# **Transitions through self-employment of older people with disabilities in Europe**

# **RICARDO PAGÁN**

University of Malaga (Spain) Faculty of Economics Applied Economics Department

## Abstract:

This paper analyses the labour-market transitions among older people with disabilities in Europe as compared to non-disabled counterparts. Particular attention is paid to the use of self-employment as a means to gradual exit from labour market. Using data from the two first waves (2004 and 2007) of a panel data from the Survey of Health, Ageing and Retirement in Europe (SHARE), we estimate employment transition matrices for disabled and non-disabled individuals aged 50 years or over (separately for males and females). In this analysis we take into account the possible transitions in disability status that individuals may experience throughout our panel data. The results show that older people with disabilities (especially females) who are self-employed in 2004 are less likely to remain in the same labour status three years later. In contrast, transitions to out of labour force from self-employment were relatively higher for disabled individuals as compared to non-disabled ones. These findings vary when we take into consideration the disability trajectories. Policy makers must promote self-employment among older people with disabilities in Europe to increase their employment rates, prevent their social exclusion, and as a bridge job to a gradual retirement.

**Keywords:** Self-employment, employment transitions, disability, older workers, Europe.

## **Corresponding author:**

Ricardo Pagán-Rodríguez Faculty of Economics Applied Economics Department University of Malaga Plaza de El Ejido s/n 29.071 Malaga (Spain). *Telephone:* +34 952 131186. *Fax:* +34 952 132075. *E-mail:* rpr@uma.es

# Introduction

The shift in age structure associated with population ageing has a profound impact on future labour, financial and commodity markets (1,2). All countries will face population ageing, although at varying levels of intensity and in different time frames. Increasing the labour market participation and employment rates of older people is of key importance to European Union policy, which is to be addressed through a comprehensive and sustainable approach known as "*active ageing*" (3). Within this context, self-employment has been an important element in raising employment levels of older people in the last decades, providing flexibility which allows older people to better combine personal and health needs with working life. Many policy makers and governments have adopted a wide range of policies to support self-employment which have become a source of economic growth (4,5). Although the share of self-employment levels the number of self-employed has been increasing and has varied significantly among European countries (6).

The relationship between disability and ageing is evident and straightforward because the incidence of disability increases with age. For example, almost one in three of people aged 55–64 suffers from a disability in Europe and more than two-thirds of those aged 55–64 with some form of disability are inactive (7). Consequently, employment levels among older people with disabilities are a little above the 50% rate of their non-disabled counterparts (8). Although there is a wide array of international studies on self-employment, the self-employment transition itself among older workers with disabilities has not been a major focus of study (9-12). Only the works of Quinn (13) Fuchs (14) and Zissimopoulos and Karoly (15) have analysed for the general older population the transitions to self-employment and only for the American case. For

example, Quinn (13) concludes that self-employment may be a form of partial retirement for older people because self-employment offers greater flexibility in hours, wages, working conditions or environment to accommodate tastes for leisure and Social Security earning tests. Our main interest is to investigate the labour force transitions of older people with disabilities in Europe and in particular the use of self-employment for these individuals as a bridge towards a gradual retirement. If this assumption is true, we can expect a higher number of employment transitions from self-employment to retirement among those older workers who are disabled. This analysis of transitions to retirement from self-employment must have influence on the current level of well-being (e.g. labour incomes) of older people with disabilities (and without disability) and the accumulation of other retirement benefits or financial assets. Within this analysis, we take into account the possible transitions in disability status that individuals may experience throughout our panel data. In addition, these issues are very important for policy makers, health services, social analysts 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 (16). For example, one of the most important implications for health policy of our results is that self-employment improves opportunities for older people not in employment due to long-term illness or disability to return to work. According to our results, in many cases self-employment may become an essential means to provide flexibility into the workplace and achieve an adequate working-life balance among disabled individuals. Furthermore, some studies have shown that self-employed individuals report higher job satisfaction scores as compared to wage and salary earners, as well as high satisfied workers are better performers and possess good health (fewer health complaints and good mental health) than that the dissatisfied workers. The

quality of working life of older workers with disabilities who are self-employed may be enhanced through better work-based programs (e.g. occupational health, vocational rehabilitation) that sustain workforce health and well-being and prevent both workrelated risks and chronics diseases.

The remainder of the paper proceeds as follows. Section 2 reviews the existing literature on self-employment and disability and section 3 presents the measure of disability used in this work as well as the data employed in the analysis done later. Section 4 includes the results obtained and the last section presents the main conclusions and offers some recommendations regarding public policy.

# **Review of literature**

Although there is abundant literature on self-employment at an international level (17-21) the evidence on self-employment and disability is extremely scarce due to the fact that most works on disability and employment have excluded self employment from their analysis (22-25). To our knowledge, there is no previous evidence on transitions through self-employment for older people with disabilities for Europe. This lack of evidence for Europe is surprising if we take into account that many European governments have tried to promote self-employment (through subsidies and transfer programs to individuals) as a way out of poverty and marginalization. Thus, our analysis fills this important gap in the literature and contributes to understanding the use and extent of self-employment among older disabled people throughout Europe.

