Essays in Labour and Family Economics

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To both my parents and my grandma Teresina

To my cousin Zizzi, who is now in another world

Abstract

Are the less healthy relatively less employed because they are unable to work? Or vice versa? In the first part of the thesis, I evaluate the impact of health shocks on individual labour market transitions in 27 EU countries and I explain these results through the heterogeneity in social security systems across members. In the second part, I investigate the mechanism through which tied transfers relate to both elderly and grandchildren care later on in life.

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Summary

There is relatively abundant and mixed evidence on the relationship between socioeconomic conditions and general health since the pioneering work by Grossman (1972) who defines the theoretical framework for the topic. His approach to the demand for health has been labeled as the human capital model in much of the literature on health economics because it draws heavily on human capital theory (Becker, 1964). His model has several characteristics: first, the stock of health today depends on past investments in health and on the rate of depreciation of health capital - it is similar to human capital in the traditional models. Second, health is valued by consumers and finally non-market time is an input into both health production and the production of other valued non-market goods (e.g., leisure activities). From an empirical point of view, the main implication of the model is that health must be treated as an endogenous choice (Currie and Madrian, 1999). Are the less healthy relatively less employed because they are unable to work? Or vice versa? It is plain to see that, depending on which causal pathway is at work, policies are quite different. In the first case, measures aimed at increasing the supply of labour of the relatively unhealthy, be it through reducing the direct costs of working or (with the necessary caveats) the opportunity costs in terms of foregone benefits, might be considered. In the second case, there is a relevant need for measures that focus on access to health care and the promotion of healthy lifestyles among particular groups in the population.

In the second part of the thesis, I investigate the relevance and the rationale behind intra-family exchanges. Becker (1991) was the first who investigates and models the increase and decrease of wealth from one generation to another. Foremost among these models are the altruistic model and the exchange model, with less well-known theories of paternalism, warmglow and evolutionary motivation recently gathering additional attention. Starting from Becker (1991)'s pioneering work, economists have increasingly

come to the conclusion that intervivos transfers are, to a considerable extent, motivated by altruistic concerns of parents with regard to their children. Understanding the intergenerational transmission mechanism, surely demonstrates the relevance of the family in the functioning of modern societies, despite the many transformations shaping this social unit. Several authors have recognized the role of the family as an insurance mechanism against different risks or misadventures (Altonji et al., 1997).

The structure of the thesis is as follows. The objective of the first chapter is to provide a systematic literature review on both areas of my empirical research. The chapter itself is divided in two sub-sections: first I discuss the existing evidence on the impact of health shocks on labour market transition in different countries. I consider a range of evidence which provides a comprehensive overview of the significant negative effects disability has on employment status. Importantly, this part shows specific features of the disabled group which I also analyse in the second paper. Then, I illustrate the recent evidence relating to significant changes in legislation affecting the disabled, such as the introduction of the Americans with Disabilities Act in the US, the Disability Discrimination Act in the UK and across Europe. The second part of the survey focuses on informal care and intergenerational transfers between generations. I discuss the most relevant papers on the economic motives behind unpaid assistance to aging parents and grandchildren. I further discuss the empirical results which per se might help the policy maker to design new interventions. In fact, these exchanges involve two of the most important forms of support between members of the extended family network: monetary transfer, elderly and grandchildren care.

In detail, in chapter 2, I investigate the relationship between an adverse health shock, measured by the limitation in performing daily activities, and labour market transitions in 27 European countries. Matching techniques are implemented in order to control for the non-experimental nature of the data (European Union Statistics on Income and Living Conditions). The empirical analysis reveals a significant causal effect of the health shock on the likelihood of leaving full-time employment. Individuals who incur an adverse health shock are significantly more likely to transit either into part-time, unemployment or inactive status. Nevertheless, the alternative routes out of the full-time status differ across countries depending on the country-specific social security system. The largest effect is found in Romania and Ireland, ranging from 23%

to 21%, respectively. This is close to zero in Bulgaria and Austria. I argue that these discrepancies are explained through the heterogeneity in social security systems across Europe. Individuals living in countries characterised by higher work incentives, within the integration disability policy, are less likely to drop out from full-time employment after the health shock occurs.

Finally, in chapter 3, I contribute to the debate about the economic rationale behind unpaid assistance to ageing parents and grandchildren. Using Italian data, I show a positive correlation between downstream intergenerational transfers and intra family informal care. I analyse the effect of tied transfer on both elderly care and grandchildren care. On the one hand, married couples who receive a transfer from their parents during severe economic hardship are more likely to reward them with elderly care later in life. On the other hand, I observe a strong correlation between tied transfer and grandchildren care as well, which seems to be driven by pure altruism. The results suggest not only the reciprocity between parents and adult children in terms of exchange - the money transfer for future elderly care - but also a higher likelihood of receiving grandchildren care. Furthermore, I investigate whether this correlation is entirely due to a smaller geographical distance between generations. Interestingly, this can be only partially explained by the increased geographical proximity between the families. Taking advantage of a rich set of information on family background and network, unobserved heterogeneity due to family taste is dealt with by using information on parents' and in-laws occupations. I implement an IV approach where I exploit the variability in the job occupations of parents and in-laws when their (adult) children were 14 years old in order to assess the endogeneity issue.

Chapter 1

Literature review

1.1 A brief introduction to the literature

In the following Sections I give an overview of the literature on two fundamental branches of the applied micro economics which are analysed in the next two chapters. First, I focus on the labour market responses to the worsening of health condition at individual level across Europe. Second, I investigate the motive behind the financial transfers from parents to adult children and future exchange of informal care between families.

With respect to the first topic, as a result of theoretical predictions starting from Grossman (1972), acute health shocks may decrease the labour supply by rising the disutility of being employed and reducing the ability to perform well on the job. Conversely, health shocks rise the financial needs - for instance, through increased medical cost - and thus may increase desired labour supply. For example, among those aged 51 to 64, medical conditions increase health spending and reduce non-health spending of individuals with low income (Butrica et al., 2009). Thus the effects of health on labour force participation are (theoretically) ambiguous and the empirical evidence on the net effect of an acute health shock on labour supply is mixed as well. It seems there is still a need for a better understanding, especially in relation to country-specific social security systems. This heterogeneity across EU countries may cause differences in the labour supply responses depending, for instance, on better health insurance. Then, if access to health insurance depends on employment, workers have a greater incentive to continue working in order to keep their health insurance (Datta et al., 2011).

Concerning the second topic of this study, I start discussing the economic theory

which develops various models on intervivos transfers motives between families. The first is the altruistic model in which donors transfer resources to their children in exchange of the provision of some (costly) action from the recipient, also called "services" - future informal care. Under the altruistic model, donors provide transfers to equalize the marginal utility of own consumption to that of the recipient of help. In that case, private help may be displaced by public support. Conversely, if private transfers are meant to compensate services received, those may in some cases reinforce the redistribution made by the government.

The following Sections will clarify the related literature on the health status and labour market partecipation and intergenerational transfers, respectively. First, I discuss the definition of disability, the transitions from employment to all the other statues then I focus on the exchange of elderly and grandchildren care once the individuals have received a financial help from parents or in-laws.

1.2 Literature on health shocks and labour market conditions

This survey shows the existing evidence related to the impact of health status on labour market outcomes and it considers a range of international papers which reveal the effect of suffering from a health shock on the labour market transitions: from employment to unemployment/inactive and the impact on the earnings. Moreover, this review describes the different econometric techniques that have been used to solve or attenuate the endogeneity issue: selection bias, omitted variables, measurement of disability. In particular, the latter problem yields different estimates depending on the definition of disability itself (Bound, 1991). As defined by Wolfe (1984), disability is a restriction or inability rather than a demographic characteristic and there is not a single, consistently used, definition or method for classifying the disabled, which may cause a further increase in the bias.

In his pioneering work on human capital, Becker (1964) drew an analogy between "investment" in health capital and investment in other forms of human capital. Then, Grossman (1972) extends the theory of human capital to the demand for health and medical care over the life-cycle. The model has several characteristics: (i) the stock of

health today depends on past investments in health, and on the rate of depreciation of health capital - it is similar to general human capital in the traditional models.[1] (ii) Health is valued by consumers both for its own sake and because being sick is assumed to take time away from market and non-market activities. (iii) Non-market time is an input into both health production and the production of other valued non-market goods (e.g., leisure activities). This model can be solved to yield a conditional labour supply function in which labour supply depends on the endogenous health variable. Grossman (1972)'s model provides the foundations to a large body of empirical research where health is treated as an endogenous choice (Currie and Madrian, 1999).

