3 asking different questions) and this paper utilizes data from waves 4, 5, and 6 conducted in 2011, 2013, and 2015 (Börsch-Supan 2017c, 2017d, 2017e; Börsch-Supan et al. 2013).

Employment of data from waves 4, 5, and 6 provide a recent information from three time-points in a medium time-span, which should provide enough within-person variation. Furthermore, more countries participated in these latter waves than on the previous ones. Still, each of the waves misses some of the participating countries, and thus the final sample consists of data from 12 countries – Austria, Belgium, Czechia, Denmark, Estonia, France, Germany, Italy, Slovenia, Spain, Sweden, and Switzerland.

This study keeps respondents between 51 and 86 years of age in wave 4 (that means age range 55-90), as active ageing addresses chronological age as a flexible characteristic and aims its policies for all groups of older adults (Timonen 2016; Zaidi and Howse 2017). The respondents over the age of 86 (which was about 2 %) were dropped in order to prevent distortion of the results by outliers with different characteristics and life conditions. After

dropping respondents with missing values in utilized variables, the final consists of 14,989 individuals present in all three waves.

The baseline characteristics of the sample from wave 4 in 2011 are displayed in Table 8. The table contains descriptive statistics of the whole sample, but also of two education categories separately, as this grouping plays important role in the analysis. In overall, some activities are more prevalent among older adults – labour force participation, care provided outside households, and physical activity – while caregiving within household, educational courses, and participation in political organizations are rare. Respondents with tertiary education, who hold postmaterialist values more often, are substantially more often male, living with a partner, younger, and better off in QoL, health and economic situation. More educated respondents come more often from Belgium, Denmark, or Germany compared to Czech Republic, Italy, or Sweden. They incline more to roles of worker, volunteer, student, and most other types of activities apart from caregiving.

**Table 8: Descriptive statistics of the baseline characteristics of 14,989 respondents available for analysis in waves 4, 5, and 6 sorted by education.**

Variable	Categories or range	Lower than tertiary (% or mean)	Tertiary (% or mean)	Total (% or mean)
Quality of life: CASP-12	13–48	37.2	39.3	37.7
Labour force participation	yes	27.9	46.5	32.2
Caregiving outside household	yes	40.0	43.7	40.9
Caregiving within household	yes	5.7	5.1	5.6
Volunteering	yes	13.2	22.8	15.5
Educational course	yes	4.9	16.0	7.5
Sport or social club	yes	24.1	40.4	27.9
Political organization	yes	3.2	8.3	4.4
Physical activity	yes	56.7	68.3	59.4
Age	51-86	66.0	63.8	65.5
Partner in the household	yes	55.5	59.6	56.4
Able to make ends meet	with great difficulty	11.5	4.3	9.8
	with some difficulty	29.5	17.5	27.0
	fairly easily	33.8	32.7	33.5
	easily	24.9	45.5	29.7

Subjective health status	poor	10.1	4.0	8.6
	fair	30.6	19.2	28.0
	good	36.6	36.1	36.5
	very good	16.2	26.8	18.7
	excellent	6.5	13.9	8.2
Gender	male	36.5	42.5	37.9
	female	63.5	57.5	62.1
Country	Austria	9.8	13.2	10.6
	Belgium	9.6	17.0	11.3
	Czech Republic	11.5	6.0	10.1
	Denmark	4.3	11.8	6.1
	Estonia	14.1	14.5	14.2
	France	9.8	9.7	9.8
	Germany	2.7	4.9	3.3
	Italy	8.2	1.8	6.7
	Slovenia	7.6	5.7	7.2
	Spain	7.8	3.0	6.6
	Sweden	4.0	5.5	4.4
	Switzerland	10.6	6.9	9.7
N		11,486	3503	14,989

