

# Does it matter how you retire? Old-age retirement routes and subjective economic well-being

**Liisa-Maria Palomäki**

Finnish Centre for Pensions ([liisa-maria.palomaki@etk.fi](mailto:liisa-maria.palomaki@etk.fi))

Manuscript version accepted for publication in *Social Indicators Research*. The final publication is available at Springer via <https://doi.org/10.1007/s11205-018-1929-9>

## 1 Introduction

Retirement is a key transition in old age. It typically leads to changes in different domains of subjective well-being. Due to the population ageing, retirement on an old-age pension is becoming increasingly common in Europe. The effect of retirement on well-being is a relatively widely studied topic, including, e.g. perspectives of health, psychology (e.g. Van Solinge & Henkens, 2008; Wang, 2007), economics and policy analysis (Bender, 2012; Bonsang & Klein, 2012; Fonseca, Kapteyn, Lee, Zamarro, & Feeney, 2014; Horner, 2014; Kapteyn, Lee, & Zamarro, 2013; Kesavayuth, Rosenman, & Zikos, 2016), but there exists surprisingly little knowledge of the association between retirement and financial satisfaction, which has been proven to increase overall subjective well-being (George, 1992) and at its most extreme, to reduce mortality (Lee & Huang, 2015).

Since the 2000s, subjective well-being (SWB) has gained more ground internationally both in governmental policy-making and in well-being research, which stems from the critique towards GDP as a measure of societal progress (Helliwell, Layard, & Sachs, 2017; Stiglitz, Sen, & Fitoussi, 2009). Income adequacy in old age has mainly been evaluated with objective measures, such as income (European Commission, 2015; Grech, 2015) and regarding retirement, especially within the framework of life-cycle model of consumption (Blau, 2008; Hurd & Rohwedder, 2008), but these objective measures can be criticized for not being able to capture the entirety of economic well-being as they do not reflect people's experiences accurately enough (Diener & Suh, 1997). Regarding individuals, especially housing costs and health care may create differential challenges for old-age people with similar pension levels. Similarly, country level income measures may not reflect the situation of individuals. E.g. some European countries may have very similar old-age poverty levels but the ability of old-age people to make ends meet may be very different in the same countries (Ahonen, Kuitto, & Palomäki, 2017).

Financial satisfaction in old age is an established topic in gerontological research (George, 1992; Hazelrigg & Hardy, 1997; Hsieh, 2003; Liang & Fairchild, 1979; Liang, Kahana, & Doherty, 1980; Litwin & Sapir, 2009; Stoller & Stoller, 2003; Weidekamp-Maicher & Naegele, 2007), with the main finding being old-age people's paradoxically high financial satisfaction with relatively low income levels (Hansen, Slagsvold, & Moum, 2008). These studies are mainly cross-sectional, which leaves unanswered many of the questions on how changes over time, such as retirement and ageing combined with income change affect financial satisfaction. Retirement has been hypothesized as causing either more or less deprivation than the changes in income would lead one to suspect (Berthoud, Blekesaune, & Hancock, 2009).

According to the traditional line of thought, retirement occurs from full-time work to full-time old-age retirement. In reality the transition into old-age retirement takes place through different pathways. Most people in European countries transit from work into old-age retirement between the ages of 50 to 69. But for one in five the path is different, either because they transit into retirement from other statuses or do not actually consider themselves to be retired. (Eurostat, 2015). Older people's decision to withdraw from the labour market is shaped by the institutional setting of social protection domains (pensions, disability and employment), but also by individual and contextual factors (Debrand & Sirven, 2009), creating "pull" and "push" incentives for retirement (e.g. Hofäcker & Unt, 2013). The exit pathways from the labour market are shown to affect short-term life satisfaction (Wetzel, Huxhold, & Tesch-Römer, 2016), but the route in itself has not shown any independent effects on post-retirement health (Halleröd, Örestig, & Stattin, 2013) or later life overall (Hyde, Ferrie, Higgs, Mein, & Nazroo, 2004). Against this background, it is also essential to specify the association between retirement routes and financial satisfaction.

This study explores the effect of retirement on individuals' subjective economic well-being in European countries. We distinguish between three different retirement routes, measured with preceding basic activity statuses. The study focuses on the experiences of those who worked and of those who were unemployed before retirement. People with different labour market statuses generally enjoy different levels of well-being, and retirement might have adverse consequences in relation to income level changes and perceived income adequacy. The goal is to find out how different retirement routes are associated with the perceived income adequacy and whether possible differences can be explained with different levels of income change. Retirement is analysed with EU-Silc panel data using individual fixed-effect models. Results are indicative of the short-term effects of different retirement pathways on subjective economic well-being. The following sections present, firstly, the relevant literature on the subject; secondly, the aim of the study, data, measures and methods; thirdly, the results; and finally, a conclusion and discussion of the results.

## 2 Retirement routes and previous research on subjective economic well-being

People usually anticipate their incomes to decline at retirement and the adequacy of retirement income is a cause for concern for many of the employed in Europe, especially for women and those who are married, have poor health, a low education and experience financial strain. (Hershey, Henkens, & van Dalen, 2009). Few existing country-specific studies seem to verify that financial satisfaction actually decreases at the time of retirement (Berthoud et al., 2009; Bierman, 2014; Bonsang & Klein, 2012; Kesavayuth et al., 2016). This has been the trend in Britain (Berthoud et al., 2009) and for West German men aged 50–70, especially in cases of involuntary and thus unanticipated retirement (Bonsang & Klein, 2012). Regarding gender variation, retirement was shown to decrease income satisfaction for British men but not for women, while personality did not play a role in this domain satisfaction neither for men nor for women (Kesavayuth et al., 2016). The abovementioned studies nevertheless do not distinguish between different routes to old-age retirement.

The preconditions for retirement are strongly shaped by the transformations of pension policies throughout Europe. Since the late 1980s, the aim has been to reduce future expenditures by restricting, for instance, access to early retirement, raising the age of retirement and creating incentives to work longer. (Ebbinghaus & Hofäcker, 2013; Hofäcker & Unt, 2013; Wels, 2016). The institutional drivers divide retirement contexts in European countries roughly into two categories, including noteworthy variations across countries. Central and Northern countries are characterized by conditions that promote “late exit”, such as high retirement ages and public policies that support employment of older workers. Eastern and Southern countries, on the other hand, are characterized as “early retirement” countries with lower retirement ages and limited active ageing policies. (Hofäcker & Unt, 2013). The institutional pathways shape retirement routes, but patterns outside of the institutional retirement pathways also exist. Especially women’s retirement is structured around ‘the institution of family’. (Fasang, 2010). Given this variability, premises for the retirement experience regarding income adequacy differ in many ways across countries, but also due to individual characteristics.

