Structural and Individual Barriers to Progressive Retirement.

A European comparison using SHARE waves 5 & 6.

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Abstract: Over the last two decades, many European Countries have implemented working time reduction schemes allowing older workers to progressively retire from the labour market. However, little is known about the way these schemes affect progressive retirement decision. Using panel data from SHARE waves 5 and 6 for 13 countries (*n*=7,358), the article suggests a typology of working time reductions in late career based on both the stability of the work trajectory and whether or not the worker receive social benefits compensating the income loss in case of working time reduction. Two major results flow from the research. Firstly, a large part of the older workforce reducing working time in late career does it without perceiving any additional social benefits (an estimate of 2.5 per cent the working population aged 55-69 receives social benefits after reducing working time). Secondly, the article shows using a multinomial logit model that the level of incomes, the gender and the level of education play a key-role in explaining the type of working time reduction.

Key-words: Working time reduction, older workers, SHARE, European comparison.

Introduction

Using panel data from the Survey of Health Ageing and Retirement in Europe (SHARE), the article aims to assess progressive retirement (i.e. working time reduction in late career), using both a cross-national and an individual perspective. At macro level, the article assumes that the types of arrangements implemented for reducing working time in a move towards retirement such as the share of workers reducing working time in late career vary from one country to another. In order to better understand these differences, the article suggests a typology of working time reductions in late career taking into consideration working time, work trajectory and change in social benefits after reducing working time. At micro level, the article looks at individual factors explaining whether or not working time is reduced and in which way. The article particularly looks individual characteristics such as the level of incomes, the gender, the level of education or the working time at baseline. The paper is divided in four sections. The first section shortly summarizes the theoretical background related to working time reductions in late career. The second section presents the data and methods used for performing the analyses and the how the typology was built. The third section shows the empirical results in three sub-sections. First, some descriptive data are presented. Second, descriptive results are produced using the above-mentioned typology. Finally, results of a multinomial logistic regression are shown. The conclusion summarises the main results flowing from this research, mentions the major limitations of the paper and argues for more research on this matter.

1. Theoretical background

Since the end of the 1980s, a large set of working time arrangements were implemented in European countries in order to enhance the transition from work to retirement (Wels, 2018a). While the success of these arrangements has been limited for quite a while (Zaidman, Okba, Olier, Salzmann, & Savary, 1999), the progressive limitation of early retirement schemes contributed to the increase in part-time work in late career over the last decade. By allowing older workers to reduce working time, these arrangements may be regarded as contributory factors towards increasing older workers' employment participation, in response to targets fixed by the European Employment Strategy and, more recently, by the EU2020 Strategy. Furthermore, in a perspective of increasing working life, one of the main purposes of these mechanisms is to provide flexible arrangements allowing older workers to leave progressively the labour market or to continue working after the retirement age. Therefore, the retirement age should not be considered as a clear line delimitating active and inactive ageing population. The retirement period merges with period(s) of employment and, consequently, professional paths take nowadays various forms, less standardized than in the past. It is therefore necessary to use an "operational definition" of the retirement process, considering retirement "as a substantial reduction in employment accompanied by income from a retirement pension or personal savings" (Atchley, 1982, p. 263) – but also by social benefits – rather than a dichotomous definition that opposes working life and inactivity. From an individual's perspective, these arrangements have different meanings. On the one hand, working time reductions may imply engagement in social activities or care giving responsibilities (Evandrou & Glaser, 2004). On the other hand, working time

arrangements may be due to health problems (Author C), low incomes or pension or economic downturn (Burgard & Kalousova, 2014).

The nature of these working time arrangements varies from one country to another, as much as legislations allowing a flexible transition to retirement. In a recent state of the art about this matter, Wheatley distinguishes four types of flexible working arrangements (2017). "Flexi-time, compressed hours and annualized hours" refer to arrangements allowing workers to keep their usual working time by making it flexible on a weekly, monthly or yearly basis. The "job-share" refers to a full-time position shared between two employees, salary and leaves being divided pro-rata between the two workers. This type of arrangement is particularly relevant in the United States (Olmsted, 1979). The "homeworking" refers to a situation in which part of the working time is made at home. Finally, "part-time and reduced hours" refers to a situation in which the initial working time is reduced. The distinction between part-time and reduced hours is important as part-time workers might reduce their working time in a move towards retirement – working time reduction does not concern only full-time workers. This paper focuses specifically on reduced hours.
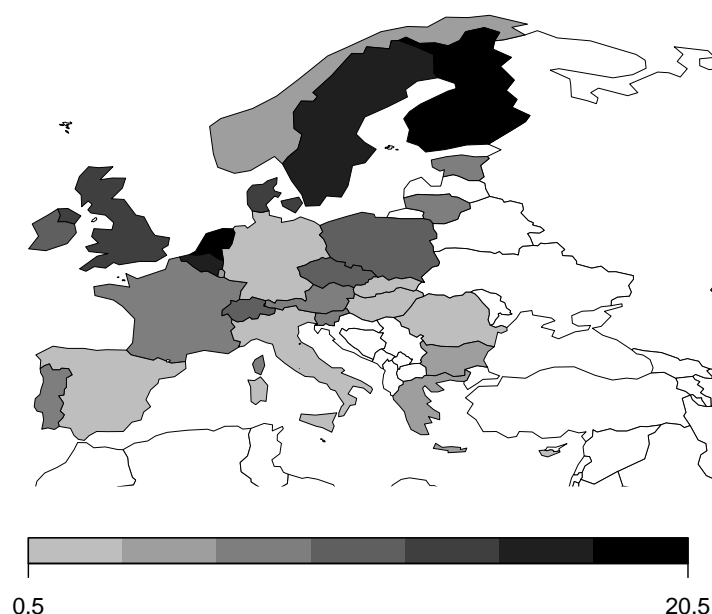
The implementation of working time arrangements and their purposes vary from one country to another. According to Delsen (1990), aims and designs of part-time early retirement schemes vary depending on the country. Part-time arrangement could be implemented for reducing unemployment, reducing early retirement costs or humanizing work. Working time arrangements policies cover a large set of individual situations and has different goals depending on the type arrangement allowing working time reduction. Several types of arrangements have been developed in European countries during the past 20 years. *Part-time early retirement arrangements* have been introduced for instance in Belgium (Wels, 2014a), the Netherlands (de Vroom, 2004) and France (Guillemard, 2008), allowing older workers to work part-time and to receive social benefits such as unemployment benefits compensating the income loss. *Tax reduction* (tax credit) was developed for older workers working part-time in the United Kingdom (Burtless & Quinn, 2002). *Phased retirement* (or *gradual retirement*) allowing older workers to work part-time in addition to pension benefits – but before the retirement age – has been introduced in countries such as France, the United Kingdom and Sweden (Laczko, 1988). *Legislation concerning combination of work and retirement benefits* has been relaxed in many countries (Wels, 2016). Finally, it has to be mentioned that sector-driven collective reduction of the working time based on an age criterion can be observed in countries such as Belgium or the United Kingdom (Andor, 2012).

