

# Part-time work of older workers with disabilities in Europe

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## Summary

The aim of this paper is to analyse the incidence of part-time work among older workers with disabilities as compared to non-disabled counterparts within a European context. Data are drawn from the 2004 Survey of Health, Ageing and Retirement in Europe (SHARE). The key advantage of this dataset is that provides a harmonized cross-national dimension which is indispensable to carry out any internationally comparable analysis. We have information for European individuals aged 50 years or over on a wide range of health indicators, disability, socio-economic situation, labour force participation, family, social relations, etc. The results show that older people with disabilities (aged 50-64) are more likely to have a part-time job compared to non-disabled ones. Although there is a important employment gap between both groups, many older workers with disabilities are using part-time work to achieve a better adjustment between health limitations and working life. The econometric analysis corroborates that being disabled has a positive effect on the probability of working part-time although this effect varies by country. Policy makers must encourage part-time employment as a means of increasing the employment opportunities for older worker with disabilities and support gradual retirement opportunities with flexible and reduced working hours. It is crucial to change attitudes towards older people with disabilities in order to increase their labour participation and reduce their levels of poverty and marginalization.

**Keywords:** Disability, employment, part-time, older workers, Europe.

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## **Introduction**

Population ageing is becoming one of the most distinctive demographic, social and economic events all over the world. All countries is facing this phenomenon, although at varying levels of intensity and in different time frames (United Nations, 2001). To avoid increasing the tax burden or impoverishing pensioners, many governments are now looking at ways such as the promotion of flexible forms of employment, continuing training, reforms of pensions, adjustments to workplace and job design, and early retirement schemes to induce more people to enter or stay in work (European Commission, 2002; OECD, 2003a). Part-time employment and other atypical labour arrangements can play an important role to fill the gap between full-employment and retirement and provide flexibility which allows older people to better combine personal and health needs with working life (McNair *et al.*, 2004). Moreover, many older people want to work later in life if they can do work that it meaningful in an environment that is welcoming and flexible (Champlin and Knoedler, 2004).

There is no doubt that disability is an important issue in relation to old age. Many countries have integrated into their priorities the need to maintain the quality of life and social integration of older persons with disabilities. Nowadays, the labour market situation of people with disabilities is very poor, as is illustrated by the higher non-employment rates and lower labour earning of disabled people (OECD, 2003b). For example, the employment rates of older people with disabilities (aged 50-64) are only a little above 50% of those of their non-disabled counterparts. Although there is an increasing number of works that analyse this relationship between disability and employment (Parsons, 1980; Sheikh and Mattingly, 1982; Kidd *et al.*, 2000; Jones *et al.*, 2003; Gannon, 2005; Moon and Shin, 2006), very little attention has been paid to the particular labour situation of older workers with disabilities. Several studies have shown

a positive relationship between disability and part-time employment as a means of accommodating health problems that make the option of full time employment difficult or in many case impossible to many disabled people (Schur, 2000 and 2003; Robinson 2000; Hotchkiss, 2004; Pagan 2007). However, there are not specific empirical studies on the use of part-time jobs among older workers with disabilities. More knowledge about these particular type of workers, their health limitations, personal and job characteristics are very important both for social analysts and health services as well as policy makers and employers in order to provide some insights into key equity considerations which would complement the efficiency arguments advocated by those who promote a greater flexibility in the labour markets (Bardasi and Francesconi, 2004). Furthermore, work-related disability transfers, vocational rehabilitation services and long-term of public pension programmes are strongly linked to these questions.

The purpose of this paper is to fill this gap by analysing the incidence of part-time employment among older workers with disabilities in Europe. Using data from the new 2004 Survey of Health, Ageing and Retirement in Europe (SHARE release 2.0.1 published in July 2007), we estimate employment and part-time rates for disabled and non-disabled individuals in 11 European countries (for males and females separately). We compare the personal and job characteristics of older part-time workers by disability status in Europe, and particular attention is paid to the relationship between health problems and part-time work. Finally, we use a probit model to estimate the effect of being disabled on the probability of working part-time after controlling for a set of variables (or characteristics).