Apart from the studies on transitions to self-employment of older workers pointed out earlier (13-15), it is worth mentioning the special edition of the Journal of Vocational Rehabilitation in the year 2002, wherein there are a set of American works that introduce the concept of self-employment (26,27) and analyse the role of vocational rehabilitation agencies and counsellors (28,29), the major activities and considerations when designing an enterprise (30) and supported self-employment (31), among others. For example, Callanhan *et al.* (26) find that around 13% of the participants in the United Cerebral Palsy Associations who became employed chose self-employment over regular employment. This percentage is greater than that in the traditional rehabilitation services and even larger than the percentage of individuals who are self-employed in the general population. Also, Doyel (29) concludes that self-employment is a "*true*" option for disabled people and it is crucial for vocational rehabilitation counsellors to learn the realities of small business training, development, and ownership in order to support this important employment option for disabled population. With respect to people with severe disabilities, Rizzo (31) points out that these people can use this non-traditional work as a means of increasing their employment levels through a more intensive use of business and personal social support systems.

Recently, Cowling and Taylor (32), using the 5<sup>th</sup> wave (year 1995) of the British Household Panel Survey, find that having an illness that limits the type or amount of work increases the probability of being self-employed, especially for females. Finally, Boylan and Burchardt (33) use data from the Labour Force Survey (2000-2001) and the Family Resources Survey (1998-2000) for the UK to assess the nature and extent of self employment among disabled people as well as the barriers encountered and availability of appropriate advice and support. The results show that disabled people are more likely to be self-employed compared to non-disabled people. For both males and females, disabled people out of work appear to be more open to self-employment as compared to non-disabled counterparts. However, disabled people have more difficulty in accessing start-up capital, interaction with the benefit system and finding out about accessing appropriate training and advice.

# **Data and Methods**

The analysis relies on the use of the Survey of Health, Ageing and Retirement in Europe (SHARE), which includes information for European individuals aged 50 years or over on a wide range of topics in great detail such as health and psychological measures, socio-economic variables, family and social relations, among others. We use data from the first two waves (2004 and 2007) for eleven European countries (Austria, Germany, Sweden, The Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland and Belgium)<sup>a</sup>. One of the advantages of this multidisciplinary and cross-national database is that it offers harmonized data from all these countries thanks to the use of the same questionnaire and methodology in all participating countries. In addition, the design and development of the SHARE closely follow the U.S. Health and Retirement Study (HRS) and the English Longitudinal Study of Ageing (ELSA) in order to be comparable to both datasets.

With the release of wave 2 (in December of 2008), the SHARE allows us to go into a longitudinal dimension and explore variations of the same people over time. Namely, we analyse the relationship between disability and self employment from a dynamic perspective. Following Burkhauser and Daly (35), Burchardt (36,37) and Jenkins and Riggs (38), using data from a single year or pooled data has the drawback of including, for example, people with temporary disabilities (e.g. an injury suffered during that year), as well as people disabled from childhood or with a longer-term disability. The possibility of differentiating between the different disability trajectories a person might follow as well as their main socioeconomic characteristics is an essential requirement for the design, implementation and later evaluation of the effectiveness of public policies aimed at people with disabilities. The SHARE also provides us the opportunity to identifying each individual's work history and job transitions between the two

<sup>&</sup>lt;sup>a</sup> A full description of this database and its methodology is available at: http://www.share-project.org and Börsch-Supan and Jürges (34). We exclude from our analysis Israel, the Czech Republic, Poland, Slovenia and Ireland because they are no data are available for both 2004 and 2007 yet.

available waves. Since the job transitions are analysed at two points in time (2004 and 2007), we can not say anything about the individual's employment status over the two waves. However, this method has the advantage of not relying on the individual's memory as in the retrospective questions, and the linked waves reflect more reliably the true status of the individual at each point of time (39).

We construct a measure of disability from two questions that have been used in previous studies and are included in the health section of the SHARE questionnaire (40,41): "Do you have any long-term health problems, illness, disability or infirmity? (Yes/No)". Those who answer "Yes" can be defined as people with disabilities. In addition, 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 determine the grade of severity of the disability. We have to bear in mind that this measure of disability is a self-evaluation and it does not refer to an "objective" definition of disability<sup>b</sup>. However, the questions of the SHARE contain the main objective of the World Health Organization (WHO) definition which relates disability to limitations on daily activities. Therefore, the figures obtained from the SHARE give an approximation of the phenomenon of disability, and though not strictly comparable to other data sources designed to follow the international definitions of disability, they are closer to them than any sort of administrative data (which usually focuses strictly on disability with respect to work). The SHARE provides information on the labour force status of the respondents in both waves. In terms of employment outcomes, workers are asked whether they are currently self employed in their main jobs. In addition, respondents are

<sup>&</sup>lt;sup>b</sup> Chirikos and Nestel (42) and Kreider (43) have argued that self-classification may lead to overestimation (when the individuals try to justify situations of inactivity or limited work activity) or underestimation (when the disability is regarded as a stigma) of the prevalence of disability rates.

also asked about self-employment in second jobs. For the purpose of our analysis, we defined self-employment by employment status in the main job.