This complex endogeneity issue may cause the observed mixed empirical evidence. Nevertheless, in theory, if labour market policies aimed at people with disabilities were effective, economists should have observed no significant discrepancies in labour market outcomes between disabled and non-disabled individuals (Lechner and Vazquez-Alvarez, 2011). In the data, generally, social scientists observe dramatic differences in labour market status between individuals with and without disability. In the late 2000s, just before the onset of the recent economic downturn, disabled employment rate was marginally over a half, while their unemployment rate was doubled with respect to the OECD average for people without disability (OECD, 2010).

According to Lechner and Vazquez-Alvarez (2011), in addition to this controversial situation, the size of the disabled group has grown and their labour market outcomes have deteriorated over the past twenty years.[2] Their low rates of participation raise concerns about the presence of employer discrimination and social exclusion of the disabled and the implications of high rates of social security benefit claimants on public spending (Burchardt, 2003).

As a result, this issue has received growing attention from policy makers. In fact, a range of legislative and other reforms aimed at securing an improvement in the labour market position of the disabled have been introduced in all OECD countries. Significant legislative changes around the world have been implemented in order to enhance

[1] One of the main differences between health and other forms of human capital is that health capital is often subject to large negative shocks. If variation in current health is dominated by shocks, then uncertainty about the return to investments in health will be very important, and insurance should play a large role in mediating the relationship between health and the labour market (Currie and Madrian, 1999).

[2] See, for instance, Bound and Burkhauser (1999) for the US case and Bell and Smith (2004) for the UK one.

the access of disabled people to employment. Most industrialized countries recognize, *defacto*, the need for effective policies and practices in support of workers who suffer from long-term illness and/or disability but, most of the time, they are not completely well functioning (OECD, 2010).

For example, in the USA, the Americans with Disabilities Act (ADA) requires employers to accommodate disabled workers and outlaws discrimination against the disabled in hiring, firing, and pay. Acemoglu and Angrist (2001) show, both empirically and theoretically, that the ADA had a negative effect on the employment of disabled men of all working ages and disabled women under age 40. The effects appear to be larger in medium-size firms, possibly because small firms were exempt from the ADA. Furthermore, they also demonstrate that the negative effects of the ADA have been larger in states where there have been more ADA-related discrimination charges. DeLeire (2001) using the Survey of Income and Program Participation show a substantial wage and earnings gaps between people with and without disabilities, and only a small fraction of this difference is due to discrimination. In particular, the author estimates that, in 1984, only 3.7 percentage points of the earnings gap is caused by discrimination. Although in the USA discrimination did not change over the 1984 to 1993 period, the negative effects of poor health on the earnings of people with disabilities fell substantially.

The UK government passed the Discrimination Disability Act (November 1995) with provisions relating to employment to come into effect at the end of 1996. The Act defines a disability as a physical or mental impairment, which has a substantial and long term (greater than 12 months) adverse effect on the ability to carry out day-to-day activities. Kidd et al. (2000), using for the first time Labour Force Survey data, confirm the presence of substantial wage and participation rate differences between people with and without disability in the UK. Using the decomposition methods, they show that the differences in productivity-related characteristics between groups explain around 50% of both the wage and participation rate differential between the disabled and not. The unexplained components may in part be addressed by the implementation of the 1995 Disability Act. This is the first attempt to explain how the legislation can lead towards wage convergence between the two groups. Nevertheless, in the UK the current employment rate is just 32.8% for the disabled, compared to a rate of 80.3% for their counterparts.

In recent years, Germany reformed their welfare and labour market structure based on the idea of improving employment services, making greater demand on individuals to actively participate and speeding up the reintegration process. These reforms were implemented until 2005, the so-called Hartz IV.[3] The Hartz IV reform constitutes a remarkable change in the German welfare policy. For the first time welfare recipients are a target group of labour market activation. Before 2005, almost no effort was made to reintegrate those people into the labour market. Thus, there is neither experience nor any evidence on the effectiveness and efficiency of welfare-to-work programmes prior to the reform. Around 11% of the active German population are classified with some degree of disability that may range from 1% to 100%; approximately 5% of all disabilities are a consequence of occupational injury (Lechner and Vazquez-Alvarez, 2011). Despite these very costly policies, which attempt to increase the employment chances of the disabled, the available statistical evidence points to the fact that an onset of disability leads to an increase in the risk of unemployment and to reduced earnings and labour market participation (Lechner and Vazquez-Alvarez, 2011, p. 389). Garcia-Gomez (2011) was the first author who made an attempt to explain the possible consequence of a health shock comparing various institutional settings across Europe. She studies the effect of health shock on the probability of employment. Her evidence suggests that individuals who incur a health shock are significantly more likely to leave employment and this effect differs according to the differences in social security arrangements across countries.

The rest of the chapther is organized as follows. Section 1.2.1 focuses on the measurement error in the disability context. Section 1.2.2 reports the impact of disability on employment and wages. In Section 1.3 I introduce the other topic which is about the monetary transfer and intergenerational exchanges. The following Section defines the different motives behind a monetary transfer, while in Section 1.3.2 I discuss the relevant aspects of intergenerational transfers between families.

1.2.1 The measurement of disability

There are two main ways to determine the existence of a disability from survey data. Generally, the disability measure is self-assessed in data sources such as Labour Force Survey (LFS), National Health Interview Survey (NHIS), Current Population Survey

[3]Hartz is the set of proposals which has been adoped in order to reform the labour market in Germany. Jacobi and Kluve (2006) provide an excellent survey of the reform package.

(CPS), Survey of Income and Program Participation (SIPP) and European Union Statistics on Income and Living Conditions (EU-SILC), where an individual assesses their own condition which is correlated to their capacity to undertake "normal" work (Jones, 2008). Survey questions typically take the form: *Do you have a health condition that limits the kind or amount of work you can perform?*.[4] As pointed out by Banks et al. (2004), the exact wording of question strongly affects the number of people defined as disabled, while the positive aspect of such question is that they provide direct information on work ability.[5] Nevertheless, determining whether people suffer from a health shock is often not objective and it also depends on social and economic incentives to misreport the status, for instance, to claim disability benefits. Then, health status becomes endogenous in a regression analysis when the employment status determines a misreported level of disability. This is called "justification bias", namely the situation in which disability becomes a justification for choosing unemployment or inactivity status in the questionnaires. Several papers analyse this controversial aspect and most of them focus on the US economy (Bound, 1991; Currie and Madrian, 1999). Conversely, it may happen to face a situation in which the individuals have a rational incentive to underestimate their health shock to avoid, for example, stigmatisation (Bound, 1989). The author constructs a natural 'control' group for beneficiaries using the applicants for Social Security Disability Benefits who fail to pass the medical screening. Data drawn from the 1972 and 1978 surveys of the disabled done for the Social Security Administration show that fewer than 50% of rejected male applicants work. Typical earnings of those that do are less than 50% of the median earnings of other men their age. These data cast doubt on recent econometric work which suggests that the disincentive effects of disability insurance have been substantial.

In addition to the potential justification bias, self-reported health measures are also subject to measurement error. Recently, Hancock et al. (2014, 2013) explain the con-

[4]In the second chapter I explain the measure implemented in the analysis and how it is related to this one. The International Classification of Impairments, Disabilities and Handicaps provides for definitions for each of these concepts. An impairment is any temporary or permanent loss or abnormality of a body structure or function, whether physiological or psychological; an impairment is, then, a disturbance affecting functions that are essentially mental (memory, consciousness) or sensory, internal organs (heart, kidney), the head, the trunk or the limbs. A Disability is a restriction or inability to perform an activity in the manner or within the range considered normal for a human being, mostly resulting from impairment. A Handicap is the result of an impairment or disability that limits or prevents the fulfilment of one or several roles regarded as normal, depending on age, sex and social and cultural factors (Jones, 2008).

[5]See for example Kidd et al. (2000) and Acemoglu and Angrist (2001).

cerns about the quality of subjective assessments and the possible failure in addressing causality. The health measure they consider is closely related to the one I adopt in my second chapter. Furthermore, a certain medical condition may be interpreted as work-limiting by one individual, but not by another, making self-reported disability non-comparable across individuals or across countries (Campolieti, 2002). Nonetheless, other factors such as the individual's own employment opportunities, the accessibility to the workplace, the technological advances and the changes in the nature of employment may influence the relationship between health and labour market partecipation. Banks et al. (2004) examine the differences in the rates of self-reported disability across countries (the US, the UK and the Netherlands) and across different labour market statues. They find that the wording of the questions leads to contrasting market partecipation rates for disabled. Results suggest that more than a half of the gap between the rates of self-reported work disability in the US and the Netherlands can be explained by differences in how the question has been constructed. Using the harmonized EU-SILC survey (in my second chapter) allows me to limit, or at least mitigate, this concern due to the fact that the questionnaires are directly comparable across EU countries.