Some countries have developed a large set of arrangements covering successfully many people, while in some other countries the access to these mechanisms is limited. Because employment policies vary from one country to another, empirical evidence differs depending on the country. In the UK, for instance, the majority of older working men works full-time and is likely to work full-time until retirement – working time arrangements such as gradual retirement are limited (Loretto & Vickerstaff, 2015). Conversely, part-time

work for women is more typical but is mainly due to life course events rather than an increase in part-time work at the old age. In Belgium, working time arrangements are more successful. The time-credit (*crédit-temps*), allowing older workers to reduce their working time in addition to social benefits, concerns both men and women (Wels, 2018b). In 2013, 11.9 per cent of men and 16.6 per cent of women aged 55 or over working in the private sector were affected by a working time reduction supported by the time-credit (Wels, 2015). Finally, Sweden – where two main arrangements are currently used (the partial early retirement old-age pension and the partial disability pension (Wadensjö, 2005) – is characterized by a high level of part-time jobs at the end of the career, both for men and women.

Few descriptive data are available at a comparative level and it is still difficult to evaluate the share of older workers reducing working time. One way to do so is using microdata from the Labour Force Survey ad-hoc module published in 2012 as in our 2018 paper (Wels, 2018a). In this ad hoc module focusing specifically on the transition from work to retirement, one question was about whether the respondent has reduced his/her working time in a move towards retirement. Figure 1 shows the percentage of working people aged 55-69 declaring reducing working time in a move towards retirement in Europe. What appears is that there are significant differences across countries as the scale goes from 0.5 per cent to 20.5 per cent of the working population. The share is high is countries such as the Netherlands (20.5 per cent), Finland (17.9 per cent), Belgium (16.9 per cent) and Sweden (16.8 per cent) while it is very low in countries such as Slovakia (0.5 per cent), Hungary (0.2 per cent), Spain (2.2 per cent), Germany (2.7 per cent) and Italy (2.8 per cent).

Figure 1. Percentage of workers aged 55-69 declaring reducing working time in a move toward retirement in 2012

Source: Labour Force Survey, ad hoc module 2012, author's calculation. For details about calculations and methods, please read Wels, 2018.

However, the ad hoc module does not contain information about public benefits supporting working time arrangements in late career and, consequently, it is difficult to distinguish people reducing working time

using social benefits to do so from people reducing working time without support of any social benefits. This raises the question of potential social disparities related to the use of working time arrangements in a move towards retirement within the ageing workforce. It can be assumed, looking at the scientific literature, that these arrangements are still underestimated by empirical research (Vickerstaff, 2010), mostly because only a few number of workers were concerned during the 1990s (Zaidman et al., 1999), but also because, due to the lack of homogeneity of these mechanisms, international datasets are not able to capture properly this issue. This paper assumes that one cannot investigate working time arrangements without taking into their cost.

The working paper particularly focuses on two research questions. First, it assesses in what extent working time reductions in a move towards retirement depend on whether public arrangements partly cover the income loss or not. Second, it assesses the impact of individual characteristics – such as the level of incomes or the level of education – on the way working time is reduced in the lead up to retirement.

2. Data and methods

The paper uses longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE), waves 5 and 6 (Borsch-Supan, 2017). Fourteen countries are initially included in the dataset among which 13 are European or member of the Single Market (Switzerland): Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Italy, Luxembourg, Slovenia, Spain, Sweden and Switzerland. The original sample was selected based on two criteria: the employment status and the age. As the paper focuses on the change in working time from one period to another, only the working population was taken into consideration. People declaring being unemployed or inactive in waves 5 and 6 Have been excluded from the sample[1]. Among this population, a minimum threshold of 55 years old in wave 6 has been selected, corresponding to the minimum threshold chosen by SHARE. A maximum threshold of 69 years old was also set up for two reasons. First, the number of people aged 70 and over declaring being employed is extremely low and would lead to lower significance levels. Second, the nature of the arrangements investigated in this paper is more about reducing working time in a move toward retirement rather than about remaining in the labour market after the retirement age or going back to work after the pension age (*unretirement*)[2]. Data have been weighted using the "Calibrated longitudinal individual weight - panel 5 & 6" provided by SHARE as the perspective of the article is about individuals rather than households. Table 1 shows the total sample population for the panel wave 5 – wave 6 and the selected population (working in both waves 5 and 6 and aged between 55 and 69 years old in wave 6), by country of residence.