Within this context, we have to bear in mind that technology has changed to give individuals (disabled or not) the opportunity to work at home. Many firms are encouraging employees to work at home with flexible hours which allow them to achieve a better work-life balance and facilitate a gradual transition for workers to retirement. In addition, working at home can have other advantages such as save on start up costs, avoid noise and distractions of the workplace, less stress and more motivation and save on time and money spent travelling to work, among others. For many disabled individuals, working at home may become a perfect way to be employed. For example and depending on your disability, they can find online job opportunities to increase their confidence and life satisfaction as well as provide an income for them and their families. However, there are also disadvantages from home working, for example, isolation/loneliness, need for self-discipline, domestic distraction and interruptions, difficulty of managing home workers and monitoring their performance and risk of information-security problems, among others. Although it would be very useful in our study to distinguish between self-employment and working at home, the SHARE does not contain any data that allow us to identify whether the respondent is working at home (the variable EP005 measuring the current work situation (i.e. employed or selfemployed, unemployed, homemaker, sick, others) does not include the "working at home option").

Our sample consists of individuals aged 50 or over who are included in both waves. Initially, we have a balance panel comprising a longitudinal sample of 18,461 individuals, i.e. 36,922 person-wave observations. As noted earlier, we do not have any longitudinal sample for Israel, the Czech Republic, Poland and Ireland yet. Therefore,

8

our balance panel data only includes the 11 original countries participating in the first wave. The final sample after dropping those with missing information was 17,091 individuals (7,691 males and 9,400 females), of which 5,847 were disabled in both waves (2,443 males and 3,404 females).

# Results

Table 1 shows the levels of self-employment (as a percentage of the total employment) for older workers (males and females) in 2004 and 2007 by disability status and European country. In general, the incidence of self-employment among older workers (disabled or not) differs significantly across the European countries analysed and the self-employment rates are higher for males as compared to those observed by females. For males and females, Greece and Italy are the countries with the highest levels of selfemployment, whereas the lowest levels are found in Denmark and Sweden. If we compare the self-employment rates between non-disabled and disabled individuals, we find that the highest differentials in favour of non-disabled males are found in The Netherlands (9.20 in 2004 and 4.94 in 2007) and Austria (7.53 in 2004 and 8.64 in 2007), whereas for the female sample these differentials are found in France (8.82) and Italy (6.95) in 2004, and again in Italy (11.04) and Germany (4.96) in 2007. On the contrary, the differentials in favour of disabled males are found in Spain (11.21) and Greece (4.38) in 2004 and in Sweden (13.65) and France (12.49) in 2007. For the female sample, these differentials are found in Greece (7.36) in 2004 and in Spain (13.88) and Denmark (8.87) in 2007. Finally, the last two columns of Table 2 show the variation rate of self-employment between 2004 and 2007 by disability status. For disabled males, self-employment rates increase in five out of eleven countries analysed between 2004 and 2007, whereas for disabled females this increase is found in eight out of eleven countries. In contrast, self-employment rates for the non-disabled sample only increase in three out of eleven countries. It is worth mentioning the important increase in the levels of self-employment for disabled individuals in France (4.2 and 2.12 for females and males, respectively).

### (Table 1)

Table 2 shows the labour-market transitions for all European respondents on the basis of their initial labour status in 2004 (i.e. wage and salary employment, selfemployment, unemployment and not in the labour force) into one of the four possible statuses in 2007. The row totals for each collective sum to 100 and show the percentage of individuals for a given status in 2004 located in a given status in 2007<sup>c</sup>. We are particularly interested in looking at the fraction of disabled and non-disabled individuals who were self-employed in 2004 and were out of labour force in 2007. Compared with non-disabled individuals, the disabled workers who are self-employed are somewhat less likely to remain in the same labour status three years later. For example, the percentage of older males who were self-employed in 2004 and continued working in the same employment class in 2007 is relatively higher among non-disabled workers than disabled ones (79.8 and 75.4%, respectively). For females, this gap in favour of non-disabled individuals is even higher (9.2 percentage points). A similar result is observed for wage and salary employment. In addition, self-employed individuals were more likely to move into wage and salary employment as compared to wage and salary workers to move into self-employment. Of the disabled males (females) who were selfemployed in 2004, 17.7% (35.3%) were out of labour force in 2007. In contrast, transitions to out of labour force from self-employment were relatively lower for nondisabled counterparts (12.5 and 25.3%, respectively). Although for males (disabled or

<sup>&</sup>lt;sup>c</sup> Since we only observe the employment status of individuals in two specific years (2004 and 2007), we can not capture those employment transitions occurred between these two years. The same fact will happen when we will explore the transitions in the disability status of individuals throughout the panel data.

not) the retirement rate for self-employment and wage and salary employment is not statistically different (around 12% for non-disabled and 17% for disabled), for females this retirement rate for self-employment is significantly higher than the rate for wage workers, especially whether the individual is disabled (in this case the gap is 20.7 percentage points, whereas for non-disabled individuals it is 13.7 percentage points). This finding suggests that self-employment can be an attractive option to move gradually to inactivity for many older workers with disabilities because it offers independence, flexible work hours and a better control over how to spend their time. According to Oi (44), 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. Self-employment can be used by disabled individuals as a bridge job which fills many of their personal and health needs. Rather than retiring directly from a career job, many disabled workers may transition to self-employment and find a better balance between their health limitations and working life.