Labour market status is generally regarded to be associated with differential levels of well-being. The employed with a higher income and more non-pecuniary benefits are in many ways best off, while the situation of the disabled and the unemployed is in many ways much worse. (Stam, Sieben, Verbakel, & de Graaf, 2016; Tøge & Blekesaune, 2015; Vaalavuo, 2016). The differences in well-being between employment groups are typically explained with individual

resources, but the role of norms in society is also presumed (Stam et al., 2016). Altogether, the level of well-being presumably differs by labour market status, and retirement can therefore be followed up with adverse effects. The analysis of life cycle events and income trajectories (Rigg & Sefton, 2006) show that retirement is one of the most important life events where falling income is concerned. Nevertheless, the pre-retirement status has a major influence on the outcome, as nearly 40 per cent of people retiring from work and only 20 per cent of people retiring from other statuses ended with falling income in Britain between 1991 to 2000. Those starting best off have more to lose in negative life events.

The relationship between income trajectory and satisfaction is nevertheless not so straightforward, which could also be presumed with old-age people's controversial high financial satisfaction. Also longitudinal evidence indicates that changes in income and satisfaction may not correspond. This is proven with two German studies covering all households, not just the elderly, that explore the effect of income change on income satisfaction. The first study observed that an increase in income did not translate into a corresponding change in satisfaction. The benefits of an improved financial situation faded more quickly than habituation to a decreasing income. This was interpreted in terms of asymmetrical adaptation. (Wunder, 2008). The second study also observed that the negative effect of income loss was stronger than the positive effect of income increase. Furthermore, it showed that people compare their own income development with that of others. People experienced deprivation in comparison to people whose income position was higher but became lower. People's income satisfaction increased in comparison to people whose income surpassed theirs. This was interpreted as a shift in others' income ranking that signalled possibilities for oneself as well. (D'Ambrosio & Frick, 2012).

This study focuses on the effect of retirement on subjective economic well-being. Typically the research considers, in one way or another, age and cohort differences as alternative explanations for old-age people's financial satisfaction (Bierman, 2014; Hansen et al., 2008). Instead of this distinction, we contrast ageing with the event of retirement.

Whereas retirement can also reduce financial needs, ageing is assumed to have a similar effect because of the adaptation or accommodation of needs, aspirations and comparison standards to meet declining economic resources (Hansen et al., 2008). Ageing can be assumed to cause a gradual or linear change in well-being, and retirement sharper and more rapid change.

### **3 Data and methods**

### 3.1 Aim

This study aims to explore the association between old-age retirement and subjective economic well-being among individuals living in different European countries. The study begins by analysing the outcome of retirement in general, and proceeds to comparing different retirement routes. People with different labour market statuses, for example those working and those unemployed, generally enjoy divergent levels of well-being. The income levels of the labour market groups differ notably, and a transition into retirement might have adverse consequences on subjective and objective economic well-being. The results of the study make multiple contributions. Most importantly, the association between retirement and subjective well-being is further specified by its financial domain, providing important (albeit indirect) information about the short-term influences of pension policies. The main focus of this study is on retirement routes<sup>1</sup>. Another contribution is given to the ongoing discussion on the puzzling relationships between age, income and financial satisfaction of the elderly.

The research begins by investigating the general trend between retirement and perceived economic well-being by asking: 1) *'Is retirement associated with changes in Subjective Economic Well-being (SEW)?'* Existing country-specific case studies lead us to hypothesize that SEW declines at retirement (H1). Alternatively, retirement will not be followed by a decrease in SEW. This might result from people usually being able to anticipate the transition into old-age retirement, unlike into unexpected early retirement, which has been linked with lowered income satisfaction and spending (Bonsang & Klein, 2012). Retirement is also followed by the cessation of work-related expenses and increased leisure time, allowing for more efficient purchasing or the home production of goods (Hurd & Rohwedder, 2008).

The research then proceeds to distinguish between different retirement routes by asking: 2) *'Is the association between retirement and SEW different for individuals retiring via different retirement routes?'* In this connection, it can be hypothesized that SEW decreases for people retiring from work and (H2) and increases for people retiring from unemployment (H3). These hypotheses are based on the idea of income levels dropping for people retiring from work, and on the possible increase in income level for the unemployed as they most likely start receiving a pension. Pension levels, even the minimum guarantee levels, are higher than unemployment benefit levels in many countries. More importantly,

---

<sup>1</sup> There exist previous studies on retirement and SWB with different methodological approaches, such as IV methodology, leading to different frameworks regarding the interpretation of results.

they are granted on a permanent basis whereas other benefits have to be frequently applied for, thereby often stigmatizing the applicant.

The following question is then set as: 3) *'Are the possible differences in SEW for people retiring via different retirement routes associated with changes in income?'* The hypothesis is that income change explains changes in SEW (H4). This would also take into account the differences in social security systems and other heterogeneity affecting retirement experience from different statuses. Alternatively, a change in income level does not have this kind of off-setting effect. For example, retirement has been hypothesized to cause more or less variation in deprivation for elderly persons than income changes would lead us to suspect (Berthoud et al., 2009). Adaptation to a new income level has also been proven to occur more slowly for people whose income decreases than for people whose income increases (Wunder, 2008). Also other factors, such as a comparison with other pensioners' income (Palomäki, 2016) and even changes in that compared to one's own situation (D'Ambrosio & Frick, 2012), have proven to affect subjective economic well-being. If the income change does not explain the differences, this would signal that the retirement route is linked to financial satisfaction beyond its evident association with income.

### **3.2 Data**

The empirical analyses are based on the longitudinal component of the survey The European Union Statistics on Income and Living Conditions (EU-SILC) 2010-2013, which is the EU reference source for comparative statistics in income distribution and social exclusion at the European level (Eurostat, 2017). The data covers 29 European countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Greece, Spain, Finland, France, Hungary, Ireland, Iceland, Italy, Lithuania, Luxembourg, Latvia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia and United Kingdom. All private households and all persons aged 16 and over within the household are eligible. The longitudinal component refers to the rotational design, in which individuals representing households in different European countries are interviewed up to four times, forming an unbalanced panel data. The relatively short follow-up time, with two to four observations per unit, of the EU-SILC panel fits well with this research purpose, in which the main focus is on a single event of transition into retirement.

In the analytical sample, households are represented by one member of the household, and for countries using person sampling, the respondent must be the selected respondent. They must be at least 55 years of age and have complete records in all the essential factors, such as the measure of subjective economic well-being, basic activity status, age and income. As the focus is on the transition into old-age retirement, respondents already retired at first wave, reporting for more than one transition and transitioning into another status after retirement during the research period are excluded. The descriptive results are produced with weights provided by Eurostat whereas the regression analysis is run without weights. The application of weights in studies carried out with the longitudinal component of EU-SILC is varied (Nelson & Tøge, 2017; Tøge & Blekesaune, 2015; Vaalavuo, 2016). The research data constructed for this study includes 26,680 individuals and 73,614 person years. The mean age of all the respondents is 62 years, and for retired persons 64 years. Of all the respondents, 42 per cent are men, 56 per cent are in a relationship, and 54 per cent perceive their health to be good while 31 per cent perceive it to be fair (weighted percentages).