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[1] This does not mean that there was no period of non-employment from wave 5 to wave 6 but rather that individuals have declared being employed in both waves 5 (baseline) and 6 (follow-up).
[2] Several papers have been recently published on this matter for European countries (Hayward, Hardy, & Liu, 1994; Maestas, 2010a, 2010b) and an extensive literature exist for the United States (Congdon-hohman, 2015).

Table 1. Population aged 55-69 and employed population in waves 5 and 6

	Original N	Selected N
Austria	3191	328
Belgium	4545	650
Czech Republic	4597	532
Denmark	3531	896
Estonia	4810	881
France	3328	433
Germany	4496	832
Italy	3799	450
Luxembourg	1158	143
Slovenia	2514	209
Spain	5517	633
Sweden	3726	716
Switzerland	2712	655
Total	47,924	7,358

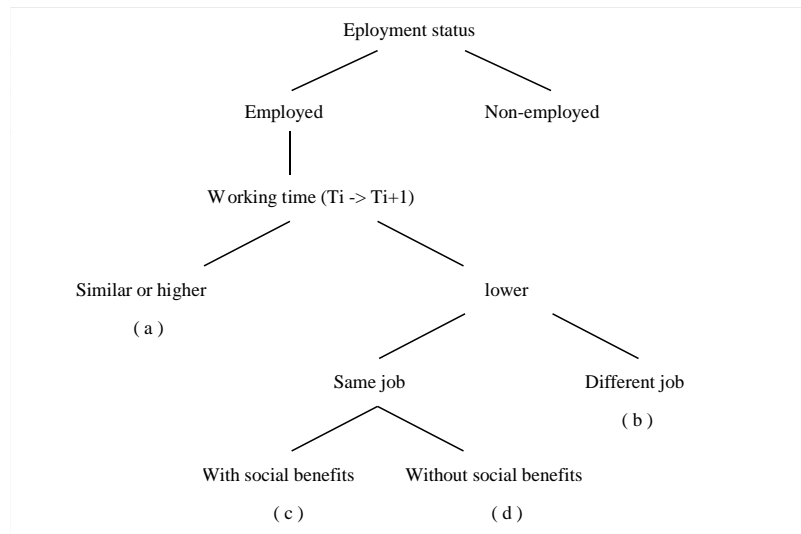Source: SHARE waves 5 & 6 (longitudinal panel)
Note: data weighted using the Calibrated longitudinal individual
weight - panel: 5_6

Results are presented in three sections.

The **first section** briefly presents descriptive data about the association between working time and age, the association between working time reduction, net earnings and social benefits and about change in employment from wave 5 to wave 6. Specifically, three dimensions are examined. First, the section looks – at a descriptive level – at the association between the change in working time and the change in yearly net earnings and the change in social benefits between wave 5 and wave 6. Second, it looks, at country level, at the association between change in working time and age, the association between change in working time and net earnings and the association between change in working time and social benefits. Finally, it looks at the share of people aged 55-69 continuously working from wave 5 to wave 6 and at the potential change in the type of employment and employer.

The **second section** suggests a typology of working time reduction based on (1) the change in employment, (2) the change in net earnings and (3) the change in working time. Descriptive results are presented for the 13 countries taken into consideration in this paper. Information about whether working time has been reduced from one period to another are not available at first sight – i.e. no question is asked specifically about this matter – and, consequently, need to be produced using existing data. A new categorical variable was produced in four steps as can been seen in figure 2.

Figure 2. Schema of the creation of the dependent variable

The first step distinguishes working people from non-working people. As a matter of fact, working time concerns people declaring being employed or self-employed over the selected period. Unemployed, retired, disable and other inactive people are therefore excluded from the sample as we only focus on those declaring having a job in both waves 5 and 6. The second step looks at whether working time increased, remained the same or was reduced from one wave to another. One variable is used for that purpose: the usual working time including paid or unpaid overtime. The third step focuses on people who have reduced working time from one wave to another and looks at whether they kept the same job or not. Finally, the fourth step focuses on people having reduced working time within the same job and accounts for the change in net incomes (i.e. at the individual level) both from work (earnings) and from social benefits.

Nine variables available in waves 5 & 6 have been particularly used for creating these categories. Names and descriptions of these variables are presented in table 2.

Table 2. Variables used and description

Code	Description
ep005	In general, which of the following best describes your current employment situation?
ep013	Regardless of your basic contracted hours, how many hours a week do you usually work in this job, excluding meal breaks [but including any paid or unpaid overtime]?
ep125	I'd like to know about all of the work for pay that you may have done since {FLLastInterviewMonthYear} through the present. During that time, have you been working continuously?
ep141d1	Change in employment (d1)
ep141d2	Change in job employer (d2)
ep205e	After any taxes and contributions, what was your approximate annual income from employment in the year [Year - 1]? Please include any additional or extra or lump sum payment, such as bonuses, 13 month, Christmas or Summer pays.

ep071d1>d13	Have you received income from any of these sources in the year [STR (Year - 1)]? (Country specific).
ep74	Period of [ep071:d1>d13]
ep078	Typical payment of [ep071:d1>d13]

Source: SHARE, waves 5 & 6

Finally, the **third section** looks at the individual features associated with the different types of working time reductions in Europe taking into consideration the age, the gender, the level of education, the net earnings and the marital status. A multinomial logistic regression is performed using the typology mentioned above as a dependent variable. The type A (i.e. people not reducing working time between wave 5 and wave 6) is selected as reference category. Eight independent variables are introduced in the model: the level of incomes after working time reduction (I), the age in wave 6 (A), the gender; the level of education using the international standard classification of education (ISCED); the martial status in wave 6; the type of working time in wave; the employment status distinguishing private sector employees (Pr), public sector employees (Pu) and self-employees (S); and the industry (Ω).