Recently, some authors instrument the self-assessed disability status with other objective health related measures. For instance, Han et al. (2005) control for labour market participation alongside detailed health variables and individual covariates to, possibly, directly measure the justification bias. Kreider and Pepper (2007) tackle the endogeneity issue non-parametrically, but rather than imposing strong assumptions to obtain correct point identification, they derive different sets of bounds. These formalize the identifying power of primitive non-parametric assumptions, which appear to share broad consensus in the literature. To sum up, their findings corroborate the hypothesis that non-workers appear to systematically over-report disability, under relatively weak non-parametric assumptions.[6] Differently, others studies do not find any evidence of health misreporting caused by labour market status. Stern (1989) estimates the effect of disability on labour force participation by using symptoms or diseases as instruments in a simultaneous equations model of endogenous reported disability and labour force participation. The results show that each measure of disability explains a significant amount of variation in labour force participation, though the two are not perfect sub-

[6]Other recent examples of instrumental approach are Campolieti et al. (2010); Disney et al. (2006); Lindeboom et al. (2006); Hallan and Zweimullera (2013) and, Dwyer and Mitchell (1999).

stitutes. There is only weak evidence of endogeneity of the disability variables. In the discussion on whether individuals tend to exaggerate the severity of their health problems in order to rationalize their decisions regarding labour force participation and application for disability benefits, Benitez-Silva et al. (2004) are unable to reject the hypothesis that self-reported disability is an unbiased indicator of the Social Security decisions. In addition to this, some authors find that reporting errors vary between types of disability. Baker et al. (2004), using a unique data set that matches a variety of self-reports of health with respondents' medical records, find that these measures are subject to considerable response error resulting in large attenuation biases when they are used as explanatory variables.

1.2.2 The impact of disability on employment and wages

Apart from the measurement problem which may cause a bias in the estimates of the disability status, the difference in labour market participation between the two groups, disabled and not, is dramatically wide and persistently increasing. In many studies, the probability of being employed has been modelled using a probit as part of a Heckman (1976) correction for sample selection on wages (see Baldwin and Johnson (1994, 2000); Kidd et al. (2000) for the US and the UK, respectively) or in an analysis of the effects of health conditions on the labour supply of older workers (Disney et al., 2006).

Baldwin and Johnson (1994) estimate the degree of labour market discrimination against disabled men. Men with disabilities are classified either into a group of individuals with impairments that are subject to prejudice (handicapped) or into one where they are less subject to prejudice (disabled). They find that the employment rates and hourly wages of disabled men are (i) slightly lower than those of non-disabled but (ii) substantially higher than those of handicapped. Moreover, they find that wage differentials between non-disabled and both disabled and handicapped men increased between 1972 and 1984, while it is not the case for the employment rate. Using the same approach, Kidd et al. (2000) find substantial differences in wage and participation rates between able-bodied and disabled men in the United Kingdom, which have implications for the operation of the 1995 Disability Discrimination Act.

Other papers principally focus on whether an individual who suffers from a health shock undertakes different types of employment with respect to non-disabled. US evi-

dence highlights the fact that disabled workers are concentrated in non-standard forms of contracts, such as part-time and temporary jobs. In this stream, Hotchkiss (2004) use data from the Current Population Survey to examine how the incidence and nature of part-time jobs among workers with disabilities have changed over time compared with the experiences of non-disabled workers. She finds that disabled workers are not being marginalized and they consider part-time employment more attractive. According to the author one possible explanation is that employers are increasingly accommodating the needs of disabled workers, offering them part-time jobs that would be available only on a full-time basis to non-disabled workers. A second, more likely, explanation is that policy changes and more generous Social Security Disability Insurance benefits have made part-time employment more financially attractive to disabled workers. Hence, the important question is still whether this is driven by a voluntary choice or not. Controlling for a rich set of observable characteristics, Schur (2003) finds that health problems make traditional full-time jobs difficult or impossible for many people with disabilities. Despite the lower pay and other drawbacks of many non-standard jobs, they still allow many people with disabilities, who would not otherwise be employed, to work.

When ill health or a disability reduce the individual's productivity at work, they directly impact earnings, though this will vary depending on the requirements of the occupation and the severity of the disability. Nevertheless, this reduced capacity to work may also change an individual's preferences away from consumption towards leisure. In addition, "non-work income" that a person can obtain may increase with the onset of disability, which will similarly increase the reservation wage and reduce the probability of employment. Independently from this, the empirical evidence suggests that disabled workers earn significantly less than non-disabled, even after controlling for differences in human capital, job-related characteristics and other socio-economic conditions (Acemoglu and Angrist, 2001).[7]

DeLeire (2001) splits the population into three groups: (i) the self-reported work limited disabled, (ii) the disabled who class their disability as non-work limiting and (iii) the non-disabled. The author assumes that the disabled who have a non-work limiting disability have same productivity to the non-disabled and, therefore, any unexplained

[7]Using the Current Population Survey Acemoglu and Angrist (2001) analyse the impact of the Americans With Disabilities Act (ADA). Their findings corroborate the idea that the disability policy in the USA had, generally, a negative effect on the wages of disabled. In the medium firm and in the states more ADA-related, the effects appear larger.

gap in wages between these two groups of workers is solely due to discrimination. The unexplained gap between the work limited disabled and the non-disabled is a combination of discrimination and productivity differences. The results indicate that 3.7 percentage points of the earnings gap is due to discrimination. Jones et al. (2006) apply the method of Deleire (2001) to UK LFS data in the period following the DDA. They find substantial differences in employment incidence and earnings which continue to exist, especially for those with mental health problems. DeLeire (2001) is able to separate the effects of disability and of discrimination and his results show limited evidence of wage discrimination against the disabled. For women the "penalty" for work-limiting disability has increased more than for men. Finally, the author observes large raw earnings differences between the disabled groups, indicating the importance of the unobserved heterogeneous productivity effects.

Less attention has been paid to the problem of selection bias that can arise as a result of the non-random assignment of individuals into disability status. Using UK data, Madden (2004) controls for both selection into health and employment status. However, controlling for the endogeneity of health status does not significantly change the estimated impact of disability on participation or earnings in his paper, in fact the selection into health status is found to be of little empirical importance. Lechner and Vazquez-Alvarez (2011) use matching techniques and data from the German Socio-Economic Panel (1984-2001) to overcome the same problem. Despite the difference in methodology they identify a significant negative impact of disability, including an employment differential of nearly 10% and an earnings differential of 16%. In the longer term, their results suggest that training seems to increase employment rates by 10-20 percentage points. For most programs the longer-term positive effects seem to be sustainable over the eight-year observation period.

A closely related study with respect to mine is Garcia-Gomez (2011), who investigates the relationship between health shocks and labour market outcomes in 9 European countries using the European Community Household Panel. Also in this paper some matching techniques are implemented to control for the non-experimental nature of the data. The results suggest that there is a significant causal effect from health shocks on the probability of employment and the heterogenous evidence relates to the differences in social security arrangements across countries.

In the attempt to disentangle the different effects between health status and labour market outcome, it is worth to mention Jenkins and Rigg (2003)'s work. Using UK data from the British Household Panel Survey (BHPS), they split the effect of disability into three stages: (i) a selection effect, (ii) the effect of a disability onset, and (iii) the effect of a disability post onset. Their evidence stresses the point that individuals who experienced a disability onset were typically more disadvantaged prior to becoming disabled, which is consistent with self-reporting bias issue. They find lower incomes, lower employment rates for disabled and finally they shed light on the fact that the probability of being in employment declines with the duration of disability. The general evidence suggests that worsening health conditions might cause lower labour market partecipation but there are many counfonding factors which may influence this relationship and, among the most relevant, is the specific social security system.

1.3 Literature on transfer and exchange between generations

Economists have long been fascinated by intra-family exchanges and there are numerous theoretical models to guide the thinking on the subject. Some of them develop the idea that the main motive for this relationship is altruism.[8] Others implement the exchange motive while less well-known theories concern paternalism, warmglow and evolutionary motivations which have recently gathered additional attention. Since Becker (1991)'s work, economists have increasingly come to the conclusion that intervivos transfers are to a considerable extent motivated by altruistic concerns of parents with regard to their children. Nevertheless, the empirical results are mixed.