*Source: SHARE, waves 4, 5, and 6, own calculations.*

### *Method*

The analysis capitalizes on the panel dimension of SHARE and use data from three waves with continuous outcome variable. Hypothesized effects can be estimated through random effects regression in this data structure, which is a first step of the analysis. Random effects regression has characteristics similar to OLS regression – it uses both between-person and within-person variation and treats unobserved differences as random, which leads to higher efficiency at the expense of higher risk of bias. The alternative approach applicable to the same data structure is fixed effects regression. Fixed effects regression uses only within-person variation for estimation of the coefficients (Allison 2009). This procedure enables to use every individual as his control, and thus it controls also all stable (un)observable characteristics, such as macro-context and value orientation. This robustness is conditioned by

some variation of predictor and their exogeneity. A difference in coefficients between random effects model (REM) and fixed effects model (FEM) indicates spurious effects in REM, while much higher standard errors in FEM means low efficiency of FEM estimation (Allison 2009). Therefore, both models are estimated on the whole sample and the more appropriate one is used for the analysis of subgroups.

### *Dependent variable*

Subjective QoL is indicated on a CASP-12 scale, which is both theoretically and empirically grounded measurement of QoL in younger old age (Higgs et al. 2003b), but is applicable also for very old adults (Gjonça et al. 2010; Lakomý and Petrová Kafková 2017) due to very overlapping life priorities of these two phases (Baltes and Smith 2003; Krause 2007). CASP is an acronym for control, autonomy, self-realisation, and pleasure – the four key domains of QoL in older age according to sociological theory. Each of four domains consists of three items measured on a 4-point scale. Hence, the CASP-12 scale altogether takes values between 12 and 48 and fits the format of the continuous outcome.

### *Main explanatory variables*

This paper examines the effect of roles prescribed by active ageing, and thus it uses all activities with hypothesized impact as explanatory variables. The utilized roles belong to various sections of SHARE dataset and their measurement takes various forms. The aims of variable transformations were a) to produce simple binary indicator for each activity with sufficient within-person variation and b) to fit the definition of any particular activity by active ageing approach as well as possible.

An indicator of labour force participation groups respondents into categories of economically active – employed, self-employed, or unemployed – and economically inactive – retired, homemakers, rentiers, or permanently disabled. Variable ‘care outside household’



indicates care or help provided to any recipient monthly or more often (the same frequency as in AAI) and ‘care within household’ more intensive care and personal help (daily is the only intensity measured by SHARE) for anybody living in the same household. These two variables were constructed from a set of more specific questions inquiring the type, recipient, and frequency of each caregiving relationship. Other activities are indicated if provided at least monthly versus provided less often or not at all. These activities are measured by direct questions on ‘voluntary or charity work’, ‘educational or training course’, ‘sport, social or other kind of club’, ‘taken part in a political or community-related organization’, and ‘vigorous physical activity, such as sports, heavy housework, or a job that involves physical labour’.

Other two explanatory variables are level of education and European region, but these have a different meaning in the analysis than activities prescribed by active ageing. Education and region indicate a prevalence of value orientation, which aims to explain some variation in the effect of activities on QoL. The variable level of education is dichotomized to categories ‘lower than tertiary education’ and ‘tertiary education’, as individuals with completed tertiary education are the main protagonists of the shift towards postmaterialist value orientation. Similarly, this shift is also more profound in countries from Northern and Western Europe than Southern and Central/Eastern Europe. Hence, the variable ‘European regions’ was dichotomized to North/West (Austria, Belgium, Denmark, France, Germany, Sweden, Switzerland) and South/East (Czechia, Estonia, Italy, Slovenia, Spain), since these two categories represent the main European contrast in values, prosperity, norms, social policies, etc. (Borges Neves et al. 2013; Di Novi et al. 2015; Walker 2004). To test this assumption, models were also compared between Northern and Western Europe and between Southern and Eastern Europe with no substantial differences identified. Hence, the dichotomous

definition of regions is kept in order to provide less fragmented results with higher within-person variation for each model.