The formula may be written as follow:

$$\begin{bmatrix} \text{Ln} \Pr(Y_i = B)/\Pr(Y_i = A) \\ \text{Ln} \Pr(Y_i = C)/\Pr(Y_i = A) \\ \text{Ln} \Pr(Y_i = B)/\Pr(Y_i = A) \end{bmatrix} = \emptyset_1 * I + \emptyset_2 * A + \emptyset_3 Ln \Pr(Y_i = M)/\Pr(Y_i = F) +$$

$$\emptyset_4 \begin{bmatrix} \text{Ln} \Pr(Y_i = isced\ 0,1)/\Pr(Y_i = isced\ 5,6) \\ \text{Ln} \Pr(Y_i = isced\ 2-4)/\Pr(Y_i = isced\ 5,6) \end{bmatrix} * \emptyset_5 \begin{bmatrix} \text{Ln} \Pr(Y_i = M)/\Pr(Y_i = W) \\ \text{Ln} \Pr(Y_i = N)/\Pr(Y_i = W) \end{bmatrix} +$$

$$\emptyset_6 Ln \Pr(Y_i => 30)/\Pr(Y_i =< 30) + \emptyset_7 \begin{bmatrix} \text{Ln} \Pr(Y_i = Pu)/\Pr(Y_i = S) \\ \text{Ln} \Pr(Y_i = Pr)/\Pr(Y_i = W) \end{bmatrix} + \emptyset_8 Ln \Pr(Y_i = \Omega)/\Pr(Y_i = K)$$

Two comments flow from this formula. First, the model can be read as a classical ordinary least square regression with a categorical variable as the dependent variable and categorical and numerical variables as independent variables Coefficients are in odds ratios. Second, the choice of the reference categories for the categorical variables was not made randomly. The aim of the model is comparing results observed in types B, C and D with the type A (no working time reduction). Male workers are compared with female workers. Lower and middle levels of education are compared with highest levels of education. Married, in partnership and divorced people are compared with widowed people. Employees working in public and private sectors are compared with self-employees. Community, social and personal service industries are compared with the other types of industries.
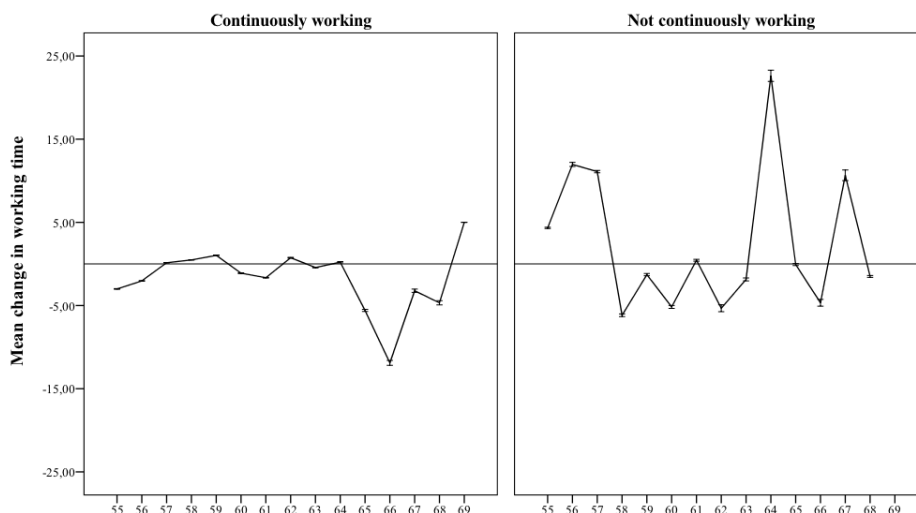
3. Results

3.1. Descriptive statistics

A relatively small percentage of the sample reduced working time in late career. Put in another way, a large part of the working population keeps the same or increase working time in late career. Working time reduction at the end of the professional career is not the standard trajectory to retirement even though it should be assumed, looking at the literature, that that kind of pathway is less atypical than in the past. Panel data used in this paper allows to follow the same population from wave 5 to wave 6. The panel has

been interviewed in 2013 (wave 5) and in 2015 (wave 6) and information about their weekly working time has been collected. The change in working time may be calculated as the difference between the weekly working time declared in wave 6 and the working time that has been declared two years before.

Figure 3. Change in working time from wave 5 to wave 6 by age

As mentioned in the methods section, the sample includes people declaring being employed or self-employed in both waves. Although, as there is a two years' time-gap between waves 5 and 6, one could expect that the sample includes people who moved from one position to another or from one company to another, with a potential effect on working time. To control for such an impact, figure 3 shows the average change in working time from wave 5 to wave 6 distinguishing respondents who declared continuously working over the sequence from respondents who declared not working continuously. In the former case, one can observe that the average change in working time is close to zero until 64 years old. Between 65 and 68 years old, the average working time decreases. It increases more sharply for people aged 69. In the case of workers who declared not working continuously over the period, the figure is, as expected, much more difficult to read, as different degrees of variation occur at different ages, without showing any clear trend. One of the reasons explaining these variations might the relative stability of the labour market for people aged 55 and over. Over the selected period, 96 per cent of the panel declared a continuous job (with a minimum of 89 per cent in Italy and a maximum of 100 per cent in Luxembourg). Similarly, people declaring a change in employer over the period were, on average, 4.4 per cent (with a minimum of 1.6 in Italy and a maximum of 6.6. in Slovenia).