The study of private intergenerational transfers surely demonstrates the importance of the family in the functioning of modern societies, despite the many transformations shaping this social unit. Several authors have recognized the role of the family as an insurance mechanism against different risks or misadventures (Altonji et al., 1997). This hypothesis gains strength given that the percentage of people aged 29-54 at risk of poverty or social exclusion increased from 22.4% in 2008 to 24% in 2011, whereas it decreased from 23.3% to 20% for the cohort of those aged 65 and over. Better knowledge

[8]Kathleen (2013) is a valuable example of family transfers both from the theoretical and empirical point of view.

of the criteria used by families, and especially parents, to provide financial support for their adult children would improve the ability of decision makers to design effective social programs that may improve the quality of life of more vulnerable individuals.

In an evolving context of increasing presence of women in the labour market, people working until later in life, a low number of children per woman and budgetary pressures jeopardising the sustainability of the welfare state, it is relevant to understand what to expect from the family as a provider of support. Intergenerational transfer is the mechanism deployed by families to help generations deal with crises, transitions and even long lasting needs. Thus, they function as a safety net (Albuquerque, 2014).

This Section revisits the literature on the on-going relationship between the different kind of private transfers. Intervivos transfers appear more interesting than other forms of transfer (e.g. bequest) for two main reasons: (i) they reach their recipients earlier in life when needs are more acute, for example in terms of starting a family or in case of particular critical moment in life: divorce or entry to unemployment; (ii) they are part of complex family network which includes other dimensions of solidarity and exchange such as informal care.

In the following Sections I discuss the main motives for intervivos transfers: altruism towards children, and (inter-temporal) self-interested exchange between parents and children. Finally, I review the most relevant papers in the literature.

1.3.1 The transfer motives

The intergenerational transfer literature mainly distinguishes between bequest and intervivos transfer (McGarry, 1999). In this analysis I principally focus on intervivos transfers because it directly relates to my third chapter. The motive behind this kind of transfers are: "accidental", "voluntary", and "capitalist". The first type occurs when the transfer is made as a consequence of precautionary savings and deferred consumption. The second case involves a range of motives, from "pure altruism" behaviour to self-interested strategic "exchange" (Becker, 1991). The altruism theory assumes affection, a moral duty or obligation as the basis for providing help in situations of need; conversely, the exchange theory posits that one gives to others because she expects them to give in return; when the exchange expectations are in effect, it follows that the more resources the elderly have, the more they can receive in return.

By positing an indirect exchange motive, Stark (1991) provides a sort of bridge between the economic literature on altruism and exchange through the so called "demonstration effect". The basic idea behind this behaviour is to identify a mechanism by which children get accustomed to accept a general normative pattern of obligation to help their elderly. Stark (1991) finds that adults who have young children are likely to visit or call their aged parents ten times more than the adults who are childless. The interpretation is that the middle generation treats their elderly parents well in order to demonstrate to their children how they would like to be treated when they are aged. The author assumes stronger demonstration effects from visits, telephone calls, and the provision of everyday services than from the giving of money because the children can see and understand what is happening. Thus, the demonstration theory proposes an extension of the exchange motive in the direction of "indirect reciprocity", i.e. you give to a person other than the one from whom you expect the benefit of the exchange.

Finally, "capitalist" bequests (or intervivos transfers) are directed to accumulation for its own sake to either create or preserve the wealth beyond one's own personal existence (Masson and Pestieau, 1996). As I said before, I focus on the importance of intervivos transfers relative to bequests. For instance, Cox (1987) and Cox and Raines (1985) claim that an enlarged conception of intervivos transfers, including in kind or in cash transfers received by any "adult" child even in the same household, make them more important than inheritance (in the ratio of 3 to 2). Even more interestingly, the US inter-household transfers are worth more than 3,000 dollars and in general intervivos transfers account for at least 20% of US wealth (Gale and Scholz, 1994).

Hence, the literature recently establishes a shift of interest from bequests to intervivos transfers. It is relevant to provide a general sense of some conceptual pitfalls before focusing on the case of parent-to-child financial transfers, which has the most important implications. Three are the main questions to address: (i) *to whom*, (ii) *what*, and (iii) *when* the transfer has been done.

- To whom? Intergenerational transfers may go downwards, from parents to children, or upwards, from children to parents. They may also skip a generation, and occur between grandparents and grandchildren in both directions.

- What? Intervivos transfers may consist of monetary or time transfers. Financial

transfers, especially those from parents to children, cover a large range of transactions. They may take the form of gifts of various assets, cash transfers made once or regularly. But they also include in kind transfers, such as the payment of a rent, free disposal of a home, college fees, loans, co-signature for home mortgage, which may not have an obvious equivalent cash value. Time transfers concern *a priori* any non-financial help or service, including co-residence.

- When? This is the most neglected question on which reserchers pose their focus (Arrondel and Masson, 2006).

1.3.2 Intergenerational transfers: theory and empirical results

Starting from the microeconomic models of family discussed by Becker (1974) and Barro (1974), the overall picture is that the donors are, generally, altruistically motivated. Nevertheless, several other motivations for intergenerational transfers have, since then, been posited: exchange, reciprocity and demonstration. Transfers may directly enter in the utility function of the receiver and of the donor or they may also enter the utility function through the utility of the counterpart (in altruism), and they also may be a factor in budget constraints and/or in time constraints.

A relevant survey, written by Laferrere and Wolff (2006), describes different ways to model private transfers. First, the authors consider the case of pure altruism model in which the utility of the parent is augmented by the utility of his children and that may induce the parents-to-child transfers. A crucial implication of this model is the strong property of "redistributive neutrality": due to the fact that the two generations basically pool their income, any kind of government transfer to one of them will be undone by the other adjusting her transfer. Second, this class of models have been modified considering the "impure" version of altruism. In this scenario, exchange and strategic considerations matter. Third, in a non-altruistic framework with imperfect credit market, transfers to children and to old parents correspond to a reciprocity contract and they are an investment for old age. Moreover, for much of what is exchanged within families there exists no market substitute, therefore family transfers appear to possibly condition intra- and inter-generational inequality, hence the importance to assess their motivation.

Across Europe, intervivos transfers from parents to children are a common pattern, although the exact extent is notoriously difficult to estimate (Albertini et al., 2007).

As expected, the authors find a net downward flow from the older to the younger generations, both by intervivos financial transfers and by social support. Conversely, transfers from children to parents are less frequent and less intense than vice versa. In addition, they provide a clear evidence on the fact that country-specific transfer patterns follow the typology of welfare regimes and the welfare regime effect holds after controlling for the most relevant characteristics of the parents. For instance, in the Nordic European countries the monetary parents-to-children transfers are more usual but less intense than in the Southern ones, while the Continental European countries somehow lie in between the two regimes.

As pointed out by Gale and Scholz (1994), intervivos transfers are estimated to be around one third of all the intergenerational transfers, which means hundreds of billions of dollars per year. Altonji et al. (1997) uses Panel Study of Income Dynamics data on the extended family to test whether intervivos transfers from parents to children are motivated by altruism. In their contribution they find that 20% of the children receive around 100 USD (the mean corresponds to slightly less than 300 USD) yearly. Finally, the authors focus on whether an increase by a dollar in the income of the parents (the donor) and a reduction in child's income (the usual recipient) results in a one-dollar increase in the parents' transfer to the child. Surprisingly, they find that the redistributing effect leads to a 13% increase in the transfers, that is far less than the one-dollar increase implied by altruism. McGarry (1999) presents a new framework for analysing transfers from parents to children that is more consistent with observed behaviour than the altruistic and exchange models alone. The model explains the differences in behaviour induced by intervivos transfers and bequests, which depend on liquidity constraints and uncertainty about the permanent income of the recipient. Using a nationally representative sample of the elderly, the author finds that intervivos transfers (in 25% of families) go disproportionately to less well-off children, while bequests are divided equally across children. Over 60 per cent of parents who made intervivos transfers do so unequally, meaning that at least one child received money and at least one did not. These estimates are conservative in the sense that the author counted a transfer as equal when all children received some kind of transfer, regardless of its actual amount.

Henretta et al. (1997) use the Asset and Health Dynamics among the Oldest Old (AHEAD) dataset to investigate whether people who received a transfer will be more

prone to provide informal care in the future - basically the opposite relationship described by all the other papers. The authors find a positive and significant relationship between past transfers and current care-giving using a model with fixed effect. According to their results, informal care is one of the easiest way to exchange for elderly parents, in fact the most relevant source of care-giving, besides the spouses, are children. Who provides more care? Surely the children with specific characteristics such as lower opportunity costs, unemployed, caring for other people or living in proximity; all these features may increase the likelihood of being a care provider. On top of this, females typically provide more care than men.