### *Control variables*

Gender, country, and other time-invariant variables are not included in the analysis, as they are controlled automatically. Thus, the presented models contain only for time-variant control variables. Age is accompanied by age squared to identify a potentially non-linear effect. The subjective economic situation is measured by a question ‘would you say that your household is able to make ends meet...’ with the following options: with great difficulty, with some difficulty, fairly easily, and easily. Subjective health status is also measured directly using options poor, fair, good, very good, and excellent.

## **Results**

### *Comparison of REM and FEM*

Table 9 presents models of random effects regression and fixed effects regression for the whole sample. REM shows five significantly positive effects and one negative effect of performed roles. These effects indicate the impact of change over time and suggest that older adults, who ended with a job, volunteering, physical activity or participation in sport club or political organization between waves, perceive a decline in the subjective QoL. In contrast, starting these activities have a presumably beneficial effect, which supports the assumptions of active ageing approach. Age has nonlinear effect implying the increase of QoL followed by a reversed trend in higher age, while the effects of good financial situation and good health are presumably beneficial. However, some of the presented effects can be spurious, if they get significantly lower in FEM.

### **Table 9: Random effects and fixed effects regression models predicting QoL**

	Random effects model		Fixed effects model	
	Coefficient	SE	Coefficient	SE
Constant	12.398***	1.624	6.409+	3.432
Labour force participation	0.226***	0.076	-0.016	0.124
Caregiving outside household	-0.024	0.047	-0.044	0.068
Caregiving within household	-1.290***	0.094	-0.916***	0.143
Volunteering	0.740***	0.067	0.283**	0.092
Educational course	0.080	0.088	-0.010	0.108
Sport or social club	0.672***	0.054	0.230**	0.075
Political organization	0.214*	0.106	-0.026	0.139
Physical activity	0.641***	0.047	0.198**	0.068
Age	0.532***	0.047	0.820***	0.102
Age squared	-0.004***	0.000	-0.008***	0.001
Partner in the household	0.443***	0.062	-0.105	0.180
Able to make ends meet (with great difficulty as ref.)				
with some difficulty	1.680***	0.082	1.082***	0.129
fairly easily	3.564***	0.086	2.295***	0.142
easily	4.789***	0.089	2.860***	0.151
Subjective health status (poor as ref.)				
fair	2.721***	0.086	1.707***	0.145
good	4.641***	0.090	2.747***	0.159
very good	5.806***	0.102	3.321***	0.176
excellent	6.595***	0.122	3.673***	0.196
N	14,989		14,989	

Source: SHARE, waves 4, 5, and 6, own calculations.

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Indeed, the effect size in FEM is much lower. On the one hand, the effect of three activities – volunteering, sport club, and physical activity – remains significant, while their coefficients and statistical significance dropped substantially. On the other hand, the negative effect of caregiving within the household from REM remains still high with  $p=0.000$ . Other controlled characteristics have strong fixed effects as well, although they decreased in magnitude. Finally, most of the standard errors are about 0.2-0.5 higher in FEM than in REM. The difference between standard errors implies lower efficiency of FEM, but even larger difference between coefficients of these models signifies that random effects can be explained

by some time-invariant factors controlled only in FEM. The difference between models is confirmed by Hausman test with  $p=0.0000$ . Even a control for gender and country – which is not present in compared models to keep them as similar as possible – does not change the difference between models, and thus FEM provides less biased results.

### *Differences in FEM between education groups*

Fixed effects regression cannot directly test, which unobserved factors predict the dependent variable. Still, the difference between education groups would imply that education directly or some characteristics connected to education – like value orientation – explain some part of the relationship between roles and QoL. Models from Table 10 indicate that this is at least to some point the case. The coefficients are more important for interpretation than a level of significance for much higher standard errors in the second model caused by the smaller sample of older adults with tertiary education.