### **3.3 Measures and methods**

The article uses the concept *Subjective Economic Well-being (SEW)* (Cracolici, Giambona, & Cuffaro, 2012; Palomäki, 2016) referring to households' evaluations of the adequacy of their income to satisfy needs. The choice of concept emphasizes the way of measurement, as opposed to objective economic well-being measures such as income. The concept comes close to the concept of perceived income adequacy (Grable, Cupples, Fernatt, & Anderson, 2013), and they are used interchangeably. Another widely used concept describing the subjective economic well-being of the elderly is financial satisfaction (George, 1992; Weidekamp-Maicher & Naegele, 2007), but it can be understood also as a more comprehensive measure.

The dependent variable representing SEW is measured as the ability of households to make ends meet. The question is phrased as follows: "A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual expenses?" Six-point ready-classified answer categories are: 1) with great difficulty, 2) with difficulty, 3) with some difficulty, 4) fairly easily, 5) easily and 6) very easily. (Table 1.)

TABLE 1. Subjective economic well-being 2010–2013, % \*

	%
Great difficulty	10
Difficulty	16
Some difficulty	31
Fairly easily	24
Easy	13
Very easily	5
All	100

\* Weighted at population level

The main time-varying variable used to measure retirement transition and retirement route is based on the respondent's self-defined current economic status. The information on the respondent's basic activity status is derived from the question regarding self-defined current economic status. Ready-classified answer categories are: 1) employee working full or 2) part-time, 3) self-employed working full or 4) part-time, 5) unemployed, 6) pupils, students, people in further training, unpaid work experience, 7) in retirement or early retirement or having given up business, 8) permanently disabled or/ and unfit to work, 9) in compulsory military community or service, 10) fulfilling domestic tasks and care responsibilities, and 11) other inactive person. Categories are not related to any specific age.

Transition into retirement is measured with the respondent's self-defined current economic status as described above and elaborated as a time-varying dummy variable. *Retirement transition* is coded as one for the basic activity status in



time (t), when the respondent indicates being in retirement or early retirement or having given up business and the preceding status (t-1) is some other. Statuses following the transition become coded as one and statuses preceding the transition become coded as zero. The effect of transition into old-age retirement on subjective economic well-being is measured with this variable.

*Retirement route* is captured by a time-varying factor variable indicating both the timing of the retirement transition and the preceding status (Table 2.). The transition route variable has four values: 0) no retirement transition (*no retirement*), 1) retirement from work (full or part-time employment and full or part-time self-employment) (*ret. work*), 2) retirement from unemployment (*ret. unemployment*) and 3) retirement from other status (permanently disabled or/ and unfit to work, fulfilling domestic tasks and care responsibilities, a pupil, student, in further training, engaging in unpaid work experience, in compulsory military community or service, and other inactive person) (*ret. other*). Transition route dummies become coded as 1-3 when the individual retires in time (t) and the condition for the preceding status (t-1) is realized, following the equivalent coding for all the statuses after retirement.

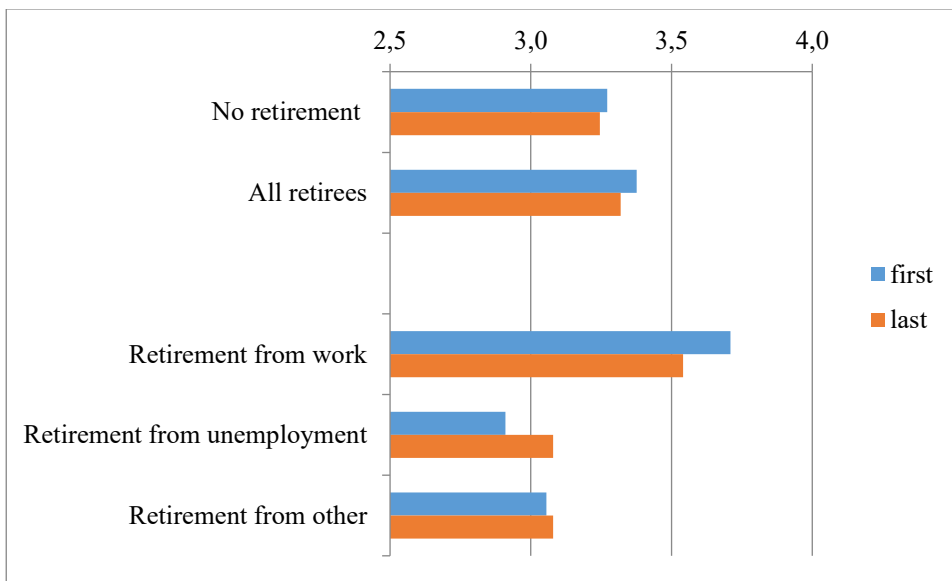
TABLE 2. Retirement routes 2010-2013, % & n (not weighted)

	%	n
No retirement	79	21162
Retirement		
from work	11	2917
from unemployment	2	595
from other status	8	2006
All	100	26680

Additional analyses were run separately, first for those retiring from full-time work (n=2126) and part-time work (n=791) and secondly for those retiring from employment (n=2 322) and self-employment (n=595). Because the results did not differ either by working time or economic status, it makes sense to combine these groups into one category. The similarity of effects is very likely due to the fact that people in these categories belong to same labour market group of those working and the source of income is the same – own work. In addition, the labour market status as such proves to

be a significant factor contributing to the evaluation of adequacy. The situations for those working and those unemployed are assumed to be more or less similar across European countries. Contrastingly, the situations of groups under the ‘*ret. other*’ are assumed to vary more, both in terms of frequency and other perspectives related to economic well-being, which makes the combination of these groups into one category reasonable for the purpose of this study. This variable compacts the retirement routes into three comprehensible categories and suppresses the number of possible destination categories for purposes of adding statistical relevancy and alleviating the interpretation of results. An example of including more detailed information on individuals’ transitions between employment statuses is presented by Lancee and Radl (2014). An overall picture of the average change in SEW by retirement and retirement routes is presented in Figure 1, where the first time-point indicates the respondent’s first observation in the survey and the last time-point indicates the respondent’s last observation in the survey. The length of the period between these points and the timing of retirement varies by respondent due to the structure of the data. The purpose of this figure is to create an overall idea of the phenomenon.

Fig 1. SEW (mean) at first and last time-point of the survey (weighted averages)



Income is proven to affect the financial satisfaction of the elderly, even though its effect has been described as paradoxical (Hansen et al., 2008). *Household income* is measured as equivalized disposable household income, referring to income available for spending or saving after tax and other deductions, and adjusting for the size and composition of households. Household income is further transformed into purchasing power parities and a logarithmic scale. In order to make values comparable for each person, income is further centralized across the medium income of all households by

year. The reference income period in the EU-SILC data is the previous year. The difference in the income reference period and variables measuring current situation (for example, activity status, health) has been addressed, for instance, by employing information from previous years (Vaalavuo, 2016) or left unproblematic. This issue will be discussed in this study in relation to robustness checks of the results.