Adult children's provision of in-kind services to their parents, namely elderly care, represents an important form of economic transfers to them (Pezzin and Schone, 1999). Focusing on adult daughters, the authors jointly estimate a model of labour market participation and informal care decisions and their evidence suggests that competing demands on daughters' time reduce both co-residence and informal care-giving. Duration of care-giving can also vary greatly, from several months following, e.g, a hip fracture or other health shocks, to many years. Parents rarely pay children directly for their assistance. Nevertheless, financial or non-financial transfers depend on the care provided. The former include stocks, other assets, or cash transfers. Moreover, as known in the literature (Bernheim et al., 2004; Poterba, 2001), intervivos transfers have often tax advantages with respect to bequests and for this reason they are preferred to the second ones. The latter are more difficult to measure but could include transfers of belongings such as furniture, cars, or even the title to one's house.

Understanding the reason why an individual decides to transfer resources to someone else within the family is of great relevance in view of the direct potential effects on inequality and in relation to public transfers. On the one hand, it is important to identify whether they crowd-out, crowd-in or have no effect on private transfers and the link between the services and credit provided by the family and those provided by the market. On the other hand, helping is a form of insurance to be helped in return if and when needed (Wolff, 2006).

It is of great interest to know how private, market and public transfers between generations are connected, in particular nowadays, as the retirement system is facing the demographic pressure of the baby-boomers caused by the rising of life expectancy and

the fall of fertility rates. The scenario is getting worse especially during this persistent economic downturn which may cause an increase in cost for the families.

Chapter 2

Health Shocks and Labour Market Transitions across Europe

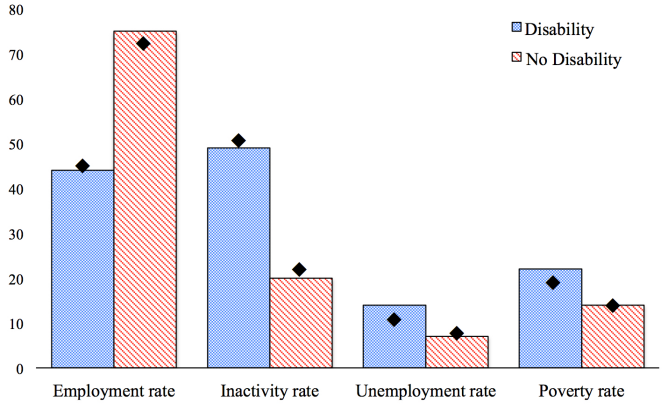
2.1 Introduction

Too many workers leave the labour market permanently due to health problems or disability, and too few people with reduced work capacity manage to remain in employment. This is a social and economic tragedy that is common to virtually all OECD countries (OECD, 2010). It is essential to social inclusion and integration that people with health problems find a job, nevertheless their occupation opportunities are restricted. The literature, which mainly focuses on individual countries, still provide evidence of dramatic differences in labour market outcomes on the basis of disability (Acemoglu and Angrist (2001) and DeLeire (2001) for the US and Kidd et al. (2000) for the UK).

As it is shown in Figure 2.1, people with disability register lower employment rate and, simultaneously, higher inactivity rate than non-disabled ones. Then, it seems that people who suffer from health related problems remain cornered in the "inactivity" trap which reflects the scarce labour market opportunities for these people.[1] During the late 2000s, the employment rate for disabled people was only slightly over half of that of the ones without any disability. Closely related to these poor labour market outcomes, people with disability also experienced poverty more intensely than their

[1] In addition, all the key indicators of the labour market outcomes do not exhibit any substantial discrepancy before the onset of the global economic crisis (the black rhombus in the picture), when for about a decade economic growth was rather strong in many European countries and employment rose quite significantly.

Figure 2.1: Differences in the labour market outcomes by disability



Source: EUROSTAT; Note: Average employment, unemployment and inactivity rates measured as % of working-age population; poverty rate measured as % of people with a disability living in households with income lower than 60% of the median-adjusted disposable income for late-2000s. The rhombus shows the key labour market indicators since mid-1990s. The OECD average is an unweighted average across 27 OECD countries excluding Japan, New Zealand and Turkey.

peers without disability.[2] For these reasons, most industrialized countries recognize the need for effective policies for the disabled.[3] Recently, across Europe, the focus of disability policies has shifted from being passive towards a more employment-orientated approach. Such policies should re-think the balance between income protection and integration in order to ensure right incentives to work, encouraging the participation of disabled people, which is still scarce (OECD, 2010).

Most of the literature focuses on individual countries effects. This paper aims at providing a cross-country evidence of the causal effect of health shocks on the labour market outcomes, specifically looking at the individual transition from full-time to all the other possible statuses: part-time, unemployed, retired and inactive. As a result of the harmonization process behind the EU-SILC dataset, I can analyse these effects through a comparable survey framework (Campolieti, 2002). Differently from most of the literature, I use a different measure of health shock and I find that individuals who suffer from a sickness are significantly more likely to leave their full-time employment and, depending on country-specific welfare, they transit to the other statuses. For instance, higher standard of integration in disability policy are associated to fewer drop

[2]For what concern the disabled, Figure 2.1 shows no statistical difference in the labour market outcomes before and after the last economic downturn. The disadvantaged condition persists till the mid-1990s.

[3]The American with Disability Act (ADA) for the U.S.A., the Disability Discrimination Act (DDA) for the UK, the Severely Disabled Person Act (SDPA) for Germany.

outs from full-time employment. This policy encourages the workers to stay on the job market through, for example, vocational rehabilitation services.[4] It is therefore of great interest to investigate the relationship between health condition and labour market performances and, in view of the ongoing unification and integration process, it is also worth to compare the different findings across EU members.

Most of the studies focus on the transition from work to retirement for elderly people.[5] Partly due to data unavailability, a few papers look at the impact of bad health on labour market for young individuals and Lindeboom et al. (2006) represent a valuable exception. Generally the evidence is mixed and the findings are sensitive to different specifications and factors, moreover there is still a limited evidence for cross-country comparisons. Starting from this scarse evidence, I investigate the effect of an adverse health shock on the individual labour market outcomes across Europe (2003-2009). The main contributions are threefold with respect to the existing literature. First, it deepens the understanding of the relationship between health status and labour market dynamics across Europe. Second, as main health regressor I use the limitation in activities which is a more specific measure of disability (Hancock et al., 2014). Third, I provide evidence on the existing heterogeneous effects of health shocks on labour market outcomes depending on country-specific social security arrangements.

Specifically, (i) I carry out the analysis using the EU-SILC harmonized sample which makes the comparison across 27 European countries feasible. To the best of my knowledge, the only similar contribution has been done by Garcia-Gomez (2011) with an different and smaller sample of 9 EU member countries. (ii) I consider a different measure of disability which properly captures the presence of long-standing limitations, impairment and disabilities, which are more likely to cause an adverse effect on labour market outcomes. As underlined by Hancock et al. (2014, 2013), the health indicators are plagued by measurement errors.[6] The authors use ten indicators of ability to afford particular items or delivery activities to construct a latent index which describes a severe difficulty for an individual to perform usual dayly activities. The variable used here considers any form of disability, handicap, impairment and other severe difficul-

[4] In Section 2.2 I discuss the policy reform and disability policy indicators across Europe.

[5] See some examples on both static and dynamic effects: Berkovec and Stern (1991); Bound and Burkhauser (1999); Currie and Madrian (1999); Riphahn (1999); Smith (2004); Han et al. (2005); Disney et al. (2006); Hagan et al. (2008); Jones et al. (2010) and Zucchelli et al. (2007).

[6] They explain the concerns about the quality of subjective assessments and the failure to address problems caused by measurement error in the health related variables.

ties in performing usual daily activities. This represents the most similar measure of health shock with respect to Hancock et al. (2014). The purpose of using this measure is to isolate the presence of severe limitations and to rule out cases in which individuals are affected by chronic illnesses, but are not substantially limited in their usual work activity. For example, I can rule out cases - such as anaemia, asthma, celiac disease, diabetes and headache - that are considered as chronic illnesses but do not strongly influence individuals' work activities.[7]

Finally, I relate the findings with the heterogeneity in social security system across EU countries. Individuals living in countries characterised by higher work incentives are less likely to drop out from full-time employment after a health shock occurs.[8]

Thus, poor health reduces the individual's productivity in work and in earnings. The effects will differ depending on both the peculiarity of the occupation (Brant et al., 2012) and the severity of the disability (Jimenez-Martin et al., 2006; Oguzoglu, 2011) which are considered as controls in the main analysis. Brant et al. (2012), using U.S. longitudinal data, analyse a job history of both blue and white-collar employees and their transitions from good to bad health statuses. Their findings suggest that blue-collar workers' health deteriorates faster than their white-collar counterparts mainly because the formers are more likely to experience a negative health shock on the job market. Jimenez-Martin et al. (2006) find that, for Spanish workers aged between 50 and 64, the probability of continuing working decreases with the severity of the shock. Furthermore, in Oguzoglu (2011), the effect of work limitation on labour market participation is explored by considering different health shocks, which are heterogeneous with respect to their severity.