**Table 10: Fixed effects regression models predicting QoL sorted by education**

	Lower than tertiary		Tertiary	
	Coefficient	SE	Coefficient	SE
Constant	7.106+	4.080	7.047	6.316
Labour force participation	0.012	0.152	0.021	0.214
Caregiving outside household	-0.038	0.080	-0.062	0.124
Caregiving within household	-0.913***	0.000	-0.867**	0.277
Volunteering	0.207+	0.114	0.463**	0.155
Educational course	0.014	0.153	-0.043	0.153
Sport or social club	0.252**	0.091	0.167	0.131
Political organization	-0.087	0.185	0.053	0.211
Physical activity	0.216**	0.079	0.124	0.133
Age	0.804***	0.120	0.802***	0.190
Age squared	-0.006***	0.001	-0.006***	0.001
Partner in the household	-0.170	0.210	0.179	0.331
Able to make ends meet (with great difficulty as ref.)				
with some difficulty	1.148***	0.139	0.573+	0.339
fairly easily	2.371***	0.155	1.745***	0.358
easily	2.980***	0.167	2.183***	0.365

Subjective health status (poor as ref.)				
fair	1.760***	0.157	1.416***	0.371
good	2.760***	0.174	2.588***	0.396
very good	3.305***	0.197	3.231***	0.416
excellent	3.780***	0.226	3.365***	0.439
N	11,486		3503	

Source: SHARE, waves 4, 5, and 6, own calculations.  
+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

The effect of volunteering is more profound for more educated respondents, while physical activity and participation in a sport or social club have the effect only in people with lower level of education. Then, the effects of economic situation and health are stronger for less educated as well. The higher effect of volunteering and the lower effect of conventional political participation among respondents with higher education is fitting the expectations. The more beneficial physical activities are also plausible, if their purpose is more in physical work and sports competition than self-expression and meeting people. Nevertheless, it is important to note that effects of age, health, and economic situation on QoL are much stronger than rather cosmetic effects of roles supported by active ageing policies.

### *Differences in FEM across Europe*

Table 11 shows results of FEM separately for Northern/Western and Southern/Eastern European countries. Participation in sport or social club has a positive effect only in the less prosperous countries and volunteering, physical activity, and caregiving within the household have a stronger effect in that part of Europe. The effect of caregiving within the household, which is the only negative one, may be stronger in Southern/Eastern Europe due to lower availability of formal care. The effects of physical activity and sport club are presumably more beneficial in more materialist part of Europe, but the effect of volunteering contradicts the expectations even though it fulfilled them in the first comparison. Generally, the impact of

roles for QoL differs across Europe, but these differences and the whole effects are rather small and almost negligible compared to the effects of age, health, and economic conditions.

**Table 11: Fixed effects regression models predicting QoL sorted by European region**

	North/West		South/East	
	Coefficient	SE	Coefficient	SE
Constant	12.503**	4.107	-0.809	5.575
Labour force participation	-0.180	0.145	0.211	0.215
Caregiving outside household	-0.057	0.080	-0.031	0.113
Caregiving within household	-0.596**	0.183	-1.188***	0.212
Volunteering	0.255*	0.106	0.355+	0.182
Educational course	-0.049	0.118	0.054	0.232
Sport or social club	0.093	0.085	0.450**	0.139
Political organization	0.022	0.150	-0.109	0.293
Physical activity	0.152+	0.084	0.237*	0.109
Age	0.654***	0.122	1.016***	0.170
Age squared	-0.005***	0.001	-0.008***	0.001
Partner in the household	-0.305	0.220	0.107	0.291
Able to make ends meet (with great difficulty as ref.)				
with some difficulty	1.021***	0.222	1.098***	0.158
fairly easily	2.182***	0.232	2.348***	0.182
easily	2.757***	0.238	2.885***	0.207
Subjective health status (poor as ref.)				
fair	1.715***	0.222	1.704***	0.189
good	2.777***	0.238	2.703***	0.214
very good	3.268***	0.249	3.417***	0.266
excellent	3.745***	0.265	4.205***	0.342
N	8271		6718	

Source: SHARE, waves 4, 5, and 6, own calculations.