In previous studies, age has been shown to be a major factor shaping perceptions of economic well-being for the elderly, and therefore an individual model for age needs to be carried out in order to extract the effect of age within this context. *Age* is measured with the individual's age in years, which includes the assumption of stable effect across the age range (Berthoud et al., 2009). Age is top-coded by Eurostat to 80.

Control variables are: *Relationship status* (information on a respondent's marital status and legality of union). It is further categorized as: 1) in a relationship are either married, registered partners, or in a consensual union without legal basis, and 2) not in a relationship are those never married, divorced, separated, widowed and not in a consensual union without legal basis. This variable aims at distinguishing between people living with a partner and those living alone. *Self-perceived health* entails subjective evaluations of general health. It is categorized as 1) very good, 2) good, 3) fair, 4) bad, and 5) very bad.

The data is analysed with regression models that take into account the longitudinal nature of the EU-SILC data. The main analysis method is linear individual fixed-effect regression model (Allison, 2009) with dummies for analysis of the effect of retirement transition and the effect of the retirement route. The decision to apply a standard linear panel data model follows the practice of earlier research on the effect of retirement (Abolhassani & Alessie, 2013) and retirement route (Hyde et al., 2004) and results suggesting that the treatment of the dependent life satisfaction variable as either cardinal or ordinal produces similar results (Ferrer-i-Carbonell & Frijters, 2004). In order to test this assumption, robustness checks with ordinal response are provided. The statistical analyses are performed with Stata 14.

One of the assumptions of the fixed-effect model is that unobserved heterogeneity, that is, the correlation between an entity's error term and predictor variables, bias the results and the link needs to be controlled for. The Hausman test indicates that this is also the case here, which also makes the fixed-effect model preferred over random-effect.

Some previous studies have applied the variation of retirement age between countries as an instrumental variable to study the causal effects of retirement (e.g. Fonseca et al., 2014; Horner, 2014; Kapteyn et al., 2013). The application of IV methodology in this research setting would nevertheless prove very difficult, as it is hard to come up with valid instruments for retirement routes that would not be linked with the outcome. Another issue to be acknowledged regarding the application of the individual FE approach comprises the idea that the Initial Conditions Problem is solved with the chosen method. The treatment of the initial conditions in dynamic panel data models has proven to be a major issue. (Wooldridge 2005; Akay 2009). Regarding retirement routes and SEW, the problem lies in the uncertainty of an individual's initial level of SEW prior to the observation period. Selection into a certain retirement route might not be exogenous and not treating this issue might lead to distorted conclusions. However, this study aims to specify the associations between retirement routes and SEW, and the individual linear FE method is assumed to address this problem as the analysis method includes controls for the differential levels of SEW before retirement.

The main analysis with a fixed-effect model is built in five steps, and in the final phase it includes all of the variables presented above. The retirement transition is added in the first model. It indicates whether the transition into retirement for old age is associated with the perception of income adequacy among all those retired. The second model adds to the first model and further elaborates the association of retirement transition by distinguishing between different retirement routes. The associations of different retirement routes describe differences in relation to people who did not retire during the research period. This indicates whether the retirement route is a significant factor shaping subjective economic well-being. The third model controls for the changes in income levels. The fourth model controls for changes in relationship status and perceived health. The fifth model controls for the association of ageing. Old age has been identified as a significant confounder in the relationship between income and financial satisfaction. It is therefore essential to ensure that possible retirement effects are not produced by ageing.

## **4 Results**

In the first model, the retirement transition is added (Table 3.). The starting point indicates that moving from a different labour market status into old-age retirement is associated with a decrease in subjective economic well-being by 0.6 units. The result signifies that people making the retirement transition evaluate their income adequacy as lesser after retirement than what they experienced when most of their time was occupied with some other status, before becoming

pensioners. However, it is to be noted that the level of decrease in income adequacy is not as drastic as one could expect. This is a remarkable result as such and confirms hypothesis No. 1, of retirement having a negative association with subjective economic well-being. This is now constituted at the European level, confirming the result of previous country-specific countries.

In the second model, the effect of retirement route is explored. The coefficients of the retirement route variable show that people retiring from work experience decrease in perceived income adequacy by 0.17 units, whereas the financial situation of people retiring from unemployment eases by 0.14 units. Retiring from other status does not alter the perception of income adequacy. These results confirm hypotheses No. 2 and No. 3. This action emphasizes the significance of the preceding status shaping experiences at retirement. It is noteworthy that the preceding status is neither an account of the whole labour market history nor an account even of a relatively shorter period of time.

In the third model, the effect of change in household income is added. Retirement can have differential outcomes on the economic well-being of people with different labour market statuses. The assumption is that working people have higher incomes than other groups. People retiring from work might face a more pronounced drop in income, while people retiring from unemployment might experience income growth as they most likely start receiving a pension. These kinds of changes might explain the way in which labour market status shapes subjective economic well-being at retirement. However, the degree and direction of a possible change in income level vary individually according to labour market history and earnings. Controlling for the level of income change indicates that an increase in income enhances perceived income adequacy by 0.11 units. Results show that the differences in experiences that come with different retirement routes are not explained with the inclusion of the level of income change, as the coefficients for retirement routes remain practically the same. Therefore hypothesis No. 4 gets rejected. According to the presumption by Berthoud et al. (2009), retirement causes more variation in experiences than a change in income would indicate. This means that the employment status is linked to financial satisfaction via retirement beyond its evident association with income. This adds to existing knowledge of retirement effects, but also to the confounders of the financial satisfaction of the elderly.

The fourth model indicates that the ending of a relationship, practically becoming single and a sole provider, and decreasing health all serve to deteriorate subjective economic well-being. These are expected results.

The fifth model controls for ageing. Cross-sectional studies have shown that age plays a major role in the financial satisfaction of the aged and is therefore a factor to be taken into account when exploring the relationships between retirement for old-age, income and perceived income adequacy. Adding age to the models shows that ageing in itself decreases perceived income adequacy by 0.3 units, further clarifying the picture formed in previous models. Taking into account the age differences across retirement route groups - retirees from other status being the oldest and retirees from unemployment being the youngest, slightly decreases the association of retiring from work and increases the association of retiring from unemployment, but more clearly shows that retirement from other status is linked with an increase in income adequacy. The overall negative effect of age seems to be minor, but additional analyses with 5-year age-categories prove it to be significantly steeper for those aged 70 and over.