There are at least two ways in which a health shock may influence labour market trajectories. On the one side, health shocks are likely to cause longer unemployment spells when an individual is out of the labour market (Boheim and Taylor, 2000; Gannon and Nolan, 2007).[9] On the other side, health shocks are more likely to move workers

[7] I also use another measure of health shock - chronic illness - in order to make some comparisons with respect to the previous literature.

[8] This is one of the possible channels. The paper proposed by Jenkins and Rigg (2003) explains the complexity of the mechanisms through which a health shock affects labour market outcomes. The authors use the BHPS to split the effect of disability into three steps: the selection effect, the effect of disability onset and the effect of disability post onset. Jenkins and Rigg (2003) point out that people who had experienced the onset of disability were typically characterized by having lower qualifications, income and employment rates. After the initial onset effect, average work earnings rise, but the probability of being unemployed linearly increases with the duration of the disability.

[9] Gomez and Nicolas (2006) analyse the effects of a health shock on the probability of leaving em-

from employment to unemployment, retirement or inactivity, which is to say looking at transitions (Garcia-Gomez et al., 2010).[10] This paper fits into this second line of research. I condition on past health and labour status to evaluate the effects of changes in health using two definitions of health deterioration. Following others, such as Lechner and Vazquez-Alvarez (2011), Dano (2005), Gomez and Nicolas (2006) and Garcia-Gomez (2011), I rely on the possibility of conditioning on sufficient observable information to obtain a credible counterfactual against which I measure the impact of the health shock on labour market outcomes.Then I relate these different effects with the country-specific social security system.[11]

Section 2.2 provides a brief overview of social protection policies and health status across Europe. The EU-SILC data and the descriptive statistics are presented in Section 2.3. Estimations and main results are in Section 2.4. Section 2.5 focuses on the relationship between the probability of leaving full-time employment and the integration policy indicator. Section 2.6 concludes.

ployment and transiting out to unemployment or inactivity in Spain.

[10] Additionally, a blooming literature examines the influence of measurement error, justification bias and the endogeneity problems that further complicate the analysis (Bound, 1991).

[11] Recently Polidano and Vu (2015) study the causal labour market impacts of disability onset by gender, age and education levels using longitudinal data from the Household Income and Labour Dynamics Australia survey and difference-in-difference propensity score matching techniques. Using the same dataset, Cai et al. (2015) study the effect of health status and health shocks on hours worked.

2.2 Disability policy reforms across Europe

Sickness and disability outcomes are still inadequate in most countries, with low employment rates and high benefit dependence, calling for further, often unpopular, reforms. In the past 10 years, EU countries have started to shift away their approach from merely paying benefits to people with disability ("compensation policy") towards helping them stay in, or return to, work ("integration policy"). The former guarantees that individuals who are disabled do not endure economic hardship and provides them benefits for the potential income losses. The latter tries to avoid the exclusion of disabled individuals from the labour market by encouraging participation and integration. Therefore, such policies should be designed to ensure that the incentives to work are relatively higher to being unemployed or merely collecting disability benefits (OECD, 2010).[12]

While social security policies have been interpreted, up to the recent time, only in terms of mere financial assistance, a new wave of reforms has recognised the need for a stronger active support in order to help people with disabilities to stay in the labour market. This shift can be explained using the two disability policy indicators previously mentioned.[13] The first dimension measures the compensation or benefit programs for each country where the sub-components are: coverage, minimum disability level, disability level for a full benefit, maximum benefit level, permanence of benefits, medical assessment, vocational assessment, sickness benefit level, sickness benefit duration and unemployment benefit level and duration. A higher score means greater system generosity, with 50 being the maximum. The second dimension covers employment or integration measures (coverage consistency, assessment structure, employer responsibility for job retention and accommodation, supported employment program, subsidised employment program, sheltered employment sector, vocational rehabilitation program, timing of rehabilitation, benefit suspension regulations and additional work incentives). A higher score indicates a more active approach, therefore more focused on the vocational rehabilitation and work incentives.[14] Table B.4 provides a general idea of

[12]To the best of my knowledge, Garcia-Gomez (2011) is the only one study that tries to analyse the incentives provided by the alternative routes out of employment after the onset of a health shock across Europe but with a smaller sample. There is no other study that tries to understand the correlation between the onset of disability, the labour market outcomes and the incentives provided by the different policy. Consequently, here and in the forthcoming Sections it will deepen the relationship between the country-specific policy indicators and the effect on labour statuses.

[13]OECD (2010), p. 87.

[14]See Table B.1, Table B.2 and Table B.3 in the Appendix for a detailed description of the sub-components of policy indicators provided by OECD (2010).

disability policy typologies across Europe. The Nordic countries and Portugal have a higher score for compensation policy, so, *a priori*, one would expect the highest outflows from full-time job in these countries. Vice versa, in the United Kingdom is the least generous. Considering integration policies, Norway and Finland register the highest score, meaning a more employment oriented approach, whereas Mediterranean countries occupy the bottom of this ranking. Thus, it seems straightforward to hypothesize an higher probability to transit into part-time job for the Nordic countries with respect to Southern Europe.

Figure 2.2: Disability policies orientation across EU (2009)

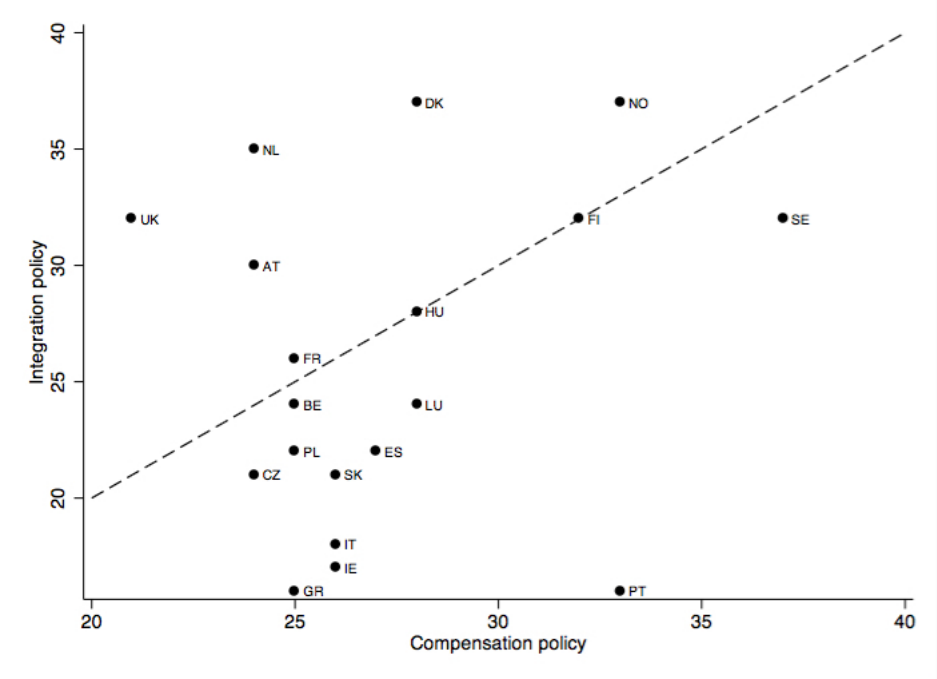


Figure 2.2 shows the variation in policy attitude across countries by describing a generalized different policy pattern between North and South. Countries with high scores on both scales have a comparatively stronger integration policy in place, but the generosity and accessibility of benefits is likely to mitigate the potential advantages in terms of incentives of the integration component. The worst situation is found in those countries, which are characterised by low levels in both scores. Only a few countries have a more predominant focus on one of the two policies - either compensation or integration. On the one hand, Portugal, Greece, Ireland and Italy, have the strongest compensation orientations, hence I should expect the highest outflows from employment.

On the other hand, the Netherlands and the United Kingdom, followed by Austria

register the strongest attitude towards integration policy. In these countries, the incentives to continue working seem to be the highest: this implies a higher likelihood to remain in full-time (such as in Austria) or transit to part-time (Scandinavia). Deviations from the dashed 45-degree line represent a country orientation towards one of the two types of policies. The scores in the first dimension, encapsulating the benefit or compensation policy tools, range from around 20 in the UK, that has the least generous and least accessible benefit system, to over 30 in the majority of the Nordic countries and Portugal. The scores in the second dimension, summarising the integration policy tools, span within a slightly broader range: from around 15 in some Southern European countries and Ireland to 35 points or more in Denmark, the Netherlands and Norway.