#### (Table 2)

All figures shown in Table 2 do not take into account the possible transitions in disability that an individual may experience between 2004 and 2007. Namely, it is necessary to introduce into our analysis the different disability trajectories that an individual may follow between both years. However, the mobility between disability states (non-disabled *versus* disabled) is limited. 78.2% of males (74.7% of females) are non-disabled in the two years, whereas 70.1% of males (72.7% of females) remain disabled in both years. This implies that around 21.8% (25.3%) of non-disabled males (females) in 2004 become disabled in 2007. Higher percentages are found for those disabled individuals in 2004 who exit from disability in 2007 (29.9 and 27.3% for males and females, respectively). Table 3 repeats the labour market transitions shown in Table

2 but now taking into account these transitions in disability. 76.3% (58.1%) of those self-employed males (females) in 2004 who are disabled in both years remain in the same labour status in 2007, whereas 79.8% (66.5%) of those self-employed males (females) who never experience disability are observed in self-employment in 2007 as well. The percentage of self-employed males (females) who are disabled in both years and move out of the labour force in 2007 was 18.4% (37.2%). This percentage is greater than those observed for the rest of disability trajectories. In addition, for females the flows from self-employment to inactivity in all trajectories analysed are higher than those transitions observed from wage employment to inactivity. For example, the percentage of females in wage employment who were disabled in 2004 and 2007 and move to inactivity in 2007 was 16.1, i.e. 21.1 percentage points lower than the percentage observed for self-employment females. For males, the differentials in the flows to inactivity between wage employment and self-employment are lower as compared to those for females.

# (Table 3)

To complete the previous analysis on employment transitions at older ages, a probit model was used to estimate the determinants of the transitions from self-employment in 2004 to out of the labour force in 2007. Our main focus is on the disability status (and their possible trajectories) and its impact on the transition from self-employment to inactivity. Table 4 presents the coefficients and marginal effects for two different specifications, wherein the only difference among them is in the use of different disability measures (i.e. disabled status and disability trajectories). In specification 1, the coefficient of the disability variable (=1 if the individual reports a disability in 2004) is significant at a 5% level and means that the disabled individuals who were selfemployed in 2004 are significantly more likely than non-disabled counterparts to be out of the labour force three years later (around 3.8 percentage points). Looking at the results shown in specification 2, those individuals who are disabled in both years are more likely to move from self-employment to inactivity in 2007 as compared to the category of reference (never disabled). That is, being disabled in 2004 and 2007 increases the probability of exiting from self-employment to inactivity by about 4.3 percentage points relative to the baseline probability (5.7%). The coefficient of the disability trajectory "non-disabled  $\rightarrow$  disabled" is also significant, increasing the probability of moving to inactivity by 3.5 percentage points relative to the baseline probability. Furthermore, variables measuring individual, job and household characteristics also affect the probability of move from self-employment to inactivity in 2007, and the results are similar to those found in the existing literature on self-employment.

#### (Table 4)

# Conclusion

Using data from the two waves of the SHARE (2004 and 2007), we have analysed the employment transitions of older European individuals (disabled and non-disabled), with particular attention to the use of self-employment as a bridge job to gradual retirement for older people with disabilities. The employment transition analysis has shown that disabled workers (especially females) who are self-employed in 2004 are less likely to remain in the same labour status three years later. In contrast, transitions to out of labour force from self-employment were relatively higher for disabled individuals as compare to non-disabled ones. In addition, we have found differences in the flows to inactivity from self-employment depending on the type of disability trajectory. For example, those individuals who are disabled in 2004 and 2005 are more likely to move from self-employment to inactivity. This finding has been corroborated by the estimation of a

probit model on the exit from self-employment to out of the labour force. It is important to mention that a limitation of the SHARE is that does not contain any information of the type of disability and impairment that the person suffers. The availability of this information in the SHARE would have permitted a more detailed analysis. Nonetheless, the results of our study offer an important step towards understanding the labour-market transitions of older people with disabilities in Europe and particularly the use of selfemployment over time as a bridge job towards a gradual retirement which increases their levels of employment and income rates. The promotion and use of selfemployment would help to prevent their social and labour exclusion and reduce the employment gap between disabled and non-disabled population.

From a public policy perspective, the availability of self-employment may become a key factor for increasing the employment rates of older people with disabilities in Europe. At an individual level, facilitating access to self-employment jobs and developing flexible work arrangements are ways to give older workers with disabilities greater choice and smooth work retirement transitions, especially for those individuals who have suffer long-term disability trajectories. Traditionally, governments have concentrated their efforts to combat any kind of discrimination against disabled people, but the specific needs to those starting a business have received relatively little attention (33). There is no doubt that in many cases being self-employed is a hard and difficult task. However, policy makers must encourage self-employment among disabled people in order to improve their employment opportunities. This would help to prevent their social and labour exclusion and reduce the employment gap between disabled and non-disabled population. For instance, some studies have noted that one possible impediment to entrepreneurship is lack of capital (17). In order to assist disabled people

in their new role of entrepreneurs may be very useful and necessary. In many cases, disabled people are less likely to be self-employed due to the fear of losing their disability benefits. Public benefit systems must permit the recovery of the disability benefits in the case that the self-employment option for disabled people fracases. With respect to employment services, many work advisors tend to discourage disabled people from starting up a company because it is very stressful and full of difficulties. These advisors must take into account the aspirations of disabled people, change their attitudes towards them and move from their position of authority to a position where they are working in collaboration with disabled people (45). According to Callahan et al. (26), all these efforts should be made to assure that self-employment does not isolate disabled people; however, personal preferences should be a stronger value than integration with others. Hence, self-employment may provide a realistic opportunity for a working life for any person with disability. At a general level, the encouragement and promotion of self-employment among older workers (disabled or not) may help to maintain the financial sustainability of social security and pension systems across Europe. Finally, it is fundamental to change attitudes and stereotypes towards older people with disabilities in order to combat any kind of discrimination and promote the equal opportunities principle through new European legislation.