Table 3. Pearson's correlation between change in working time, change in earnings and change in social benefits

	Change in working time	Change in earnings	Change in social benefits
Change in working time		.026[***]	-.002[**]
Change in earnings	.026[***]		-.004[**]
Change in social benefits	-.002[***]	-.004[***]	

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One question raised by the change in working time over is its impact on incomes. The table 4 looks at the correlation between the change in working time and the change in yearly net earnings, on the one hand, and in social benefits, on the other hand. As for the working time, change in earnings and social benefits has been calculated as the difference between the value observed in wave 6 and the value observed in wave 5. What is observed is that a change in working time is positively associated with a change in earnings from work (0.026) and negatively associated with a change in social benefits (-0.002). Put in another way, an increase in working time is associated with an increase in earnings and a decrease in social benefits. Conversely, a decrease in working time is associated with a decrease in earnings and an increase in working time. What is surprising looking at these coefficients is not the sense of the relationship but, rather, the low values that are observed in table 3 (both coefficients are near zero). In other words, other factors may explain the association between working time, incomes and social benefits.

Table 4. Association between age and change in working time; association between change in total working time and change in monthly net earnings from work; and association between change in total working time and change in social benefits – from wave 5 to wave 6.

	Age at interview	Change in earnings	Change in social benefits
Austria	-.094**	.092**	.031**
Belgium	-.034**	.122**	.095***
Czech republic	.008**	-.106***	-.012**
Denmark	-.032*	.015**	-.017**
Estonia	-.095***	.025**	-.034**
France	-.075**	.044**	-.019**
Germany	-.056**	.040**	.016**
Italy	-.044**	.070**	.037**
Luxembourg	.002	-.041**	-.047**
Slovenia	-.003	.093**	-0.01
Spain	.116***	-.059**	.012**
Sweden	-.132***	.055**	-.086***
Switzerland	-.070**	.029**	-.024**

Note: *p<0.1;**p<0.05;***p<0.01

Furthermore, differences might be observed among countries, as shown in table 4 where a Pearson's correlation coefficient has been calculated between the change in working time and the age, the change in earnings and the change in social benefits. In 10 countries, the age is negatively associated with a change in working time but in three countries, one observes a positive association. Similarly, in ten countries, the change working time is positively associated with the change in earnings. That is not the case in Czech Republic, Luxembourg and Spain. Finally, the association between change in working time and change in social benefits is negative in eight countries and positive in five countries. One factor might explain these variations: social benefits are not affected only by the working time as the share of public arrangements aiming at supporting a working time reduction in late career has nothing in common with other social benefits such as public pensions, widow's pensions, unemployment benefits, etc.

3.2. Cross-country comparison

Three key-elements flow from the previous section. First, the change in working time is, on average, positively associated with a change in incomes. People reducing working time are more likely to perceive lower net earnings. Second, social benefits are, on average, slightly associated with change in working time. However, the association is smaller than when looking at net earnings. Third, end of careers – when looking at people employed in both waves – are characterized by a high degree of stability. Although, there is a need to control mobility and, particularly, change in employer to understand the way working time changes. Based on these three elements, one can suggest – using an inductive perspective – a typology of working time arrangements in late career. The table 5 summarize the different types that can be observed using the SHARE dataset. The first type (a) refers to workers keeping the same working time or increasing working time over the selected period. The second type (b) refers to respondents reducing working time and declaring having changed of employer and/or having worked discontinuously over the period. The third type (c) refers to workers who have reduced working time over the selected period, worked continuously with no change in employer and received additional social benefits since they have reduced working time. Finally, the fourth type (d) refers to people who reduced working time over the selected period, have worked continuously with no change in employer but who did not receive additional social benefits (their benefits might have decreased or remained the same after working time was reduced).

Table 5. Typology

	Type	Definition
(a)	No working time reduction	Workers did not reduce their working time. The weekly working time might have remained the same or increased over the selected sequence.
(b)	Working time reduction with change in employer	Workers have reduced their working time. The change in working time is associated with a change in employer and/or a discontinuous work trajectory over the selected period.
(c)	Working time reduction with additional social benefits	Workers have reduced their working time and this reduction is associated with an increase in social benefits.
(d)	Working time reduction without additional social benefits	Workers have reduced their working time, but the reduction is not associated with an increase in social benefits. Social benefits might have remained the same or decreased over the period.

Table 6 shows the distribution of the sample based on the fourth above mentioned categories.

Table 6. Distribution per type

	Type A	Type B	Type C	Type D	NA[*]	Types C & D, only	
						Type C	Type D
Austria	61.0	1.6	1.0	35.1	1.3	2.9	97.1
Belgium	57.6	4.0	2.1	31.7	4.6	6.3	93.7
Czech Republic	62.9	3.1	2.0	26.9	5.2	6.8	93.2
Denmark	64.3	3.9	3.2	26.9	1.7	10.8	89.2
Estonia	71.3	2.7	7.6	13.8	4.6	35.6	64.4
France	63.0	1.6	3.0	29.2	3.1	9.3	90.7
Germany	63.4	2.7	1.5	29.6	2.8	4.8	95.2
Italy	65.5	1.1	4.1	25.4	3.9	13.9	86.1
Luxembourg	72.0	1.5	0.5	19.9	6.1	2.5	97.5
Slovenia	75.9	0.3	0.9	19.4	3.4	4.5	95.5
Spain	58.1	2.4	0.9	30.1	8.5	2.9	97.1
Sweden	64.6	3.6	3.5	20.5	7.8	14.7	85.3
Switzerland	55.1	2.8	2.7	35.5	3.9	7.2	92.8

Note: * missing information for one or more variables in waves 5 and/or 6.