## **Data and methods**

As noted, we use data taken from 2004 SHARE sample, which contains information for European individuals aged 50 years or over on a wide range of health indicators,

psychological measures, socio-economic variables, family and social relations, among others. The key advantage of this multidisciplinary and cross-national database is that offers harmonized data from 11 countries (Austria, Belgium, Denmark, France, Germany, Greece, Italy, The Netherlands, Spain, Sweden and Switzerland), which allows a direct comparability across countries thanks to the use of the same questionnaire and methodology in all participating countries<sup>1</sup>. Designed to be comparable to the U.S. Health and Retirement Study (HRS) and the English Longitudinal Study of Ageing (ELSA), SHARE will collect data on older individuals over time which will facilitate to carry out longitudinal studies in the future.

Looking at the health section of the SHARE questionnaire, we can find two questions that have been used in previous studies to construct a measure of disability on the basis of individual responses (Jones *et al.*, 2003; Gannon, 2005; Pagan, 2007): “Do you have any long-term health problems, illness, disability or infirmity? (*Yes/No*)”. If the individual answers “*Yes*” to this question, the follow-up question, “For the past six months at least, to what extent have you been limited because of a health problem in activities people usually do? (*Severity limited/ Limited, but not severity/ Not limited*)” allows us to know the grade of severity of the disability. Following Gannon (2005), we can distinguish three possible situations: a) those reporting a long-term illness or disability who are limited *severely* in their activities; b) those who report a long-term illness or disability and are limited but not severely; and c) those who report such a condition but which does not limit them in their activities. We include the latter in the disability definition because in the survey although a person may respond as not being limited in their daily activities, without adaptations being made in his/her workplace it is possible that this person should be classified as severely limited.

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<sup>1</sup> We exclude Israel because the data are still preliminary. A full description of this database and its methodology are available at: <http://www.share-project.org> and Börsch-Supan and Jürges (2005).

To identify a individual as working part-time, we use the total hours worked per week in the main job. Following Kalwij and Vermeulen (2007), who analyse the labour force participation of older individuals in Europe using the same database, we defined a part-time worker as a person who reports that his/her working hours per week do not exceed 32 hours. Although this measure may differ from other definitions of part-time work, the ranking of countries is not very sensitive to the choice of definition; namely, countries with relatively high levels of part-time work according to one definition tend to have relatively high levels of part-time working according to another (Van Bastelaer *et al.*, 1997). Our sample consists of individuals between the ages of 50 and 64 in 2004 (both years included). The final sample after dropping those with relevant missing information consists of 12,454 individuals for these 11 European countries, of which 5,324 are disabled (i.e. 42.75%). By country, Germany, Sweden, The Netherlands, France and Belgium have around 1,500 observations, whereas Austria, Spain, Italy, Denmark and Greece between 800-1000 observations. Switzerland is the country with the lowest number of observations (396)<sup>2</sup>.

## **Results**

Table 1 shows the employment and part-time rates for males and females by disability status in the 11 European countries analysed. In all cases, the employment rates for older disabled individuals are significantly lower than those for non-disabled counterparts. For males, this differential is particularly high in Spain and Germany (43.05 and 25.34 percentage points, respectively), and in Denmark, Sweden and The Netherlands for females (around 25 percentage points). We also detect important differences by gender among older disabled people. The combination of disability and being female reduces drastically the probability of being employed, especially in

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<sup>2</sup> For Belgium, France and Greece the data were collected in 2004 and 2005. We exclude self employment from our analysis.

southern countries such as Spain, Italy and Greece. With respect to the part-time rates, we find a higher concentration of older disabled people in part-time jobs in almost all countries, with the exception of Austria and southern countries for males, and Italy and Greece for females, wherein the opposite result is found. The highest part-time differentials in favour of older disabled workers are found in Switzerland (17.11 and 19.61 percentage points for males and females, respectively) as well as Denmark and Belgium (15.77 and 15.48 percentage points for females). As other studies have noted, we find that part-time employment is predominantly a feature of female employment, even among disabled population. For example, in The Netherlands the percentage of disabled females who are part-timers was 78.16% compared to 28% reached by non-disabled females. These gender differences in part-time rates are also detected in the rest of countries.