Nevertheless, it is difficult to believe in a generalised full shift in policy orientation towards a more employment-oriented approach due to the presence of high heterogeneity across countries. OECD (2010) points out two main reasons: firstly, the policy implementation is lagging behind policy intentions. The big shift in rhetoric and policy has yet to translate in many cases to an actual shift in everyday practice of health system. This will require very significant additional changes addressing the financial incentives of the main stakeholders. Secondly, the policy shift has not been accompanied to the necessary degree by a corresponding shift in resources - contributing to the very low take-up in most cases of new and modified services. This suggests that the correlation between the policy indicators and the labour market outcomes might be difficult to interpret. The empirical results corroborate this idea. Workers living in countries characterised by higher work incentives are less likely to leave the full-time employment after a health shock occurs.

2.3 Empirical strategy

This paper contributes to the existing literature in estimating the impact of an adverse health shock on labour market outcomes, assessing whether people who suffer from a health shock are more likely to stay in full-time job, or transit to other statuses - namely employed part-time, unemployed, retired or inactive and consequently decreasing the weekly working hours. One main concern in estimating an equation between health and labour status is how to properly deal with the simultaneity between labour market outcomes and a health shock, which likely generates endogeneity within the model. A possibility would be to look for an instrument for health condition in a reduced form for labour outcomes. In this framework, a valid exclusion restrictions could be a detailed regional information which is not available from the EU-SILC due to the high level of aggregation employed for the regional markers. Another option - which is not applicable to this analysis due to data limitations - would be to consider a random assignment to treatment, i.e. suffering a health shock.[15] For these reasons, the identification strategy in this study involves matching technique in which, conditioning on sufficient observable information, I am able to compare individuals who undergo a health shock with their counterpart in a control group that will help to tackle the endogeneity issue. I also check the sensitivity of the results using different estimators.[16]

2.3.1 The evaluation framework

Let T be the binary variable describing the treatment status: specifically, $T = 1$ if the individual suffers from a health shock and $T = 0$ otherwise. The binary variable Y_1 and Y_0 defines the outcome of the interest for treated and untreated subjects, respectively.[17] The realisation of both outcomes for the same individual is not observable to econometricians due to the lack of counterfactual. Nevertheless, some features of the joint distribution can be estimated to obtain the Average Treatment effect on the Treated (ATT) which can be written as follows.

$$ATT = E(Y_1 - Y_0 \mid T = 1) \tag{2.1}$$

[15] This is the strategy implemented by Smith (2004) and Lindeboom et al. (2006).

[16] See Becker and Ichino (2002) and Caliendo and Kopeinig (2008) for some practical guidance for the implementation of propensity score matching.

[17] In the rest of the analysis, 'untreated' and 'controls' are used indifferently.

The ATT determines to what extent the outcome of interest varies on average for those individuals who suffer from health shocks (treated). The aim of this evaluation is to identify and consistently estimate the ATT assuming that both treatment status and potential outcomes are affected by a set of observable characteristics, X. Problems may arise because of the possible association between some of the unobservable variables that affect the potential outcome in the case of no treatment and treatment indicator. One of the assumptions that allows the identification of the ATT is strong ignorability (Rosenbaum and Rubin, 1983), which is the rationale behind common estimation strategies such as regression modelling and matching. This assumption, when the ATT is the only effect of interest, states that:

$$Y_0 \perp T \mid X \tag{2.2}$$

$$Pr(T = 1 \mid X) < 1 \tag{2.3}$$

Condition 2.2, which is mentioned in the Conditional Independence Assumption (CIA), refers to "unconfoundedness" or "selection on observables" in this framework. It means that, once I condition on observable characteristics, the assignment of the treatment is independent of the potential outcome in the case of no treatment. The idea behind this assumption is that Y_0 does not have any impact in the selection into treatment while the possibility that self-selection depends on the Y_1 does not have to be ruled out (Ichino et al., 2008). The rich set of the covariates included in the analysis makes plausible the reliability of this assumption. Condition 2.3 is a (weak) overlap or common-support condition which must hold in order to have at least a counterpart in the control group for each treated individuals.[18] If both assumptions hold, it is possible to consistently estimate the ATT (Blundell and Dias, 2009).

2.3.2 Health shock indicators for treated and control groups

In this Section I define more specifically the treated and the control groups which are depicted in Figure 2.1. For each country, I consider a three-year sequence in which all

[18] I use the min-max criterion so I exclude all the observations whose propensity score is smaller than the minimum and larger than the maximum in the opposite group. This is the interval of propensity score overlapping in the two groups.

Table 2.1: Definition of treated and control groups

TREATED				**CONTROLS**		
Time	Labour status	Health status		Time	Labour status	Health status
t_1	Full time	Good		t_1	Full time	Good
t_2	**Full time**	**Bad**	**VS**	t_2	**Full time**	**Good**
t_3	-	Bad		t_3	-	Good

individuals are employed full-time (at t_1 and t_2) and in good health at t_1. Then, I compare individuals who become "disabled" thereafter, thus declaring disability at t_2 and t_3. This requires individuals to be observed for at least three consecutive years. This sequence allows me to observe a period antecedent to disability (t_1) and some periods after this event - when the situation should be stabilised - in order to gauge the effects of the health shock on some relevant labour market outcomes. Two definitions of health shocks are involved: (1) limitation in activities because of health problems and (2) chronic diseases. The first is constructed using the responses to the question on self-assessed health in the EU-SILC: *Do you have any limitation in activities because of health problems?* From the 3 possible responses (yes, strongly limited; yes, limited; not limited), I define the presence of an adverse health shock if they report having any limitation, regardless of its strength, in any given period (t_2 and t_3). The second measure is based on the yes/no question:*Do you have any chronic (long-standing) illness?*[19]

Considering the first measure of health shock, the limitation is defined as the individual's difficulties in performing daily activities. Limitations should be due to a health-related cause and not to financial, cultural or other reasons. People with long standing limitations have passed through a process of adaptation, which may have resulted in a reduction of their activities. Thus, its main advantage is to capture the presence of long-standing limitations when this is likely to strongly influence labour market outcomes. This latter consideration makes the health indicator less heterogeneous and more specific with respect to the one widely used in the previous literature (Hancock et al., 2014).

The idea is to evaluate whether a change in health status has any consequence on the labour market outcomes. Since the aim is to rule out cases in which there is a potential anticipation or simultaneity between a change in labour status and a change in self-

[19]I use this second measure for robustness checks and in order to make the analysis comparable to the previous literature.

reported health, the treatment and control groups, shown in Table 2.1, are constructed, in detail, as follows:[20]

1. Consider a window of three years for each observed individual. At t_1, the start of the sequence, all the individuals report good health status and they are in full-time employment in t_1 and t_2.

2. The **treatment group** is composed of individuals meeting selection criterion (1) who report suffering from limitations in daily activities in t_2 and t_3. Which is to say, those individuals who experienced a health shock after t_1 and for whom this adverse health condition persists at least over t_3. alth shock.

3. The **control group** is composed of individuals meeting selection criterion (1) who do not report a worsened health status after t_1.

In the present context, the simultaneous determination of health and labour market status may arise via two different mechanisms. On the one hand, individuals may stay outside the labour market because they are recipients of benefits linked to disability policies, thus reporting low level of self-assessed health status. On the other hand, individuals may anticipate a transition out of employment and show a change in self-assessed health one period in advance. The two mechanisms are likely to generate reverse causality issues and lead to incorrect inference. Thus, selecting only healthy individuals at t_1 and in full-time job in t_1 and t_2, it should rule out or at least limit the reverse causality issue. Moreover, how the measure of the limitation in daily activities is constructed, it allows to get rid of some anticipation effects due to individuals who foresee a transition out of employment and report a health change one period in advance. In fact, the questionnaire is extremely precise in defining an individual as "hampered in their usual activity" only if he/she is currently limited and has been limited in activities for at least the last 6 months, eliminating or at least mitigating any possible anticipation effects. For what concerns the second measure of health shock, it is necessary to assume no contamination due to any anticipation effect. Furthermore, the comparison of these two indicators may shed some light on the extent to which this anticipation effect might be empirically relevant for the estimates.

[20]Similar strategy was used by Gomez and Nicolas (2006), Garcia-Gomez (2011) and Lechner and Vazquez-Alvarez (2011).

2.3.3 The plausibility of the CIA

It is possible to correctly estimate the ATT once the CIA is satisfied. Ideally, it needs that all the relevant characteristics for the selection into the treatment are accounted for and the unobservables, left out, are not potentially correlated with the treatment.[21] The applicability of this assumption, which is not testable, heavily depends on the availability of a detailed group of characteristics in order to match treated and controls (Caliendo and Kopeinig, 2008). The EU-SILC dataset used in this analysis points in this direction.