Results presented in table 6 are different from what has been mentioned in the first section of the paper are they are based on a longitudinal approach, looking at what happens from one wave to another (over a two-years period) rather than at a cross-sectional level. Put in another way, what is observed in the table is not the rate of people reducing working time based on the total number of working people aged 55-69 but the rate of people reducing working time based on the population declaring working in both waves (5 and 6). It is therefore difficult to compare both indicators are they are not calculated using the same time length.

Looking at table 6, there is no clear relationship between the share of respondents reducing working time with additional social benefits (type C) and the percentage of people reducing working time. One can observe in countries like Luxembourg or Slovenia – where the percentage of type A is very high (72 and 75.9 per cent) – that the percentage of people reducing working time, continuously working and receiving additional social benefits is low (respectively 4.1 and 0.5 per cent). Conversely, in countries such as Switzerland, where 44.9 per cent of the panel reduces its working time, only 2.7 per cent declares receiving additional benefits. What appears when looking at table 6 is that most of the workers aged 55-69 continuously working for the same employer declared reducing their working time without declaring any additional social benefits. Surprisingly, the typology shows that social benefits play a minor role in reducing working time in late career as most of the population reduces its working time without receiving any additional social benefit compensating the income loss.

3.3. Individual features

We observed in the previous section that the percentage of the population aged 55-69 who reduced working time and received additional social benefits is low. Therefore, one must assume that working time reductions in late career affect people's incomes and might consequently create some kind of inequalities

in access to flexible work schemes. To assess this second hypothesis, a multinomial logistic regression was performed using the typology mentioned in the second section as the dependent variable. The aim of the model is assessing the individual characteristics leading to reduce working time (compared with respondents who do not reduce working time from wave 5 to wave 6). Among the different individual characteristics introduced in the model, we will particularly focus on: the gender, the level of incomes at baseline, the type of working time at baseline, the work status and the level of education. Results are presented in table 7. It contains the coefficients (in log odds), the significance level as well at the odds ratios (in parenthesis).

Table 7. Multinomial logistic regression

	Reference : Type A		
	Type B	Type C	Type D
Age in wave 6	-0.03*** (0.97)	0.32*** (1.37)	-0.07*** (0.93)
Earnings (Ln)	-0.20*** (0.82)	-0.08*** (0.93)	0.09*** (1.09)
Male	0.16*** (1.18)	0.74*** (2.10)	0.24*** (1.28)
Education = not education to isced1	0.12*** (1.12)	-2.02· (0.13)	1.11*** (3.04)
= isced 2 to 4	0.22*** (1.24)	-0.87*** (0.42)	-0.13*** (0.88)
Marital status = married or in partnership	-0.21*** (0.81)	0.21*** (1.23)	0.40*** (1.48)
= single or divorced	-1.19*** (0.31)	0.30*** (1.35)	0.37*** (1.45)
Working time in W5 = >30 hours a week	0.79*** (2.20)	-1.04*** (0.35)	0.08*** (1.08)
Industry = Agriculture, hunting, forestry, fishing	0.41*** (1.51)	-10.6· (0)	-0.73*** (0.48)
= Mining and quarrying	-0.75· (0.47)	0.23· (1.26)	18.1· (750)
= Manufacturing	-1.48*** (0.23)	0.06· (1.06)	-0.13*** (0.88)
= Electricity, gas and water supply	0.48*** (1.62)	-0.54*** (0.58)	-0.65*** (0.52)
= Construction	0.21*** (1.23)	-12· (0)	-0.86*** (0.42)
= Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	-0.71*** (0.49)	0.34*** (1.40)	-0.71*** (0.49)
= Hotels and restaurants	-2.21*** (0.11)	0.45*** (1.56)	-3.45*** (0.03)
= Transport, storage and communication	-0.44*** (0.65)	1.16*** (3.18)	0.45*** (1.57)
= Financial intermediation	-2.18*** (0.11)	1.61*** (5)	-0.37*** (0.69)
= Real estate, renting and business activities	-1.13*** (0.32)	-0.41*** (0.67)	-1.68*** (0.19)
= Public administration and defence; compulsory social security	-0.74*** (0.47)	0.04* (1.04)	0.96*** (2.61)
= Education	0.89*** (2.43)	-0.95*** (0.39)	0.40*** (1.49)
= Health and social work	0.74*** (2.07)	1.25*** (3.49)	
Employed or self-employed = Private sector employee	0.74*** (2.18)	0.74*** (2.10)	-0.34*** (0.71)
= Public sector employee	-0.96*** (0.38)	0.48*** (1.61)	-0.92*** (0.40)

Note: *p<0.1;**p<0.05;***p<0.01. Reference for 'education': isced 5 to 6 ; reference for 'marital status': widowed ; reference for 'Working Time at baseline': <30 hours a week (reference); reference for 'Industry': Community, social and personal service activities; reference for 'Employed or Self-employed' : Self-employed. The analyses do not deal with attrition, but non-response modalities were included for each independent variable.