[Table 1]

To explain this high presence of older disabled individuals in part-time jobs, we can suppose that the availability of this type of non-standard employment facilitates the participation of this collective in particular, by allowing them to better combine working life and health concerns. Oi (1991) points out that one of the main characteristics of disability is that it “*steals*” time from individuals (e.g. hours of work) and especially if this is more severe or intense. In addition, disabled people are more likely to have health problems, which can make flexible or part-time schedules more desirable (Schur, 2003). To investigate the effects of health problems on the use of part-time employment, Table 2 shows information on set of health indicators as well as other personal characteristics of part-time older workers by disability status for the full sample<sup>3</sup>. Among those individuals working part-time, disabled females tend to be older and non-married

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<sup>3</sup> This analysis is not carried out by country due to limited number of observations in each cell for certain countries.

compared to non-disabled, whereas no significant difference in age and marital status is found in the male sample. Older disabled workers (both males and females) are less educated as compared to non-disabled (Bound *et al.*, 1995; Kruse, 1998; Kidd *et al.*, 2000; Zwinkels, 2001). For example, only 36.4% of disabled males have the highest educational level, whereas for non-disabled individuals this percentage rises up to 47.8%. Although disabled and non-disabled older workers are principally living with their families (around 50 and 40% for males and females, respectively), a significant percentage of disabled individuals are living alone (15 and 17.5% for males and females, respectively).

[Table 2]

With regards to the health indicators, the main result is that older people with disabilities working part-time are more likely to report health problems such as more frequent doctor visits and more nights spent in the hospital in the last 12 months. For instance, the differential in favour of disabled part-timers in doctor visits in the last 12 months is 3.17 and 5 percentage points for males and females, respectively. A higher percentage of disabled females who work part-time are obese ( $BMI \geq 30$ ) compared to non-disabled ones (19% *versus* 10.4%). Similar finding is found when we compare the level of physical activity, depression and fatigue in the last month, and the depression scale (Euro-D)<sup>4</sup>. It is worth mentioning the relationship between depression and part-time work for older people with disabilities. For example, around 54% of disabled females who work part-time are depressed in the last month in comparison with 40% reached by non-disabled females. We have to bear in mind that depression is a significant public health concern worldwide and one of the most costly disabilities in

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<sup>4</sup> The EURO-D scale is obtained from the following 12 variables: Depression, pessimism, suicidality, guilt, sleep, interest, irritability, appetite, fatigue, concentration, enjoyment and tearfulness. A higher value indicates depressed.

the workplace today (WHO, 2002). Furthermore, people with epilepsy and mental problems are more likely to suffer the most negative social attitudes and have the lowest probability of employment (Harris, 1991; Baldwin and Johnson, 1998; Waghorn and Chant, 2005). Part-time work can be very useful for people with depression and other mental disorders to remain in their jobs, avoid a temporal or total exit from the labour market or as the only means of being integrated into the labour market. Concerning self-reported health status, only 4.9% (10.8%) of disabled males (females) working part-time reported being in very good health, compared with around 30% of non-disabled part-time workers. On the contrary, around 7% of older part-time workers with disabilities have bad or very bad health, whereas for non-disabled workers this percentage is practically zero.

According to Table 3, the job characteristics of non-disabled and disabled part-time workers are not very different as we can expect. There are not significant differences between these two groups in the percentage of older workers who are employed in the private sector (around 21 and 32% for males and females, respectively) or have a permanent contract (approximately 88% for both sexes). For males, 35.5% of non-disabled part-time workers have a job responsibility for supervising other employees, whereas this percentage is only 18.6% for disabled males. However, the opposite result is found for the female sample (17.2% *versus* 13.5%). We detect a very large variation across occupations, wherein occupations such as professionals, technicians, clerks and elementary occupation employ most part-time workers (disabled or not). The unique differences that are significant between non-disabled and disabled part-time workers are detected in clerks and elementary occupations (both for males and females) and professionals (only for females). For instance, disabled females are more likely to be working as clerks (21.5% compared to 15.9%) and in elementary occupations (22.8%



compared to 17.3%) than non-disabled ones. By industry, the service sector employs the majority of older workers, especially education, health and social work and others services. Differentials (in percentage points) in favour of disabled workers are found in manufacturing (5.3), health and social work (6.5) and other services (6.7) for females, and transport, storage and communication (8.2) for males. To explain these occupational and industrial variations we must take into account that even though part-time employment is an important feature of the European labour markets it tends to be restricted to certain industries and occupations (Casey, 2004). Finally, disabled males tend to work in firms with 25-199 employees (32.9% but lower than 39.5% reached by non-disabled), while disabled females can be found mainly within the first three firm sizes considered (around 28% in each category).