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## Conclusion and discussion

This paper examines the effect of roles supported by active ageing on QoL policy and their differences based on value orientation. The effect of specific activities has been repeatedly studied, but this research extends the current understanding by employing several novelties. These are a) all concerned activities are included into one estimation to control for their

interdependences, b) a within-person estimator is used to evaluate actual changes in time with control for time-invariant factors, and c) potential differences in the effect of roles are explored in a framework of the postmaterialist values theory. Panel component of the SHARE data enabled to test these proposition on the sample from 12 European countries with the following conclusions.

First, *the effects of activities supported by active ageing perspective in fixed effects regression are much weaker or even non-existent*, if they are compared to prevalently beneficial effects estimated by random effects regression. This means that the effects from REM (and also from many cross-sectional studies) can be explained by other, mostly unobserved variables. Therefore, the effect of many activities – caregiving outside the household, participation labour force, training, and political organizations – is not beneficial in a panel perspective and the effect of caregiving within the household is even strongly negative.

Second, the participation in volunteering, sport or social club, and physical activity is beneficial, but their effects are weak and unstable. The presented results challenge the basic assumption of active ageing about benefits of all supported activities or all activities generally (Avramov and Maskova 2003; Foster and Walker 2015; Zaidi and Howse 2017). In contrast, QoL is strongly predicted by age, health, and economic status. Hence, *income security and availability of health care form QoL in later life much more than additional roles*. Although health and income may be strengthened by some types of activities (Hofäcker and Naumann 2015; Thomas 2011), availability of resources and services seems impossible to substitute (Rozanova et al. 2012; Timonen 2016).

Third, *the effect of roles is different for older adults with tertiary education and presumably more postmaterialist values*. This group evinces more beneficial effect of volunteering and less beneficial effect of participation in the political organization. Similarly,

the effects of volunteering, caregiving within the household, and participation in sport or social club and physical activity are stronger in Southern and Eastern part of Europe. All these differences across regions and level of education except inconsistent effect of volunteering can be plausibly explained by different value orientations causing higher utility of some activities (Aguila et al. 2008; Bekkers 2005; Inglehart 1990). Hence, this paper could argue that the set of supported activities is defined by experts with a different worldview (Bar-Tal 2000; Inglehart 1990; Mannheim 1936), and thus only some activities are meaningful and beneficial for older adults with a certain background. However, much more harmful effect of caregiving within household in South/East region can be better explained by lower availability of formal care (even though Sobotka (2008) would argue that services are also affected by prevailing values) and some other results can be interpreted in more ways as well, as the effects are rather weak and not very consistent. Therefore, the main conclusion is that effects of activities are weak and valid only for older adults of certain characteristics. Any strong conclusions about the explanatory power would be preliminary until they are tested through more direct indicators.

Most limitations of this study stem from the nature of data, which was not collected for purposes of the study. First, (post-)materialist value orientation was not measured, but only indicated by its covariates. This fact means that the theory of value change can be used only as a loose interpretative framework, although it could bring stronger explanation with the actual measurement of value orientation. Second, most of the activities supported by active ageing approach were measured by one closed item. In this form, it is hard to determine the prevailing meaning of the items for respondents in the situation, where each item could possibly fulfil both materialist and postmaterialist needs (for instance educational course may serve as a way how to reach higher income and job can be a source of self-expression). This dual nature of each activity in terms of values could explain the unclear pattern in the data.



Third, a mild within-person variability of some explanatory variables may contribute to some unstable fixed effects. Finally, the paper uses data only from 12 European countries, though 20 of them participated in at least one utilized waves.

Despite the limitations, this study presents methodological novelties and empirical findings, which can inspire future research. The main arguments should be further tested on both quantitative and qualitative data collected specifically for these purposes. The thesis that some roles are beneficial just for some groups and populations of older adults should be elaborated more in order to alter active ageing policies into more context-sensitive and less normative approach.