Looking at the employment status (employee or self-employee), the model shows that employees working both in the public and in the private sector are more likely than self-employees to reduce working time with additional social benefits (type C) than to keep the same working time or to increase working time over the selected sequence. By comparison, employees in the public and private sector are less likely than self-employees to reduce working time without additional social benefits (type D) than to keep or to increase working time. This shows a clear difference within the working population as social benefits tend to support working time reduction of the employees more than the self-employees once controlled other variables. This makes perfectly sense as self-employees are usually less protected than employees. Another

interesting point concerns the type B (people reducing working time with a change in employer and/or a change discontinuous work trajectory). Employees working in the private sector are indeed more likely to be concerned by type B compared to self-employees. By comparison, employees working in the public sector are less likely to be affected by a change in employers or a discontinuous work trajectory over the sequence. One raison explaining this difference is the relatively higher degree of stability observed in the public sector compared to the public sector, after controlling for other variables.

Looking at the gender, the table 7 shows surprising results. While one knows that women are more likely to be affected by part-time employment over their professional career (Sainsbury, 1999), the odds ratios observed for types B, C and D are positive for male workers when female workers are selected as the reference category. In other words, men aged 55-69 are more likely to reduce working time than female workers. Looking at the value of the odds ratio, one can also assume that men are significantly and in an important way more likely to perceive additional social benefits when reducing working time (type C). Two reasons might explain these figures. First, it is likely that, at age 55, more female than male are working part-time and do not have the willingness or the opportunity to reduce working time. Second, it is likely that the nature of female careers might reduce the opportunity to claim such benefits. On this matter, the variable 'Working time in Wave 5' gives interesting information. People working more than 30 hours a week at the baseline seem less likely to benefit from type C compared to people working less than 30 hours.

Looking at the level of education – using the variable ISCED (international standard classification of education) – three main comments can be made. Firstly, lower education levels (no education to ISCED 1 and ISCED 2 to 4) benefit less from social benefits in case of working time reduction (type C) compared with higher levels of education (ISCED 5 to 6). Although, the odds ratios are not significant at 95 per cent for the lowest levels of education. Secondly, the lowest levels of education (no education to ISCED 1) are more likely than the highest levels of education to reduce working time without any additional social benefits (type D). Thirdly, people with lower levels of education (compared to ISCED 5 and 6) are more likely to keep or to increase working time when looking. Change in employer and/or discontinuous employment trajectory associated with a working time reduction tend to apply more to highest levels of education.

Finally, a last comment is about the yearly net earnings in wave 5. The model clearly shows that people with high net earnings at the baseline are less likely to be in type B and C than in type A but they are more likely to be in type D than in type A. In other words, a high level of individual net earnings is more likely to be associated with a working time reduction without an increase in social benefits versus keeping or increasing working time. By comparison, a low level of individual net earnings is more likely to be associated with a working time reduction with an increase in social benefits or with a discontinuous work trajectory or a change in employer. Even though these relationships are significant at 95 per cent, once can observe that the value of the odds ratios is relatively low, which means that earnings contribute to explain the model but are not the main explanation compared to other variables such as the gender or the level of education.

Conclusion: Main findings, limitations and further research

This paper distinguishes four types of progressive retirement schemes, taking into consideration the change in working time, the change in employer, whether the work trajectory has been continuous or not and whether social benefits have increased in compensation of the income loss. Two main conclusions flow from the analyses performed in this study. At a macro-social level, the paper shows that a limited number of workers reduced working time in the lead up to retirement; this concerns only one third of the population aged 55-69. Belgium, Spain, Switzerland and, in a lesser extent, Czech Republic are among the countries where working time reductions are frequent. However, when looking at the different types of working time reduction, it appears that most workers reduce working time without receiving any additional social benefits. State support in progressive retirement seems not being the norm as most of the workers reduce working time with a negative impact on their net earnings and no positive change in social benefits. At a micro-level, looking at individual factors explaining the type of working time reduction in late career, the paper clearly shows that the gender, the level of education, the employment status, and the earnings at baseline contribute to explain the type of working time reduction. Consequently, one could argue that there are disparities in access to progressive retirement, particularly for women, low levels of education, low paid workers and self-employed workers.

This study raised several methodological issues. One main limitation should be particularly mentioned here. As in most longitudinal surveys, SHARE collects information on a declarative basis. Given the complex nature of social benefits, it could be expected that some respondents simplify the complexity of their earnings and do not distinguish formally work-related earning from social benefits, particularly when social benefits compensate the income loss due to the change in working time. That is particularly the case in countries where the name of social benefits has changed frequently (following multiple reforms), and their origin is not clear for workers.

As a matter of fact, progressive retirement raises questions that go beyond the organizational nature of working time policies. State support – and, particularly, financial support – plays a key role in explaining whether workers reduce their working time or not. Two configurations can be distinguished. On the one hand, if there are no social benefits provided in case of income loss, it is obvious that low paid workers are less likely to retire progressively. They would rather retire or not reducing working time. On the other hand, the study shows that those who benefits from social benefits after reducing working time are actually those who are highly qualified, men, well paid and full-time workers. The implementation of these benefits does not guarantee an equal access to progressive retirement schemes and public policies should clearly target those who would benefit the most from reducing working time. These two main conclusions open up the way to further research on this matter. Working time policies are currently a fashionable topic – particularly in the context of extending working life. Nevertheless, the question of the unequal access to these schemes should be treated as a major obstacle in improving older workers' well-being. There is also a need to produce additional quantitative research on this matter as most of the literature is qualitative and/or

company-based. This raises methodological issues that this paper outlined briefly. *How to quantify the overlap of work-related earnings and contributory benefits that are related to work as well*? *How to distinguish the different types of financial incentive for reducing working time*? *How to estimate the concrete financial burden caused by progressive retirement*? *How to compare countries having very different policies in supporting late career transitions*? These are questions that further research on this matter could answer.