TABLE 3. Individual linear fixed-effect regression model on the association between retirement and retirement routes on subjective economic well-being (SEW)

	Model 1	Model 2	Model 3	Model 4	Model 5
Retirement transition	-0.06*** (.01)				
Ret. work		-0.17*** (.02)	-0.16*** (.02)	-0.16*** (.02)	-0.11*** (.02)
Ret. unemployment		0.14*** (.03)	0.13*** (.03)	0.14*** (.03)	0.20*** (.03)
Ret. other		0.03 (.02)	0.03 (.02)	0.03 (.02)	0.08*** (.02)
Household income			0.11*** (.01)	0.11*** (.01)	0.12*** (.01)
Relationship				-0.11*** (.03)	-0.09** (.03)
Perceived health				-0.09***	-0.09***

				(.01)	(.01)
Age					-0.03***
					(.00)
Constant	3.30***	3.30***	3.37***	3.76***	5.68***
Observations	73614	73614	73614	72759	72759
Rho	0.79	0.79	0.78	0.77	0.78
Individual level variance	1.32	1.32	1.27	1.24	1.25
Error variance	0.68	0.67	0.67	0.67	0.67

---

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , SEW 1 (very difficult) - 6 (very easy), SEs in parentheses

---

The robustness of results has been checked with various alternative model specifications. The first way is to include interaction terms, in order to explore whether retirement is differently associated with perceived income adequacy in specific sub-groups. The interaction term between retirement route and gender indicated there being no gender differences, while the term between retirement route and age (in 5-year categories) indicated retirement routes having an especially strong effect for people aged 65 to 69. The effect of income change for different retirement route groups was also explored. The interaction term between retirement route and income change indicated income change having a slightly more negative association (at .05 significance level) only for those retiring from other status, rather than for people not retiring.

The second robustness check takes into account the variance across countries, regarding for example differences in labour market behaviour and social security systems etc., shaping subjective economic well-being by exploring the effect of retirement routes separately in each country without other controls (Appendix 1). The interpretation of the models is only suggestive, as cell frequencies remain naturally low. With three exceptions, the coefficients for retirement from work in different countries are negative and reach statistical significance in most of cases. Thus it can be concluded that the experience of retiring from work is more or less uniform throughout Europe in regard to perceived income adequacy. There is more variation in the experiences of those retiring from unemployment in different countries. In some countries the experience seems to be negative in contrast to the overall positive experience at the European level. However, due to fewer people retiring from unemployment and lower statistical power, the results remain mostly statistically

non-significant when the association of retirement route is explored by country. The experiences and situations of people retiring from other status are even more varied in different countries.

In order to highlight the uniformity of experiences among individuals with the same retirement route but who live in countries where, for example, typical retirement routes, living standards, replacement rates and the geographical location differ, one can draw attention to the cases of Estonia, France, the Netherlands and Portugal. The additional exploration with the data showed that in France (61%) and in Estonia (70%), the majority of the elderly population retired from work, whereas retirement from other statuses was common in the Netherlands (77%) and from unemployment in Portugal (25%). These countries also differ in absolute living standards measured with the level of severe material deprivation. Older people in Estonia and Portugal are strained with lower living standards, whereas in the Netherlands and in France, living standards are high. The difference in pension replacement rates (ARR), however, are characterized with higher rates (around 60%) prevailing in France and Portugal and lower (around 50%) in Estonia and the Netherlands. (European Commission 2015). In all of these countries where retirement occurs in different types of contextual settings, retirement from work decreased and retirement from unemployment increased the perceived income adequacy. More variation is attached to retirement from other statuses. However, the effect of the institutional context presents a further research question that has to be evaluated with a multi-level research setting with a higher number of observations.

The third alternative way of constructing models addresses the issue of income period, referring to the previous year. Instead of applying the basic activity status of the current year, it was also possible to detect the respondent's status by month in regard to the income reference year. The results of previous models did not change regardless of whether the status referred to last wave's December or if the status was from the same month of the previous year as the survey month of the current year.

Finally, additional model specifications testing the assumption of the linearity of the dependent variable showed similar results. First, the specification with conditional fixed effect logit model, with SEW dichotomized (1=fairly easily, easily, very easily, 0=some difficulty, with difficulty, great difficulty), indicated that the risk to experience some level of easiness was notably negative (-.55, (SE .08)) for those retiring from work whereas the coefficient was positive for those retiring from unemployment (.53, (SE 0.17)). The association between retirement from other status and perceived income adequacy did not prove statistically significant. A RE-ordered logit model was also specified, although the model does not control for unobserved heterogeneity at the individual level. Results indicated that retirement from work



is associated with decreased perceived income adequacy, but the results for retirement from unemployment and other status are positive as expected, but statistically non-significant. These additional models for robustness checked for the correlation between unobserved heterogeneity and observed variables with the Mundlak term (Mundlak 1978). The tests indicated that such relationships exist, which further supports the use of the chosen FE approach.

## **5 Conclusion and discussion**

This study explored the effect of the life cycle event of retirement for old age on subjective economic well-being. The transition into retirement was first analysed at a general level and then further elaborated with individual retirement routes, the definition based on preceding activity status. The inclusion of individuals' initial stages enhances the understanding of the relationship between major life cycle events and income dynamics (Rigg & Sefton, 2006), which is a perspective to be included also in the analysis of subjective well-being. The empirical analyses are based on the longitudinal part of the survey European Union Statistics on Income and Living Conditions (EU-SILC) 2010-2013, with an analysis method of individual linear regression modelling with individual fixed effects. Results of the study add to the discussions on retirement and subjective well-being and inform policymakers of the short-term association between institutional retirement pathways and the economic well-being of old-age people, but also to research on age, income and financial satisfaction with a longitudinal perspective.

The results show that retirement in general is negatively associated with subjective economic well-being, and confirm the understanding of retirement, at a general level, as decreasing financial satisfaction gained from previous country-specific case studies (Bonsang & Klein, 2012; Kesavayuth et al., 2016). The decrease of SEW in retirement is nevertheless not as drastic as one could have expected, and a more detailed exploration reveals that retirement has clearly adverse outcomes for people retiring from different labour market statuses. Those transitioning from work perceive a clear cutback in perceived income adequacy, whereas the outcome is positive for those transitioning from unemployment to a greater extent and for those transitioning from other status to a slightly lesser extent. Neither a change in income level, confirming the presumption by Berthoud et al. (2009) nor ageing can explain the signs or the sizes of the effects, even though taking into account the latter clearly defines the associations between status and perceived income adequacy. The retirement route has significant implications for the immediate feelings individuals have regarding their economic well-being after retirement. This means that the labour market status is linked to financial satisfaction beyond its evident association with income, and places it as a confounder of pensioners' financial satisfaction via retirement.