## Chapter 7: Conclusions and discussion

This dissertation elaborates Role *dynamics of older adults and their consequences* in the European context. More specifically, the effect of roles supported by the active ageing approach and their changes on subjective quality of life is tested. The study does not aim to propose a definitive statement that the roles are either beneficial or detrimental in later life. In contrary, this work applies contextual approach (Bronfenbrenner 1986; Marks 1977) to this issue and examine which individual and contextual factors shape the ultimate effect of each important activity in later life. This goal is pursued by a) an extensive overview of existing theories and research, b) the application of suitable sociological theories on this topic, and c) original empirical findings produced by secondary data analysis. The analysis addresses the effect of each major role by the different quantitative procedure performed on data from the project Survey of Health, Ageing and Retirement in Europe (SHARE). Presented conclusions are thus based mostly on these analyses, though they reflect their relation to previous knowledge.

Active ageing as a dominant reaction on population ageing in Europe (Timonen 2016; Walker and Maltby 2012) supports several groups of activities in later life. All the promoted activities, which are supposedly beneficial for health and subjective quality of life of older adults, include prolonged employment, informal caregiving, social participation, and physical activities among others (Avramov and Maskova 2003; EU Council 2012; Eurostat 2012; Marsillas et al. 2017; Zaidi and Howse 2017). Further, the beneficial effect of additional roles is expected to be valid irrespective of individual and contextual characteristics. This dissertation relativizes this expectation and shows through different analytical approaches to SHARE data how each type of activities generates different outcomes under different conditions.

First, prolonged working life follows the goals of more sustainable labour markets and welfare systems at the societal level (Ebbinghaus 2012b; Foster and Walker 2015; Zaidi 2015) and better life outcomes at the individual level (Adams et al. 2011; Foster and Walker 2015; Marsillas et al. 2017; Walker and Maltby 2012). The employment is the key role supported by active ageing approach (Avramov and Maskova 2003; EU Council 2012; Eurostat 2012; Marsillas et al. 2017; Zaidi and Howse 2017), and some critics even label it as the only role that is actually implemented (Boudiny 2013; Foster and Walker 2015).

Chapter 3 addresses the prevailing effect of working in later life has not been identified conclusively. On the one hand, some studies confirmed the expectation and found the beneficial effect of prolonged employment (Gorry et al. 2015; Horner 2014; Latif 2011) explained by a provision of financial security, identity, social contacts, prestige, and physical activity through work (Andersson 2004; Di Gessa and Grundy 2013; Horner 2014; Walker 2004). On the other hand, the effect of prolonged retirement is often detrimental to QoL (Daatland et al. 2010; Di Gessa and Grundy 2013). The inconsistency of previous studies suggests that the effect of working longer vs. retirement depends on certain conditions, such as characteristics of the individual (Bender 2012; Clark and Fawaz 2009; Wong and Earl 2009), stage of retirement (Nordenmark and Stattin 2009; Szinovacz and Davey 2004), context of retirement (Kim and Moen 2002; Szinovacz and Davey 2006), and characteristics of the retirement transition (Bender 2012; Nordenmark and Stattin 2009; Pinguart and Schindler 2007). The thesis addresses another intervening factor in the relationship between prolonged employment and quality of life, which is the role of macro-context.

The conclusion of the propensity score matching analysis conducted separately for four European regions is that the effect of working in later life clearly differs across Europe. Southern and Post-communist Europe evince positive effect of working longer, while the opposite effect was found for Northern and Western Europe. The analysis for subdomains of

subjective QoL separately reveals that employment increases control over life and pleasure in South/East and decreases autonomy in North/West of Europe. Though a direct evidence for this claim is missing, these differences can be explained rather by economic than institutional or cultural macro-factors. Hence, paid job in later life may prevent from deterioration of living standard in less wealthy parts of Europe and lead to slightly higher quality of life compared to retirement, although QoL is higher for both groups in more wealthy regions. The economic resources are far from being the only significant social force (Bourdieu 1986; Inglehart 1997; Weber 2001), but in this case, they are the most important one.