[Table 3]

To complete the previous analysis which has shown a positive relationship between disability and part-time employment among older workers, we use a probit model to estimate the effect of being disabled on the probability of working part-time after controlling for a set of job and individual characteristics simultaneously. The reported coefficients in Table 4 are the marginal effects and for males and females separately<sup>5</sup>. We present two different specifications, wherein the unique difference between both is that we include interaction terms between disability and country as explanatory variables in the second specification. These interaction terms allow us to investigate whether the effect of disability on the probability of working part-time differs across

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<sup>5</sup> For brevity reasons, we only present the coefficient of the disability variable (=1 if the person is disabled) and the interaction terms between disabled and country. The same methodology has been used by Bolin *et al.* (2007) who use our database to study informal and formal care among single-living elderly in Europe. An econometric analysis disaggregated by country was not possible due to the low number of observations in many countries. We have also used a bivariate probit model to estimate the probability of working part-time and of being employed but the results obtained did not recommend the use of this type of model. Full regressions are available upon request.

countries (the omitted reference category is The Netherlands and its corresponding interaction with being disabled). In both specifications, being disabled increases the probability of working part-time. This result is found both for males and females and corroborates the higher incidence of part-time jobs among older people with disabilities. Looking at the interaction terms included in the specification 2, we observe that the effect of disability on the probability of being part-timer varies significantly across countries. For males, this effect is significantly lower in Spain, Greece and Italy (southern countries) compared with those males living in The Netherlands. By contrast, a positive effect is found in Austria and Switzerland, whereas no differential effect exists in Germany with respect to the reference country. For females, all European countries (with the exception of Switzerland) with a significant coefficient have a smaller effect of disability on the probability of working part-time as compared to those living in The Netherlands. However, only the magnitudes of the marginal effects of the interaction terms for Spain and Italy compensate totally the isolated effect of disabled dummy variable on part-time probability. To understand these differences by country we have to keep in mind the existence of factors affecting labour supply (e.g. social security systems, disability insurance, supplemental security income, workers' compensation, accessibility, costs of rehabilitation and transportation, equipment, health care and personal assistant services) and demand (e.g. productivity of disabled workers, accommodation costs, and cultural and social aspects of disability) and policy makers' actions and regulations in each country (Manning and Petrongolo, 2005).

[Table 4]

## **Discussion**

The aim of this piece of research has been to analyse the incidence of part-time employment among older people with disabilities (aged 50-64) in Europe. Using the

new 2004 SHARE sample, we have found a positive relationship between disability and part-time work at these ages in most of the European countries analysed. For example, part-time differentials in favour of disabled individuals are especially high in countries such as Switzerland, Denmark and Belgium. This high concentration of older disabled individuals in part-time jobs appears to be mainly based on health problems. Older disabled individuals working part-time are more likely to report more health problems (e.g. more frequent doctor visits and nights spent in hospital, low physical activity, obesity, depression, fatigue and lower reported health status) as compared to non-disabled counterparts. As a result, many older disabled individuals are using part-time employment as a means of achieving a much better balance between their personal and health needs and working life (especially those with depression and other mental problems). Part-time employment provides flexibility to older disabled people which enables them to remain in the labour market despite their health limitations. In addition and according to Schur (2003), disabled people are more likely to take part-time jobs as labour markets tighten and employers increasingly cater to worker needs and preferences. This supports that idea that it is not discrimination but the way in which these part-time jobs can accommodate health concerns that primarily explains the high rates of part-time work among people with disabilities. The econometric analysis has allowed us to test the positive effect of disability on the probability of working part-time, even after controlling for other personal and job characteristics. Significant differences across countries in this relationship between disability and part-time employment are also found.