Results further point to certain other explanations of perceived income adequacy, besides objective income measures. This conclusion, based on previous research with cross-sectional data, is also established here with a longitudinal framework. Other factors affecting the evaluation of perceived income adequacy might be found, for instance, in relative comparisons (Hazelrigg & Hardy, 1997; Liang & Fairchild, 1979; Liang et al., 1980; Palomäki, 2016; Stoller & Stoller, 2003). The perceived income adequacy at present might be contrasted to one's own past situation, either with a shorter or longer period of time, or to a perception on others' financial situations or even relational changes to them. People retiring from work might have had a flat or even a rising income trajectory before retirement, and even a minor downward turn is reflected as an unequal level of perceived income adequacy. The drop in personal income might also be more noticeable than a drop in household income. Occupational statuses might hold unobservable functional meanings, and there may be different expectations regarding adequacy related to income stemming from earnings versus pensions (Hazelrigg & Hardy, 1997). Also, people retiring especially from unemployment, but also from other statuses, might gain the predictability of income flow when they start drawing a pension. This in turn enhances the possibilities to plan ahead in life, which, as expected, increases one's perception of income adequacy. The disappearance of the status of unemployed might also be reflected in perceived income adequacy.

Regarding policy implications, it seems that retirement pathways that can be understood as outcomes of different push and pull factors for older people's withdrawal from labour market have direct associations to post-retirement economic well-being. The most notable observation concerns the result of retirement from unemployment increasing financial satisfaction regardless of income change. The admission of pension as a source of income for older people with insecure labor market status could increase economic well-being. This leads us to conclude that an introduction of new pension forms, such as partial old-age pensions, could improve economic well-being in old age, at least short-term. On the other hand, prolonging the working lives for those still working, in one way or another, seems to enhance the overall level of economic well-being, as retirement from work is associated with a drop in post-retirement financial satisfaction. It is worth noting that the results only capture short-term associations, leaving the long-term associations of retirement pathways for future research.

This research naturally comes with some limitations. For example, the issue of the endogeneity of retirement, resulting either from a lower level of well-being causing individuals to retire or omitted factors correlating with both the retirement decision and well-being (Kesavayuth et al., 2016) such as the retirement of a spouse, is not addressed. The former

case is a matter which probably drives the unemployed to old-age retirement. The aim of this study is, however, focused on the portrayal of the association of relationships between labour market status, retirement and subjective economic well-being. The target is not to analyse the eligibility of retirement ages, which sets another type of requirements regarding the measurement of retirement, see for example Horner (2014). Further research on retirement and subjective well-being can nevertheless benefit from different methodological approaches, such as the ordinal treatment of subjective well-being and the instrumental variable method of determining retirement.

The voluntariness of the retirement decision, which might affect those retiring from work, is yet another notable aspect (Bonsang & Klein, 2012). This was a factor not possible to control for due to a lack of proper data. For reasons of preferring the analysis of age, period effects were excluded from the main analyses. Additional analyses indicated, however, that those retiring later during the research period experienced their income as less adequate, which can be interpreted as the negative effects of the economic crisis in Europe starting to accumulate. It is also noteworthy that perceptions were measured for a relatively short period after retirement. With a longer time period, the effects of retirement routes would probably become at least more uniform. Future research might also identify retirement routes in more detail and with longer panel data, taking into account individuals' working history from a longer period of time. It would also be informative if the differences in pension systems across European countries could be separated and linked to subjective retirement outcomes.

## References:

- Abolhassani, M., & Alessie, R. (2013). Subjective Well-Being Around Retirement. *De Economist*, 161(3), 349-366. doi:10.1007/s10645-013-9209-1
- Ahonen, K., Kuitto, K., & Palomäki, L.-M. (2017). Eläkeikäisten toimeentulo ja pienituloisuus eurooppalaisessa vertailussa. In S. Kuivalainen, J. Rantala, K. Ahonen, K. Kuitto, L.-M. Palomäki (eds.): *Eläkkeet ja eläkkeensaajien toimeentulo 1995-2015*. Eläketurvakeskuksen tutkimuksia 1: Helsinki. Retrieved from <https://www.etk.fi/julkaisu/elakkeet-ja-elakelaisten-toimeentulo-1995-2015/>
- Akay, A. (2009) The Wooldridge Method for the Initial Values Problem Is Simple: What About Performance? IZA Discussion Paper 3943: St. Louis.
- Allison, P. (2009). *Fixed Effects Regression Models* Retrieved from <http://methods.sagepub.com/book/fixed-effects-regression-models>
- Bender, K. A. (2012). An analysis of well-being in retirement: The role of pensions, health, and 'voluntariness' of retirement. *The Journal of Socio-Economics*, 41(4), 424-433. doi:10.1016/j.socec.2011.05.010
- Berthoud, R., Blekesaune, M., & Hancock, R. (2009). Ageing, income and living standards: evidence from the British Household Panel Survey. *Ageing & Society*, 29(7), 1105-1122. doi:10.1017/S0144686X09008605
- Bierman, A. (2014). Reconsidering the Relationship between Age and Financial Strain among Older Adults. *Society and Mental Health*, 4(3), 197-2014. doi:10.1177/2156869314549675
- Blau, D. M. (2008). Retirement and Consumption in a Life Cycle Model. *Journal of Labor Economics*, 26(1), 35-71. doi:10.1086/522066
- Bonsang, E., & Klein, T. J. (2012). Retirement and subjective well-being. *Journal of Economic Behavior & Organization*, 83(3), 311-329. doi:10.1016/j.jebo.2012.06.002
- Cracolici, M. F., Giambona, F., & Cuffaro, M. (2012). The Determinants of Subjective Economic Well-being: An Analysis on Italian-Silc Data. *Applied Research in Quality of Life*, 7(1), 17-47. doi:10.1007/s11482-011-9140-z
- D'Ambrosio, C., & Frick, J. R. (2012). Individual Wellbeing in a Dynamic Perspective. *Economica*, 79(314), 284-302. doi:10.1111/j.1468-0335.2011.00896.x
- Debrand, T., & Sirven, N. (2009). What are the Motivations of Pathways to Retirement in Europe: Individual, Familial, Professional Situation or Social Protection Systems? St. Louis: Federal Reserve Bank of St Louis.
- Diener, E., & Suh, E. M. (1997). Measuring quality of life: Economic, social and subjective indicators *Social Indicators Research*, 40(1-2), 189-216.
- Ebbinghaus, B., & Hofäcker, D. (2013). Reversing Early Retirement in Advanced Welfare Economies A Paradigm Shift to Overcome Push and Pull Factors. *Comparative Population Studies*, 38(4), 807-840.
- European Commission. (2015). *The 2015 Pension Adequacy Report: current and future income adequacy in old age in the EU*. Luxembourg: Publications Office of the European Union.
- Eurostat. (2015). Labour force survey statistics - transition from work to retirement. *Statistical article*. Retrieved from [http://ec.europa.eu/eurostat/statistics-explained/index.php/Labour\\_force\\_survey\\_statistics\\_-\\_transition\\_from\\_work\\_to\\_retirement](http://ec.europa.eu/eurostat/statistics-explained/index.php/Labour_force_survey_statistics_-_transition_from_work_to_retirement) Access Date 2.1.2017
- Eurostat. (2017). *The EU-Statistics on Income and Living Conditions (EU-SILC) Overview* Retrieved from: <http://ec.europa.eu/eurostat/web/income-and-living-conditions/overview>
- Fasang, A. E. (2010). Retirement: Institutional Pathways and Individual Trajectories in Britain and Germany. *Sociological research online*, 15(2), 1-16. doi:10.5153/sro.2110