A provision of informal care is a type of activity, which shares several characteristics with prolonged employment in the context of this work. First, it is a central pillar – probably one of two most important one – of active ageing paradigm. Second, its support among older adults shifts the responsibility of individual welfare state towards individuals. Third, its overall effect on QoL differs across European regions. Finally, both of these activities are available to, and thus also beneficial for, people of certain characteristics.

The analysis in chapter 4 addresses drawbacks of previous research by including all types of informal care and its impact on theoretically valid domains of QoL important in later life. Moreover, it examines multiplicity, intensity, and voluntariness of care as three decisive characteristics of caregiving. The findings of multilevel logistic regression show that provision of care has a predominantly beneficial impact on loneliness, meaningfulness of life, and overload with the even stronger positive effect of a higher number of caregiving relationships. However, this beneficial effect did not appear for intensive care provided daily. Furthermore, the resulting effect of caregiving depends on the availability of formal care in the country, which indicates to what extent can be a provision of care labelled as voluntary. The effect of caregiving is more beneficial in countries with a higher availability of formal care, but only for the less intensive provision of care. Older adults providing care weekly in a

context of stronger welfare state do not benefit from the activity, which is surprising, but it is a small group deviating from the patterns. Therefore, this could be specific subpopulation left behind by the social system (Fokkema et al. 2008; Igel and Szydlik 2011; Neuberger and Haberkern 2014).

The analysis of the effect of caregiving on domains of QoL illustrates, how the effect depends on several characteristics of provided care as well as on macro-conditions. In this way, the research expands on findings that QoL generally depends on caregiving only in some regions (Di Novi et al. 2015) and in countries with stronger social norms regarding help to relatives (Neuberger and Haberkern 2014). It is important to add that already complex analysis in this work does not incorporate another important factor of the caregiving outcomes – relationship to the care recipient – which has already been described in the literature (Broese van Groenou et al. 2013; De Jong Gierveld and Dykstra 2008).

The third crucial type of activity promoted by active ageing approach is social participation (EU Council 2012; Zaidi and Howse 2017). This category can be assigned to any activity performed repeatedly together with other people and all waves of SHARE data include social participation in a form of volunteering, attending a course, visiting social or sports club, and participation in a political organization (Börsch-Supan et al. 2013; Börsch-Supan 2017e). The dissertation followed a different type of logic in examining this type of activity, as its effect is conclusively beneficial (Adams et al. 2011; Cattan et al. 2011; Potočnik and Sonnentag 2013). The analysis of Chapter 5 illustrates how the prevalence of social participation developed over the last decade under different welfare regimes and how is its availability shaped by the level of education, financial situation, and health status.

The findings show that individual resources strongly predict the presence of social participation and this effect is similar over time, although the prevalence of social participation slightly rises over time. Moreover, the data implies strong intersection of

particular effects, and for instance older adults with good health and tertiary education have about five times higher chance for social participation than older adults with bad health and primary education. Finally, the differences among European welfare regimes in the prevalence of the activities are quite strong, but not very consistent. Support for social participation by social systems thus promotes a beneficial group of activities, which is nevertheless more available to well-off older adults and the consistent effort has not been able to lower these inequalities so far. This dissertation focuses more on a quantitative description of the situation in Europe, but its conclusions are consistent with theoretical work of Timonen (2016) and qualitative research of Rozanova et al. (2012).

Chapter 6 evaluating all activities promoted by active ageing incorporates the fact that all roles and their outcomes within an individual are interconnected and affect each other. In other words, certain roles can be in conflict or reversely support each other (Arpino and Bordone 2017; Goode 1960; Karpinska and Dykstra 2014), which is not adequately reflected by active ageing and tools for its evaluation (Commission of the European Communities 2002; European Commission 2013; Zaidi and Howse 2017). The fixed effect modelling used in this dissertation examines all important activities at the same time and capitalizes on the panel dimension of SHARE data and reflect the changes in roles and QoL within individuals over time. The results imply that some activities – volunteering, visiting social or sports club, and physical activity – have a positive effect, while caregiving within the household has a negative effect. Overall, all effects are weaker and less positive in fixed effects modelling than in other types of regression analysis, which suggests a spurious effect of being active in many studies. Hence, it is important to evaluate each effect within the context of other roles and use a proper statistical technique in order to produce data for a proper knowledge-based decision making (George 1993; Kim and Moen 2001, 2002).