# References

- United Nations (2001) World Population Ageing. New York: Department of Economic and Social Affairs.
- Börsch-Supan, A. (2009) The impact of global ageing on labour, product and capital markets. In: Cabrera and Malanowski (eds.) Information and Communication Technologies for Active Ageing, pp. 7-34.

- 3. European Commission (2007) Employment in Europe 2007. Brussels: Directorate-General for Employment, Social Affairs and Equal Opportunities.
- House, W. (1984) Urban self-employment in Kenya: panacea or viable strategy? World Development 21: 1205–1223.
- 5. OECD (2000) Employment Outlook. Paris: Directorate for Employment, Labour and Social Affairs.
- European Commission (2007) Employment in Europe 2008. Brussels: Directorate-General for Employment, Social Affairs and Equal Opportunities.
- 7. Eurostat (2002) Labour Force Survey Ad Hoc Module Eurostat Dataset 2002.
- OECD (2003) Transforming Disability into Ability: Policies to Promote Work and Income Security for Disabled People. Paris: .
- 9. Evans, D., and Jovanovic, B. (1989) An estimated model of entrepreneurial choice under liquidity constraints. Journal of Political Economy 97: 808-827.
- Blanchflower, D. (2000) Self-employment in OECD countries. Labour Economics 7: 471-505.
- Brown, S., Farrel, L., and Sessions, J. (2006) Self-employment matching: An analysis of dual earner couples and working households. Small Business Economics 26(2): 155-172.
- 12. Hyytinen, A., and Rouvinen, P. (2008) The labour consequences of selfemployment spells: European evidence. Labour Economics 15: 246-271.
- Quinn, J. (1980) Labor force participation patterns of older self-employed workers. Social Security Bulletin 43: 17-28.
- Fuchs, V. (1982) Self-employment and labor force participation of older males. Journal of Human Resources 17: 339-357.

- Zissimopoulos, J., and Karoly, L. (2007) Transitions to self-employment at older ages: The role of wealth, health, health insurance and other factors. Labour Economics 14: 269-295.
- 16. Bardasi E, and Francesconi M. (2004) The impact of atypical employment on individual well-being: evidence from a panel of British workers. Social Science & Medicine 58: 1671-1688.
- 17. Evans, D. and Jovanovic, B. (1989) An estimated model of entrepreneurial choice under liquidity constraints. Journal of Political Economy 97: 808-827.
- Blanchflower, D. and Oswald, A. (1998) What makes an entrepreneur? Journal of Labor Economics 16 (1): 26-60.
- Blanchflower, D. (2000) Self-employment in OECD countries. Labour Economics 7: 471-505.
- 20. Brown, S., Farrel, L. and Sessions, J. (2006) Self-employment matching: An analysis of dual earner couples and working households. Small Business Economics 26 (2): 155-172.
- 21. Hyytinen, A. and Rouvinen, P. (2007) The labour consequences of self-employment spells: European evidence. Labour Economics, in press.
- 22. Baldwin, M. and Johnson, W. (1995) Labor market discrimination against women with disabilities. Industrial Relations 34 (4): 555-577.
- 23. Kidd, M. P., P. J. Sloane and I. Ferko (2000) Disability and the labour market; an analysis of British males. Journal of Health Economics 19 (6): 961-81
- 24. Pallisera, M., Vilá, M. and Valls, M. (2003) The current situation of supported employment in Spain: analysis and perspective based on the perception of professionals. Disability & Society 18 (6): 797-810.

- 25. Danieli, A. and Wheeler, P. (2006) Employment policy and disabled people: old wine in new glasses? Disability & Society 21 (5): 485-498.
- 26. Callahan, M., Schumpert, N. and Mast, M. (2002) Self-employment, choice and self-determination. Journal of Vocational Rehabilitation 17: 75-85.
- 27. Kilsby, M. and Beyer, S. (2002) Enhancing self-determination in job matching in supported employment for people with learning disabilities: An intervention study. Journal of Vocational Rehabilitation 17: 125-135.
- Arnold, N. and Seekins, T. (2002) Self-employment: A process for use by vocational rehabilitation agencies. Journal of Vocational Rehabilitation, 17: 107-113.
- 29. Doyel, A. (2002) A realistic perspective of risk in self-employ employment for people with disabilities. Journal of Vocational Rehabilitation 17: 115-124.
- 30. Griffin, C. and Hammis, D. (2002) Jimbo's Jumbos: A primer on small business planning. Journal of Vocational Rehabilitation 17: 87-96.
- Rizzo, D. (2002) With a little help from my friends: Supported self-employment for people with severe disabilities. Journal of Vocational Rehabilitation 17: 97-105.
- Clowling, M. and Taylor, M. (2001) Entrepreneurial women and men: Two different species? Small Business Economics 16: 167-175.
- 33. Boylan, A. and Burchard, T. (2002) Barriers to self-employment for disabled people, Report for the Small Business Services, October.
- 34. Börsch-Supan, A. and Jürges, H. (2005) The Survey of Health, Ageing and Retirement in Europe–Methodology. University of Mannheim: Mannheim Research Institute for the Economics of Aging.
- 35. Burkhauser, R. and Daly, M. (1998) Disability and work: The experiences of American and German men. Economic Review 2: 17-29.