- Ferrer-i-Carbonell, A., & Frijters, P. (2004). How Important is Methodology for the estimates of the determinants of Happiness? *Economic Journal*, 114(497), 641-659. doi:10.1111/j.1468-0297.2004.00235.x
- Fonseca, R., Kapteyn, A., Lee, J., Zamarro, G., & Feeney, K. (2014). A Longitudinal Study of Well-Being of Older Europeans: Does Retirement Matter? *Population Ageing*, 7(1), 21-41. doi:10.1007/s12062-014-9094-7
- George, L. K. (1992). Economic Status and Subjective Well-Being: A Review of the Literature and an Agenda for Future Research. In N. E. Cutler, D. W. Gregg, & M. P. Lawton (Eds.), *Aging, Money, and Life Satisfaction: Aspects of Financial Gerontology*. (pp. 69-99). New York: Springer.
- Grable, J., Cupples, S., Fernatt, F., & Anderson, N. (2013). Evaluating the Link Between Perceived Income Adequacy and Financial Satisfaction: A Resource Deficit Hypothesis Approach. *Social Indicators Research*, 114(3), 1109–1124. doi:10.1007/s11205-012-0192-8
- Grech, A. (2015). Evaluating the Possible Impact of Pension Reforms on Elderly Poverty in Europe. *Social Policy & Administration*, 49(1), 68-87. doi:10.1111/spol.12084
- Halleröd, B., Örestig, J., & Stattin, M. (2013). Leaving the labour market: the impact of exit routes from employment to retirement on health and wellbeing in old age. *European Journal of Ageing*, 10(1), 25-35. doi:10.1007/s10433-012-0250-8
- Hansen, T., Slagsvold, B., & Moum, T. (2008). Financial Satisfaction in Old Age: A Satisfaction Paradox or a Result of Accumulated Wealth? *Social Indicators Research*, 89(2), 323-347. doi:10.1007/s11205-007-9234-z
- Hazelrigg, L. E., & Hardy, M. A. (1997). Perceived Income Adequacy Among Older Adults: Issues of Conceptualization and Measurement, With an Analysis of Data. *Research on Aging*, 19(1), 69-107. doi:10.1177/0164027597191004
- Helliwell, J., Layard, R., & Sachs, J. (2017). *World Happiness Report 2017*. New York: Sustainable Development Solutions Network.
- Hershey, D. A., Henkens, K., & van Dalen, H. P. (2009). What Drives Pension Worries in Europe? A Multilevel Analysis. Netspar Discussion Paper No. 10/2009-055. Available online at SSRN: <https://ssrn.com/abstract=1573557> or <http://dx.doi.org/10.2139/ssrn.1573557>
- Hofäcker, D., & Unt, M. (2013). Exploring the ‘new worlds’ of (late?) retirement in Europe. *Journal of International and Comparative Social Policy*, 29(2), 163-183. doi:10.1080/21699763.2013.836979
- Horner, E. M. (2014). Subjective Well-Being and Retirement: Analysis and Policy Recommendations. *Journal of Happiness Studies*, 15(1), 125-144. doi:10.1007/s10902-012-9399-2
- Hsieh, C.-M. (2003). Income, age and financial satisfaction. *International Journal of Aging and Human Development*, 56(2), 89-112.
- Hurd, M. D., & Rohwedder, S. (2008). The Retirement Consumption Puzzle: Actual Spending Change in Panel Data. *NBER Working Paper Series*, vol. 13929. doi:10.3386/w13929
- Hyde, M., Ferrie, J., Higgs, P., Mein, G., & Nazroo, J. (2004). The effects of pre-retirement factors and retirement route on circumstances in retirement: findings from the Whitehall II study. *Ageing and Society*, 24, 279-296.
- Kapteyn, A., Lee, J., & Zamarro, G. (2013). Does Retirement Induced through Social Security Pension Eligibility Influence Subjective Well-being? A Cross-Country Comparison. Michigan Retirement Research Center Research Paper No.2013-301. Available online at SSRN: <https://ssrn.com/abstract=2376883> or <http://dx.doi.org/10.2139/ssrn.2376883>
- Kesavayuth, D., Rosenman, R. E., & Zikos, V. (2016). Retirement, personality, and well-being. *Economic Inquiry*, 54(2), 733-750. doi:10.1111/ecin.12307
- Lancee, B., & Radl, J. (2014). Volunteering over the Life Course. *Social Forces*, 93(2), 833-862. doi:10.1093/sf/sou090