BIBLIOGRAPHY

Andor, L. (2012). Employment trends and policies for older workers in the recession. In *European Foundation for the Improvement of Living and Working Conditions* (pp. 1–12). Copenhagen.

Atchley, R. (1982). Retirement as a social institution. *Annual Review of Sociology*, *8*(1982), 263–287. Retrieved from http://www.jstor.org/stable/2945996

Borsch-Supan, A. (2017). *urvey of Health, Ageing and Retirement in Europe (SHARE) Wave 6. Release version: 6.0.0. SHARE-ERIC. Data set*. https://doi.org/10.6103/SHARE.w6.600

Burgard, S. a., & Kalousova, L. (2014). Effects of the Great Recession: Health and Well-Being. *Annual Review of Sociology*, *41*(1), 150504162558008. https://doi.org/10.1146/annurev-soc-073014-112204

Burtless, G., & Quinn, J. (2002). Is Working Longer the Answer for an Aging Workforce? *Issues in Brief. Cener for Retirement Research at Boston College*, *11*, 1–11.

Congdon-hohman, J. (2015). Retirement Reversals and Health Insurance : the Potential Impact of the Affordable Care Act. *Holy Cross Working Paper Series*, (July), 29.

de Vroom, B. (2004). The Shift from Early to Late Exit: Changing Institutional Conditions and Individual Preferences: The Case of The Netherlands. In T. Maltby, B. De Vroom, M. L. Mirabile, & E. Øverbye (Eds.), *Ageing and the Transition to Retirement. A comparative Analysis of European Welfare States.* (pp. 120–153). Cornwall: Ashgate.

Delsen, L. (1990). Part-Time Early Retirement in Europe. *The Geneva on Risk and Insurance*, *15*(55), 139–157.

Evandrou, M., & Glaser, K. (2004). Family, work and quality of life: changing economic and social roles through the lifecourse. *Ageing and Society*, *24*(5), 771–791. https://doi.org/10.1017/S0144686X04002545

Guillemard, A.-M. (2008). Un cours de vie plus flexible, de nouveaux profils de risques, enjeux pour la protection sociale. In A.-M. Guillemard (Ed.), *Où va la protection sociale?* (PUF (le li, pp. 25–48). Paris.

Hayward, M. D., Hardy, M. A., & Liu, M. C. (1994). Work After Retirement: the Experiences of Older Men in the United States. *Social Science Research*, *23*(1), 82–107. https://doi.org/10.1006/ssre.1994.1004

Laczko, F. (1988). Partial retirement: An alternative to early retirement? A comparison of phased retirement schemes in the United Kingdom, France and Scandinavia. *International Social Security Review*, *41*(2), 149–169. https://doi.org/10.1111/j.1468-246X.1988.tb01008.x

Loretto, W., & Vickerstaff, S. (2015). Gender, age and flexible working in later life. *Work, Employment & Society*, *29*(2), 233–249. https://doi.org/10.1177/0950017014545267

Maestas, N. (2010a). Back to Work: Expectations and Realizations of Work after Retirement. *Journal of Human Resources*, *45*(3), 718–748. https://doi.org/10.1353/jhr.2010.0011

Maestas, N. (2010b). Back to Work: Expectations and Realizations of Work after Retirement. *Journal of Human Resources*, *45*(3), 718–748. https://doi.org/10.1353/jhr.2010.0011

Olmsted, B. (1979). Job sharing: an emerging work-style. *International Labour Review*, *118*(3), 283–297.

Sainsbury, D. (Ed.). (1999). *Gender and Welfare State Regimes*. Oxford: Oxford University Press.

Vickerstaff, S. (2010). Older Workers: The 'Unavoidable Obligation' of Extending Our Working Lives? *Sociology Compass*, *4*, 869–879. https://doi.org/10.1111/j.1751-9020.2010.00322.x

Wadensjö, E. (2005). Part-time pensions and part-time work in Sweden. *IZA Discussion Paper*, (2273), 26.

Wels, J. (2014a). La politique des fins de carrière. Vers un modèle européen convergent ? *Sociologie*, *5*(3), 233–253.

Wels, J. (2014b). Le partage d'emploi entre générations. Analyse des effets régulateurs et redistributifs de la réduction du temps de travail en fin de carrière sur l'emploi des jeunes. *Recherches Sociologiques et Anthropologiques*, *45*(2), 157–174.

Wels, J. (2015). Le crédit-temps en fin de carrière : un succès remis en cause ? *Chronique Internationale de l'IRES*, *x*(x), x.

Wels, J. (2016). Le cumul emploi-retraite: Entre institutionnalisation et déstandardisation des carrières. In S. Bernard, D. Méda, & M. Tallard (Eds.), *Orienter les parcours professionnels: Quand les dispositifs se mettent en action* (p. forthcoming). Paris: Peter Lang.

Wels, J. (2018a). Assessing the association between late career working time reduction and retirement plans. A cross-national comparison using the 2012 Labour Force Survey ad hoc module. *Social Policy and Society*, *Forthcoming*, 1–18.

Wels, J. (2018b). Assessing the impact of partial early retirement on self-perceived health , depression level and quality of life in Belgium : a longitudinal perspective using the Survey of Health , Ageing and Retirement in Europe (SHARE). *Ageing & Society*, 1–25. https://doi.org/10.1017/S0144686X18001149

Wheatley, D. (2017). Employee satisfaction and use of flexible working arrangements. *Work, Employment & Society*, *31*(4), 19. https://doi.org/10.1177/0950017016631447

Zaidman, C., Okba, M., Olier, L., Salzmann, B., & Savary, A. (1999). *Les dispositifs de cessation d'activité. Etat des lieux et évolutions souhaitables*.