- Burchardt, T. (2000) The dynamics of being disabled. Journal of Social Policy 29: 645-668.
- 37. Burchardt, T. (2003) Employment retention following onset of sickness or disability: evidence from the Labour Force Survey longitudinal data. Londres: Department for Work and Pensions In-House Report.
- Jenkins, S. and Riggs, J. (2004) Disability and disadvantage: selection, onset, and duration effects. Journal of Social Policy 33: 479-501.
- 39. Dex, S. and McCulloch, A. (1998) The reliability of retrospective unemployment history data. Work, Employment and Society 12: 497-509.
- 40. Jones, M., Latreille, P. and Sloane, P. (2003) Disability, gender and the British labour market. Oxford Economics Papers 58: 407-449.
- 41. Gannon, B. (2005) A dynamic analysis of disability and labour force participation in Ireland 1995-2000. Health Economics 14 :925 – 938.
- 42. Chirikos, T. and Nestel, G. (1984) Economic determinants and consequences of self-reported work disability. Journal of Health Economics 3: 117-136.
- 43. Kreider, B. (1999) Latent work disability and reporting bias. Journal of Human Resources 34: 734-769.
- 44. Oi, W. (1991) Disability and a Workfare-Welfare Dilemma. In C. Weaver (ed.), Disability and Work. Washington: AEI Press.
- 45. Piggott, L., Sapey, B. and Wilenius, F. (2005) Out of touch: local government and disabled people's employment needs. Disability & Society 20 (6): 599-611.

**Table 1:** Self-employment rates for non-disabled (ND) and disabled (D) in 2004 and2007.

| A) Males    |       |       |       |       |                    |      |  |
|-------------|-------|-------|-------|-------|--------------------|------|--|
|             | 20    | 004   | 20    | 07    | $\Delta$ 2007/2004 |      |  |
|             | ND    | D     | ND    | D     | ND                 | D    |  |
| Austria     | 20.18 | 12.65 | 19.86 | 11.22 | 0.98               | 0.89 |  |
| Germany     | 19.73 | 20.04 | 19.27 | 23.44 | 0.98               | 1.17 |  |
| Sweden      | 21.24 | 24.78 | 12.58 | 26.23 | 0.59               | 1.06 |  |
| Netherlands | 17.76 | 8.56  | 16.22 | 11.28 | 0.91               | 1.32 |  |
| Spain       | 27.80 | 39.01 | 32.74 | 27.94 | 1.18               | 0.72 |  |
| Italy       | 47.88 | 47.84 | 40.55 | 36.13 | 0.85               | 0.76 |  |
| France      | 17.36 | 13.99 | 17.23 | 29.72 | 0.99               | 2.12 |  |
| Denmark     | 16.57 | 16.23 | 15.68 | 16.01 | 0.95               | 0.99 |  |
| Greece      | 43.21 | 47.59 | 53.73 | 45.97 | 1.24               | 0.97 |  |
| Switzerland | 30.57 | 28.08 | 23.37 | 26.52 | 0.76               | 0.94 |  |
| Belgium     | 21.67 | 19.64 | 22.98 | 26.88 | 1.06               | 1.37 |  |
| Total       | 26.70 | 26.83 | 25.86 | 26.16 | 0.97               | 0.98 |  |
|             |       |       |       |       |                    |      |  |
| B) Females  |       |       |       |       |                    |      |  |
|             | ND    | D     | ND    | D     | ND                 | D    |  |
| Austria     | 21.02 | 16.44 | 19.09 | 17.45 | 0.91               | 1.06 |  |
| Germany     | 18.04 | 11.34 | 18.89 | 13.93 | 1.05               | 1.23 |  |
| Sweden      | 7.07  | 7.70  | 5.38  | 5.55  | 0.76               | 0.72 |  |
| Netherlands | 15.19 | 16.28 | 14.02 | 16.78 | 0.92               | 1.03 |  |
| Spain       | 27.02 | 28.68 | 22.46 | 36.34 | 0.83               | 1.27 |  |
| Italy       | 31.33 | 24.38 | 23.29 | 12.25 | 0.74               | 0.50 |  |
| France      | 13.12 | 4.30  | 14.66 | 18.07 | 1.12               | 4.20 |  |
| Denmark     | 6.96  | 7.64  | 2.80  | 11.67 | 0.40               | 1.53 |  |
| Greece      | 35.16 | 42.52 | 34.63 | 37.76 | 0.98               | 0.89 |  |
| Switzerland | 21.79 | 17.34 | 19.94 | 21.85 | 0.92               | 1.26 |  |
| Belgium     | 13.83 | 15.65 | 14.94 | 20.46 | 1.08               | 1.31 |  |
| Total       | 19.70 | 14.31 | 17.91 | 17.11 | 0.91               | 1.20 |  |

Note: Sample consists of individuals aged 50 or over at time t. Weighted data.