- Lee, M.-C., & Huang, N. (2015). Changes in self-perceived economic satisfaction and mortality at old ages: evidence from a survey of middle-aged and elderly adults in Taiwan. *Social Science & Medicine*, *130*, 1-8. doi:10.1016/j.socscimed.2015.01.047
- Liang, J., & Fairchild, T. J. (1979). Relative Deprivation and Perception of Financial Adequacy among the Aged. *Journal of Gerontology*, *34*(5), 746-759.
- Liang, J., Kahana, E., & Doherty, E. (1980). Financial well-being among the aged: a further elaboration. *Journal of Gerontology*, *35*(3), 409-420.
- Litwin, H., & Sapir, E. V. (2009). Perceived Income Adequacy Among Older Adults in 12 Countries: Findings From the Survey of Health, Ageing, and Retirement in Europe. *The Gerontologist*, *49*(3), 397-406. doi:10.1093/geront/gnp036
- Mundlak, Y. (1978) On the pooling of time series and cross section data. *Econometrica* *46*(1): 69-85.
- Nelson, K., & Tøge, A. G. (2017). Health trends in the wake of the financial crisis—increasing inequalities? *Scandinavian Journal of Public Health*, *45*(18\_suppl), 22-29. doi:10.1177/1403494817707088
- Palomäki, L.-M. (2016). Reference Groups and Pensioners' Subjective Economic Well-Being in Europe. *Social Indicators Research*, *131*(2), 509-525. doi:10.1007/s11205-016-1262-0
- Rigg, J., & Sefton, T. (2006). Income Dynamics and the Life Cycle. *Journal of Social Policy*, *35*(3), 411-435. doi:10.1017/S0047279406009858.
- Stam, K., Sieben, I., Verbakel, E., & de Graaf, P. M. (2016). Employment status and subjective well-being: the role of the social norm to work. *Work, Employment & Society*, *30*(2), 309-333. doi:10.1177/0950017014564602
- Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2009). *Report by the commission on the measurement of economic performance and social progress*. Retrieved from [http://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement\\_of\\_economic\\_performance\\_and\\_social\\_progress.pdf](http://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement_of_economic_performance_and_social_progress.pdf)
- Stoller, M. A., & Stoller, E. P. (2003). Perceived Income Adequacy Among Elderly Retirees. *Journal of Applied Gerontology*, *22*(2), 230-251. doi:10.1177/0733464803022002004
- Tøge, A. G., & Blekesaune, M. (2015). Unemployment transitions and self-rated health in Europe: A longitudinal analysis of EU-SILC from 2008 to 2011. *Social Science & Medicine*, *143*, 171-178. doi:10.1016/j.socscimed.2015.08.040.
- Vaalavuo, M. (2016). Deterioration in health: What is the role of unemployment and poverty? *Scandinavian Journal of Public Health*, *44*(4), 347-353. doi:10.1177/1403494815623654
- Van Solinge, H., & Henkens, K. (2008). Adjustment to and Satisfaction With Retirement: Two of a Kind? *Psychology and Aging*, *23*(2), 422-434. doi:10.1037/0882-7974.23.2.422
- Wang, M. (2007). Profiling Retirees in the Retirement Transition and Adjustment Process: Examining the Longitudinal Change Patterns of Retirees' Psychological Well-Being. *Journal of Applied Psychology*, *92*(2), 455-474. doi:10.1037/0021-9010.92.2.455
- Weidekamp-Maicher, M., & Naegele, G. (2007). Economic Resources and Subjective Well-Being in Old Age. In H. Mollenkopf & A. Walker (Eds.), *Quality of Life in Old Age. International and Multi-Disciplinary Perspectives*. (pp. 65-84). Dordrecht: Springer.
- Wels, J. (2016). The Statistical Analysis of End of Working Life: Methodological and Sociological Issues Raised by the Average Effective Age of Retirement. *Social Indicators Research*, *129*(1), 291-315. doi:10.1007/s11205-015-1103-6
- Wetzel, M., Huxhold, O., & Tesch-Römer, C. (2016). Transition into Retirement Affects Life Satisfaction: Short- and Long-Term Development Depends on Last Labor Market Status and Education. *Social Indicators Research*, *125*(3), 991-1009. doi:10.1007/s11205-015-0862-4
- Wooldridge, J. M. (2005) Simple solutions to the initial conditions problem in dynamic, nonlinear panel data models with unobserved heterogeneity. *Journal of Applied Econometrics* *20*(1): 39-54.

Wunder, C. (2008). Adaptation to Income over Time: A Weak Point of Subjective Well-Being. SOEPpaper No. 130. Available online at SSRN: <https://ssrn.com/abstract=1279423> or <http://dx.doi.org/10.2139/ssrn.1279423>

<b>Appendix 1, Linear fixed-effect regression model on the association between retirement routes on subjective economic well-being (SEW) in 29 European countries</b>								
	Retirement routes						Constant	
	Work		Unemployment		Other			
		p		p.		p		p
<b>Austria</b>	-0,16		0,23		0,13		3,91	***
SE	0,09		0,23		0,15		0,02	
<b>Belgium</b>	-0,15		0,12		0,33	**	3,67	***
SE	0,10		0,18		0,12		0,02	
<b>Bulgaria</b>	-0,29	***	0,09		-0,07		2,23	***
SE	0,08		0,15		0,11		0,01	
<b>Cyprus</b>	-0,24	*	-0,13		0,28		2,74	***
SE	0,10		0,27		0,16		0,02	
<b>Czech</b>	-0,25	***	-0,02		-0,16		3,17	***
SE	0,07		0,14		0,11		0,01	
<b>Denmark</b>	-0,43	***	0,18		0,10		4,71	***
SE	0,08		0,34		0,15		0,02	
<b>Estonia</b>	-0,38	***	0,05		0,30	*	3,16	***
SE	0,08		0,18		0,15		0,02	
<b>Spain</b>	-0,12		0,09		0,11		3,13	***
SE	0,09		0,13		0,08		0,01	
<b>Finland</b>	-0,10		0,19		0,04		4,54	***
SE	0,06		0,11		0,09		0,01	
<b>France</b>	-0,11	*	0,22	*	-0,03		3,41	***
SE	0,04		0,09		0,07		0,01	
<b>Greece</b>	-0,48	***	0,08		-0,55	***	2,21	***
SE	0,11		0,26		0,10		0,02	
<b>Croatia</b>	-0,23	**	0,11		0,08		2,29	***
SE	0,08		0,12		0,14		0,01	
<b>Hungary</b>	0,03		0,40	**	0,17	**	2,21	***
SE	0,05		0,14		0,06		0,01	
<b>Ireland</b>	-0,07		0,29		0,06		3,13	***
SE	0,15		0,20		0,10		0,02	
<b>Iceland</b>	-0,57	**	-0,40		-0,17		3,71	***
SE	0,17		0,68		0,21		0,02	
<b>Italy</b>	-0,08		0,21		0,06		2,78	***
SE	0,06		0,19		0,05		0,01	
<b>Latvia</b>	-0,15	*	-0,07		-0,34	**	2,81	***
SE	0,08		0,15		0,10		0,01	
<b>Luxemburg</b>	-0,15		0,67		-0,14		4,30	***
SE	0,10		0,77		0,19		0,02	
<b>Latvia</b>	-0,40	***	-0,03		0,10		2,48	***
SE	0,11		0,16		0,16		0,02	
<b>Malta</b>	-0,26	**	-0,49		0,22		2,80	***
SE	0,09		0,38		0,24		0,02	
<b>Netherlands</b>	-0,23	*	0,33		-0,18	**	4,48	***
SE	0,09		0,38		0,24		0,02	
<b>Norway</b>	-0,05		1,00		-0,03		4,88	***
SE	0,09		0,96		0,12		0,02	
<b>Poland</b>	-0,11		0,29		0,39	***	2,71	***
SE	0,08		0,16		0,08		0,01	
<b>Portugal</b>	-0,22	*	0,11		0,27	*	2,62	***
SE	0,11		0,15		0,13		0,02	
<b>Romania</b>	0,14		0,31		-0,09		2,49	***
SE	0,09		0,25		0,21		0,01	
<b>Sweden</b>	-0,07		0,65	*	-0,03		4,76	***
SE	0,09		0,27		0,19		0,02	
<b>Slovenia</b>	0,03		0,18		0,32	*	2,98	***



SE	0,09		0,13		0,17		0,03	
<b>Slovakia</b>	-0,19	*	-0,40	*	0,29		2,85	***
SE	0,09		0,18		0,16		0,02	
<b>United Kingdom</b>	-0,21	***	1,12		0,06		3,83	***
SE	0,06		0,44		0,12		0,02	