Policy makers must encourage part-time employment as a means of increasing the employment opportunities for older workers with disabilities and support gradual retirement opportunities with flexible and reduced working hours. The promotion of

part-time jobs among older workers (disabled or not) may become a good instrument to maintain the financial sustainability of pension systems across Europe. However, it is necessary to reduce the limitations associated with part-time jobs, especially those concerning public benefits, employment protections, health insurances, job security and wages. For example, many pension rules prohibit companies with defined benefit plans from allowing workers to draw down a partial pension to supplement reduced, part-time earnings (Butrica *et al.*, 2006). Pensions should be adjusted to cover people who work in non-standard jobs (e.g. part-time employment) and to facilitate flexibility and mobility in labour markets. Furthermore, it is crucial to change attitudes and stereotypes towards older people with disabilities in order to increase their labour participation and reduce their levels of poverty and marginalization (Burkhauser and Stapleton, 2004). Instruments to combat discrimination towards older workers have to be secured through new European legislation (European Commission, 2002).

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**Table 1:** Employment and part-time rates for non-disabled (ND) and disabled (D) individuals by country.

	Employment rates				Part-time rates			
	Males		Females		Males		Females	
	ND	D	ND	D	ND	D	ND	D
Austria	56.87	42.37*	34.74	32.72*	7.49	6.73*	48.00	46.71
Germany	75.41	50.07*	59.28	42.86*	7.60	14.34*	47.72	62.64*
Sweden	88.34	63.28*	88.30	62.47*	6.96	11.16*	27.54	37.82*
Netherlands	75.19	52.61*	52.00	28.99*	22.57	28.00*	74.88	78.16*
Spain	79.66	36.61*	37.68	27.08*	10.70	6.90*	27.60	29.39*
Italy	47.34	39.70*	31.01	17.03*	19.19	17.15	47.43	24.06*
France	64.31	48.24*	55.21	45.19*	9.87	10.96*	38.04	36.51
Denmark	79.18	64.75*	78.19	51.01*	9.95	9.80	30.70	46.47*
Greece	65.32	47.20*	25.24	16.59*	16.31	12.80*	39.56	36.09*
Switzerland	89.36	74.98*	64.52	57.69*	7.09	24.20*	49.34	68.95*
Belgium	57.84	40.62*	42.52	26.40*	15.42	16.55*	60.01	75.49*
<b>Total</b>	<b>67.80</b>	<b>47.48*</b>	<b>48.77</b>	<b>35.63*</b>	<b>11.40</b>	<b>14.09*</b>	<b>44.31</b>	<b>48.09*</b>

Note: Individuals aged 50-64. \*Difference between non-disability and disability figures is significant at  $p > 0.05$ . Weighted data.  
Source: Survey of Health, Ageing and Retirement in Europe 2004 (SHARE).

**Table 2:** Personal characteristics of older people working part-time by disability status in Europe.

	<b>Males</b>		<b>Females</b>	
	Non-disabled	Disabled	Non-disabled	Disabled
Age	56.15	56.59	55.61	56.23*
Married	0.825	0.828	0.782	0.725*
<b>Educational level</b>				
Primary education	0.143	0.158	0.114	0.129
Secondary education	0.379	0.478*	0.555	0.596*
Tertiary education	0.478	0.364*	0.331	0.275*
<b>Household type</b>				
Alone	0.109	0.150*	0.121	0.175*
With couple	0.322	0.375	0.471	0.474
With family	0.551	0.473	0.404	0.350*
With others	0.018	0.002	0.004	0.001
<b>Health measures</b>				
Any doctor visit in last 12 months	0.764	0.920*	0.861	0.967*
N° of doctor visits in last 12 months	4.035	7.210*	3.725	8.725*
Any night in hospital in last 12 months	0.083	0.126*	0.065	0.137*
N° nights in hospital in last 12 months	0.415	1.173*	0.298	1.421*
Obese (BMI $\geq$ 30)	0.145	0.142	0.104	0.190*
Low physical activity	0.029	0.077*	0.032	0.066*
Depress last month	0.257	0.409*	0.404	0.537*
Fatigue last month	0.208	0.224*	0.205	0.406*
Depression scale (Euro-D)	1.694	1.854*	1.947	2.939*
<b>Self-reported health status</b>				
Very good	0.296	0.049*	0.309	0.109*
Good	0.586	0.403*	0.603	0.459*
Fair	0.110	0.477*	0.088	0.365*
Bad or very bad	0.008	0.071*	0.001	0.067*

Note: Individuals aged 50-64. \*Difference between non-disability and disability figures is significant at  $p>0.05$ . Weighted data. Source: Survey of Health, Ageing and Retirement in Europe 2004 (SHARE).