Source: Author's calculations using SHARE 2004 and 2007.

| Status in 2007      |                 |      |                   |      |            |      |           |      |             |       |
|---------------------|-----------------|------|-------------------|------|------------|------|-----------|------|-------------|-------|
| Status in 2004      | Wage and salary |      | Self-<br>employed |      | Unemployed |      | Not in LF |      | Sample size |       |
|                     | ND              | D    | ND                | D    | ND         | D    | ND        | D    | ND          | D     |
| A) Males            |                 |      |                   |      |            |      |           |      |             |       |
| Wage and salary     |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 84.8            | 80.0 | 3.0               | 1.9  | 1.1        | 1.3  | 11.1      | 16.8 | 1,392       | 746   |
| Self- employed      |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 7.3             | 6.0  | 79.8              | 75.4 | 0.4        | 0.9  | 12.5      | 17.7 | 545         | 232   |
| Unemployed          |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 23.9            | 20.9 | 7.1               | 2.7  | 40.7       | 30.9 | 28.3      | 45.5 | 113         | 110   |
| Not in labour force |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 1.8             | 1.0  | 1.0               | 0.7  | 0.2        | 0.1  | 97.1      | 98.2 | 2,157       | 2,399 |
| B) Females          |                 |      |                   |      |            |      |           |      |             |       |
| Wage and salary     |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 86.6            | 82.9 | 1.2               | 1.8  | 0.6        | 0.8  | 11.6      | 14.6 | 1,255       | 770   |
| Self- employed      |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 7.7             | 8.3  | 65.6              | 56.4 | 1.5        | 0.0  | 25.3      | 35.3 | 273         | 133   |
| Unemployed          |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 19.5            | 12.3 | 2.7               | 3.8  | 31.9       | 34.9 | 46.0      | 49.1 | 113         | 106   |
| Not in labour force |                 |      |                   |      |            |      |           |      |             |       |
| row %               | 1.6             | 1.3  | 0.7               | 0.7  | 0.5        | 0.3  | 97.1      | 97.8 | 3,078       | 3,672 |

 Table 2: Employment transitions for non-disabled (ND) and disabled (D) by gender

 (percentage distribution).

Note: Sample consists of individuals aged 50 or over in 2004.

Source: Author's calculations using SHARE (2004 and 2007).

|                 |      | Status in 2007 |      |        |        |          |      |      |          |        |
|-----------------|------|----------------|------|--------|--------|----------|------|------|----------|--------|
| Status in 2004  |      | NON-DISABLED   |      |        |        | DISABLED |      |      | <b>D</b> |        |
|                 | Wage | Self           | UN   | Not LF | Sample | Wage     | Self | UN   | Not LF   | Sample |
| A) Males        |      |                |      |        |        |          |      |      |          |        |
| NON-DISABLED    |      |                |      |        |        |          |      |      |          |        |
| Wage and salary |      |                |      |        |        |          |      |      |          |        |
| row %           | 86.5 | 2.6            | 0.9  | 10.1   | 1,167  | 76.4     | 4.9  | 2.2  | 16.4     | 225    |
| Self-employed   |      |                |      |        |        |          |      |      |          |        |
| row %           | 7.7  | 79.8           | 0.4  | 12.0   | 466    | 5.1      | 79.8 | 0.0  | 15.2     | 79     |
| Unemployed      |      |                |      |        |        |          |      |      |          |        |
| row %           | 25.0 | 9.5            | 42.9 | 22.6   | 84     | 20.7     | 0.0  | 34.5 | 44.8     | 29     |
| NLF             |      |                |      |        |        |          |      |      |          |        |
| row %           | 2.1  | 1.1            | 0.2  | 96.6   | 1,574  | 0.9      | 0.5  | 0.2  | 98.5     | 583    |
| DISABLED        |      |                |      |        |        |          |      |      |          |        |
| Wage and salary |      |                |      |        |        |          |      |      |          |        |
| row %           | 83.5 | 2.2            | 1.1  | 13.2   | 273    | 78.0     | 1.7  | 1.5  | 18.8     | 473    |
| Self-employed   |      |                |      |        |        |          |      |      |          |        |
| row %           | 10.0 | 73.8           | 0.0  | 16.3   | 80     | 4.0      | 76.3 | 1.3  | 18.4     | 152    |
| Unemployed      |      |                |      |        |        |          |      |      |          |        |
| row %           | 14.3 | 0.0            | 39.3 | 46.4   | 28     | 23.2     | 3.7  | 28.1 | 45.1     | 82     |
| NLF             |      |                |      |        |        |          |      |      |          |        |
| row %           | 1.1  | 1.2            | 0.0  | 97.7   | 660    | 1.0      | 0.5  | 0.1  | 98.3     | 1,736  |
| B) Females      |      |                |      |        |        |          |      |      |          |        |
| NON-DISABLED    |      |                |      |        |        |          |      |      |          |        |
| Wage and salary |      |                |      |        |        |          |      |      |          |        |
| row %           | 88.2 | 1.2            | 0.4  | 10.2   | 991    | 80.7     | 1.1  | 1.1  | 17.1     | 264    |
| Self-employed   |      |                |      |        |        |          |      |      |          |        |
| row %           | 7.9  | 66.5           | 1.8  | 23.8   | 227    | 6.5      | 60.9 | 0.0  | 32.6     | 46     |
| Unemployed      |      |                |      |        |        |          |      |      |          |        |
| row %           | 20.2 | 3.2            | 28.7 | 47.9   | 94     | 15.8     | 0.0  | 47.4 | 36.8     | 19     |
| NLF             |      |                |      |        |        |          |      |      |          |        |
| row %           | 1.9  | 0.9            | 0.5  | 96.7   | 2211   | 1.0      | 0.4  | 0.5  | 98.2     | 867    |
| DISABLED        |      |                |      |        |        |          |      |      |          |        |
| Wage and salary |      |                |      |        |        |          |      |      |          |        |
| row %           | 86.2 | 1.5            | 0.8  | 11.6   | 268    | 81.1     | 2.0  | 0.8  | 16.1     | 502    |
| Self-employed   |      |                |      |        |        |          |      |      |          |        |
| row %           | 14.9 | 53.2           | 0.0  | 31.9   | 47     | 4.7      | 58.1 | 0.0  | 37.2     | 86     |
| Unemployed      |      |                |      |        |        |          |      |      |          |        |
| row %           | 26.5 | 2.9            | 29.4 | 41.2   | 34     | 5.6      | 4.2  | 37.5 | 52.8     | 72     |
| NLF             |      |                |      |        |        |          |      |      |          |        |
| row %           | 2.2  | 0.7            | 0.2  | 97.0   | 928    | 1.0      | 0.7  | 0.3  | 98.1     | 2.744  |