The dissertation generally brings several conclusions, which is important to connect with both previous research and practical implications:

First, some activities promoted by active ageing are beneficial for older adults, but it is not true for all the activities and under all circumstances. Furthermore, the dissertation illustrates that these effects are weak or negligible compared to characteristics like health, education, and age when proper statistical techniques are applied.

Second, it is always important to consider individual resources, group dynamics, characteristics of activities, and macro-context, as the effect can be opposite for different values of these factors. In that regard, neither the theory of role strain (Goode 1960) nor the theory of role accumulation (Sieber 1974) has universal applicability. Moreover, the same can be said about the theory of disengagement (Cumming and Henry 1961) and the activity theory or active ageing concept (Avramov and Maskova 2003; Havighurst 1961). Rather than these 'absolute notions' of social gerontology, the life course approach (George 1993; Kim and Moen 2002) and ecological perspective (Bronfenbrenner 1986) are more relevant framings of this topic. This conclusion is compatible with Phillips's et al. (2010) description of the development of social gerontology towards more relative theories.

Third, the results confirmed a weak association between actual and desired reality within active ageing concept indicated from its inception. While the theory of disengagement drew on the actual performance of roles in later life (Cumming 1963; Cumming and Henry 1961), the activity theory addressed desired state of affairs as an aim of the future (Havighurst 1961). Then, active ageing as an approach closely tied to social politics held this connection to the desired level of activities, which should be aimed for (European Commission 2013; Zaidi and Howse 2017). This work also presents lower levels of activities, which is especially true for very old age, worse health, and other limiting conditions. Therefore, a prevalence of

some types of activities may rise in later life, but a decisive part of older European populations remains largely inactive when following the official definitions of activity.

Fourth, many beneficial activities are more available for well-off older people, and their support do not reduce these inequalities – in contrast, it may expand them. On the one hand, the role performance of worker or caregiver is not structured so strongly among social groups, as the less well of people may be forced to hold them even under less convenient conditions. On the other hand, availability of social activities is strongly structured by individual characteristics, which is even intensified with intersectionality of more disadvantages. Hence, the findings are in line with the criticism of Timonen (2016), who assumes that active ageing serves the purposes of only certain groups of people.

Fifth, active ageing approach formulated by people with a specific worldview serves predominantly the interests of specific groups of older adults. If the assumption that each theory reflects social position of its authors (Bar-Tal 2000; Inglehart 1977; Mannheim 1936) is held, the formulation of active ageing approach needs to be reconsidered. Indeed, active ageing promotes a set of arbitrary set activities, which can reflect the specific social position of its formulators and can be considered as more postmaterialist (Alexander et al. 2016; Inglehart 1997; Inglehart and Norris 2003). As a consequence, supported activities fit better, and thus are more beneficial only for certain groups of older adults (Roanova et al. 2012; Timonen 2016). This assumption was confirmed partially in chapters on working and all activities together.

In conclusion, the active ageing approach brings the promised benefits to older adults only under some conditions. The derived social policy should address this as a limitation preventing from the standardized application of the same approach to all EU populations and all groups of older adults irrespective their differences (Hank 2011; Di Novi et al. 2015; Walker 2002a). If applied this way, active ageing can be a source of exclusion and



marginalization in its attempt to systematize and control a large part of contemporary populations (Bauman 1993; Lasch 1991). Therefore, this strategy for addressing population ageing needs to become much more context-reflexive and incorporate the problems and conditions of older adults that are not able to fulfil its requirements.

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