**Table 3:** Job characteristics of older people working part-time by disability status in Europe.

	Males		Females	
	Non-disabled	Disabled	Non-disabled	Disabled
Private sector	0.238	0.206	0.307	0.331
Permanent contract	0.860	0.882	0.885	0.865
Job responsibility	0.355	0.186*	0.135	0.172*
<b>Occupation</b>				
Legislators, senior officials and managers	0.022	0.041	0.036	0.022
Professionals	0.386	0.354	0.281	0.172*
Technicians and associate professionals	0.183	0.168	0.119	0.139
Clerks	0.020	0.064*	0.159	0.215*
Service workers and market sales workers	0.064	0.042	0.197	0.171
Skilled agricultural and fishery workers	0.024	0.040	0.012	0.011
Craft and related trades workers	0.098	0.139	0.012	0.014
Plant and machine operators	0.073	0.072	0.011	0.029
Elementary occupations	0.130	0.080*	0.173	0.228*
<b>Industry</b>				
Agriculture and fishing	0.001	0.019	0.000	0.003
Mining, quarrying, energy and water	0.003	0.002	0.007	0.009
Manufacturing	0.095	0.135	0.104	0.157*
Construction	0.137	0.065*	0.017	0.003
Wholesale and retail trade	0.022	0.030	0.106	0.077
Hotels and restaurants	0.013	0.073	0.033	0.023
Transport, storage and communication	0.049	0.131*	0.011	0.023
Banking and finance	0.104	0.008	0.113	0.068*
Public administration	0.060	0.036	0.069	0.049
Education	0.410	0.340*	0.280	0.197*
Health and social work	0.040	0.069	0.151	0.216*
Other activities	0.067	0.093	0.108	0.175*
<b>Firm size</b>				
1-5	0.248	0.229	0.263	0.285
6-24	0.210	0.301*	0.340	0.297*
25-199	0.395	0.329*	0.289	0.280
200 or more	0.147	0.142	0.109	0.138

Note: Individuals aged 50-64. \*Difference between non-disability and disability figures is significant at  $p > 0.05$ . Weighted data.  
Source: Survey of Health, Ageing and Retirement in Europe 2004 (SHARE).

**Table 4:** Marginal effects of the probability of working part-time.

	Males		Females	
	Specification 1	Specification 2	Specification 1	Specification 2
Disabled	0.0488*	0.0730*	0.0406*	0.0592*
<b>Country interactions</b>				
Disabled*Austria		0.0462*		-0.0434*
Disabled*Germany		0.0373		-0.0104*
Disabled*Sweden		-0.0464*		-0.0049
Disabled*Spain		-0.2798*		-0.0921*
Disabled*Italy		-0.1637*		-0.1921
Disabled*France		-0.0242		-0.0350*
Disabled*Denmark		-0.1374*		-0.0288*
Disabled*Greece		-0.2594*		0.0031
Disabled*Switzerland		0.1208*		0.0113*
Disabled*Belgium		0.0501*		0.0100
N° observations	2,229	2,229	2,197	2,197
Pseudo R <sup>2</sup>	0.166	0.173	0.216	0.218

Note: Individuals aged 50-64. \*Significantly different from zero at  $p > 0.05$ . Robust standard errors. All results have been obtained from probit models of probability of working part-time that include as independent variables age, nationality, married, number of children, educational level, occupations, industry, private sector, permanent contract, job responsibility, firm size, early retirement, health status, having other job and country of residence. The reference person is: 50-54 years old, born in the country, non-married, without children, primary education, professionals, education, public sector, temporal contract, without job responsibility and other job, 1-5 employees, non early retirement and living in The Netherlands. Full regressions are available upon request.

Source: Survey of Health, Ageing and Retirement in Europe 2004 (SHARE).