 Table 3: Transition matrix by disability status and employment status (percentage distribution).

Note: Sample consists of individuals aged 50 or over in 2004.

Source: Author's calculations using SHARE. (2004 and 2007).

**Table 4:** Estimation results from a probit regression on the exit from self-employment to out of labour force (mean values, coefficients and marginal effects (ME)).

|  |         | Specification 1 |        |     | Specification 2 |        |     |
|--|---------|-----------------|--------|-----|-----------------|--------|-----|
|  | Mean    | Coef.           | ME     |     | Coef.           | ME     |     |
| Disabled   | 0.325   | 0.313           | 0.038  | **  |                 |        |     |
| Disability trajectories                                      |         |                 |        |     |                 |        |     |
| Non-disabled $\rightarrow$ Non-disabled ( <i>reference</i> ) | 0.569   |                 |        |     |                 |        |     |
| Non-disabled $\rightarrow$ Disabled                          | 0.115   |                 |        |     | 0.309           | 0.035  | *   |
| Disabled $\rightarrow$ Non-disabled                          | 0.106   |                 |        |     | 0.219           | 0.025  |     |
| Disabled $\rightarrow$ Disabled                              | 0.210   |                 |        |     | 0.377           | 0.043  | *** |
| Female   | 0.336   | 0.565           | 0.068  | *** | 0.561           | 0.064  | *** |
| Citizenship  | 0.953   | -0.093          | -0.011 |     | -0.105          | -0.012 |     |
| Age  |         |                 |        |     |                 |        |     |
| 50-54 (reference)  | 0.318   |                 |        |     |                 |        |     |
| 55-59  | 0.307   | 0.424           | 0.051  | *** | 0.432           | 0.050  | *** |
| 60-64  | 0.204   | 0.886           | 0.107  | *** | 0.885           | 0.101  | *** |
| 64 +   | 0.171   | 1.350           | 0.163  | *** | 1.342           | 0.154  | *** |
| Years of education   | 11.349  | -0.017          | -0.002 |     | -0.016          | -0.002 |     |
| Presence of children aged 0-5                                | 0.008   | 0.348           | 0.042  |     | 0.266           | 0.031  |     |
| Presence of children aged 6-12                               | 0.033   | -0.437          | -0.053 |     | -0.457          | -0.052 |     |
| Number of children   | 0.736   | 0.021           | 0.003  |     | 0.023           | 0.003  |     |
| Partner's labour status                                      |         |                 |        |     |                 |        |     |
| Living without partner (reference)                           | 0.194   |                 |        |     |                 |        |     |
| Working part-time  | 0.063   | -0.022          | -0.003 |     | -0.026          | -0.003 |     |
| Working full-time  | 0.239   | 0.047           | 0.006  |     | 0.058           | 0.007  |     |
| Not working  | 0.253   | 0.073           | 0.009  |     | 0.071           | 0.008  |     |
| Missing information  | 0.251   | -0.032          | -0.004 |     | -0.029          | -0.003 |     |
| Total household gross income /1000                           | 64.146  | -0.003          | 0.000  | *** | -0.003          | 0.000  | *** |
| Tenure   | 23.753  | -0.028          | -0.003 | *** | -0.028          | -0.003 | *** |
| Tenure <sup>2</sup>  | 732.560 | 0.001           | 0.000  | *** | 0.001           | 0.000  | *** |
| Pension claims   | 0.631   | -0.171          | -0.021 |     | -0.172          | -0.020 |     |
| Other jobs   | 0.091   | -0.299          | -0.036 |     | -0.293          | -0.034 |     |
| Constant   |         | -1.361          |        | *** | -1.397          |        | *** |
| Baseline probability   |         |                 | 0.061  |     |                 | 0.057  |     |
| Chi 2  |         |                 | 223.27 |     |                 | 232.73 |     |
| Pseudo R2  |         |                 | 0.257  |     |                 | 0.259  |     |
| Number of observations                                       |         |                 | 1,063  |     |                 | 1,063  |     |

Note: : Sample consists of individuals aged 50 or over working part-time in 2004. \*, \*\*, \*\*\* imply significance at the 10%, 5% and 1% levels, respectively. The standard errors are robust. All regressions include occupation, industry and country dummies Source: Author's calculations using SHARE (2004 and 2007).