I control for pre-treatment characteristics (demographics, educational attainments, job characteristics and household composition) by including them in the propensity score and by restricting the sample of controls to individuals who are as similar as possible. Furthermore, the information for both groups are collected with the same questionnaire, and individuals are drawn from the same local labour market. Heckman et al. (1997) stressed the importance of satisfying these two conditions in order to reduce the bias when matching estimators are involved. Again, it is crucial to underline that a consistent estimation of the ATT crucially relies on the CIA. Therefore, if the outcomes of the treated and the control individuals present systematic differences between them, matching estimation will not produce the right parameter of interest. However, assuming that these differences are time-invariant, it is possible to exploit the panel dimension of the data in order to control for this kind of unobservables. In fact, when restricting both the treated and the controls to be in full-time job in the first and the second period, the ATT is identical to the ones obtained taking differences. Therefore, in the presence of time-invariant unobserved heterogeneity the parameters of interest would be recovered (Garcia-Gomez, 2011). Finally, I follow the simulation approach implemented by Nannicini (2007) and Ichino et al. (2008) in order to obtain valuable information on the reliability of matching estimates in the case of extreme simulated confounding factors which may affect the CIA.

2.3.4 Propensity score matching

Smoothing techniques are implemented because on the one hand, it is necessary to condition on a large set of observables in order to make robust the reliability of the

[21] The full list of covariates is reported in Table **??**.

CIA. On the other hand, it is not trivial to estimate the ATT when conditioning on many covariates. I use the propensity score matching techniques to overcome these issues (Rosenbaum and Rubin, 1983). The authors define the propensity score $p(X)$ as the conditional probability of receiving the treatment, in this study an adverse health shock, conditioning on pre-treatment characteristics (t_1). The propensity must satisfy the so-called "balancing property" which is to say that individuals with equal score have the same distribution of observable covariates independently of the treatment status; and more importantly, the exposure to the treatment and the control groups are random for a given value of the score. Rosenbaum and Rubin (1983) demonstrate that if the participation in the treatment is random, once conditioning on the multidimensional vector X, it also has to be random within cells defined by the values of $p(X)$. Using the propensity score, the dimensionality problem is reduced and the ATT can be estimated as follows.

$$ATT = E(Y_1 \mid T = 1) - E(Y_0 \mid T = 1) = \tag{2.4}$$

$$= E_x \left[(E(Y_1 \mid p(x), T = 1) - E(Y_0 \mid p(x), T = 1)) \mid T = 1 \right] = \tag{2.5}$$

$$= E_x \left[(E(Y_1 \mid p(x), T = 1) - E(Y_0 \mid p(x), T = 0)) \mid T = 1 \right] \tag{2.6}$$

where the outer expectation is over the distribution of $p(X)|T = 1$. Once the "balancing hypothesis" is satisfied, the ATT estimates are consistent: for a given propensity score, the outcomes of the control group are on average the same of the treatment group. I estimate the propensity score using a probit model, stratifying individuals in blocks according to the propensity score and restricting the analysis to the common support option. The final step of the estimation strategy is the use of the kernel algorithm with replacement to identify the best match for each treated individual. Using the kernel, all treated are matched with a weighted average of all controls with weights that are inversely proportional to the distance between the propensity scores of treated and controls.[22] The kernel matching estimator defines $G(\cdot)$ the kernel function, h_n the bandwidth parameter, T the set of treated units and C the set of control units. Y_i^T and Y_j^C are, respectively, the observed outcomes of the treated and control units while C_i

[22]The main results are fairly consistent when using the nearest neighbour algorithm. This approach consists of taking each treated unit and searching for the control unit with the closest propensity score. See Dehejia and Wahba (2002), Becker and Ichino (2002) and Caliendo and Kopeinig (2008) for a presentation of different matching algorithms.

is the set of control units matched to the treated unit i with an estimated value of the propensity score of p_i. Finally, N^T is the number of units in the treated group.

$$ATT = \frac{1}{N^T} \sum_{i \epsilon T} \left(Y_i^T - \frac{\sum\limits_{i \epsilon C} Y_j^C \, G \frac{p_j - p_i}{h_n}}{\sum\limits_{k \epsilon C} G \frac{p_k - p_i}{h_n}} \right) \tag{2.7}$$

2.4 Data and results

2.4.1 Dataset

I use longitudinal data from the European Union Statistics on Income and Living Conditions dataset (henceforth EU-SILC) which provides seven waves of microdata. The EU-SILC project was launched in 2003 on the basis of an agreement in 6 Member States (Belgium, Denmark, Greece, Ireland, Luxembourg and Austria), as well as in Norway. The starting date for the EU-SILC was 2004 for the EU-15 countries, as well as for Estonia, Norway and Iceland. The 10 new Member States with the exception of Estonia started in 2005. New other Members - Bulgaria, Romania, Turkey and Switzerland - are considered from 2007. EU-SILC is the successor to the ECHP but strongly differs from it in several important ways. Perhaps most importantly, the EU-SILC is output-harmonised so the comparison between countries is much more credible. The surveys also differ in their design: whereas the ECHP was a panel survey, in which the same individuals were re-interviewed year after year, the EU-SILC takes the form of a rotating panel, where individuals are interviewed usually for a maximum of four years, and the sample is regularly refreshed with new members. However, the number of rotational groups varies: the standard is four, but there are some exceptions (Iacovou et al., 2012).[23]

This database has two main advantages. Firstly, the panel dimension assures to account for the endogeneity issue mentioned in the previous sub-sections. Secondly, being an harmonizing survey it enables a comparison among 27 European countries, which, to the best of my knowledge, is a novelty. The sample consists of 197,549 individuals divided into 27 countries and over 7 years (2003-2009). Table 2.2 summarises, country-by-country, the sample size divided by two groups: treated (individuals who suffer a health shock) and controls (individuals who do not report a worsening in their health status).[24] The fundamental information, such as income, labour condition and social status, is collected both at the personal and the household level (see Table B.5 for detailed descriptive statistics).

The outcome variables are the transitions from full-time employment to other five

[23] France (9-years panel); Norway (8-years panel) and Luxembourg (a "pure" panel).

[24] I also show the summary statistics for the whole sample and divided by treatment in the Table B.5 and in the Table B.6, respectively.

Table 2.2: Treated and control groups

Country	**AT**	**BE**	**BG**	**CY**	**CZ**	**DK**	**EE**	**ES**	**FI**
Controls	6,041	5,824	2,371	4,160	9,335	4,184	5,805	13,753	3,259
Treated	248	133	23	100	194	117	365	463	266
Total	6,289	5,957	2,394	4,260	9,529	4,301	6,170	14,216	3,525
Country	**FR**	**GR**	**HU**	**IE**	**IS**	**IT**	**LT**	**LU**	**LV**
Controls	17,768	9,108	6,405	3,238	2,095	24,140	4,545	9,139	2,984
Treated	537	147	226	64	38	645	135	389	193
Total	18,305	9,255	6,631	3,302	2,133	24,785	4,680	9,528	3,177
Country	**NL**	**NO**	**PL**	**PT**	**RO**	**SE**	**SI**	**SK**	**UK**
Controls	5,309	7,983	13,855	6,549	2,982	4,953	3,049	5,993	6,722
Treated	216	178	242	268	47	114	142	357	153
Total	5,525	8,161	14,097	6,817	3,029	5,067	3,191	6,350	6,875

Note: 27 European countries are included: Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Spain (ES), Finland (FI), France (FR), Greece (GR), Hungary (HU), Ireland (IE), Iceland (IS), Italy (IT), Lithuania (LT), Luxembourg (LU), Latvia (LV), Netherlands (NL), Norway (NO), Poland (PO), Portugal (PT), Romania (RO), Sweden (SE), Slovenia (SL), Slovakia (SV), United Kingdom (UK).

different labour market statuses. Namely, full-time employment to full-time employment (FT-to-FT), full-time employment to part-time employment (FT-to-PT), full-time employment to unemployment (FT-to-U), full-time employment to retirement (FT-to-R) and full-time employment to inactivity (FT-to-I). Then I study the effect of a health shock on the hours usually worked per week in the main job.[25] Table B.8 summarises the labour market transitions from full-time employment to the other statuses. The Figure A.1 shows the proportion of the individuals respect to the different labour outcome at t_3 and it highlights the heterogeneity across country with respect of being FT, PT, U, R and I at the period I measure the transitions

The pre-treatment characteristics are: health status, age, gender, marital status, kind of consensual union, education, household size, total disposal household income, self-employed or not, type of contract, occupation, disability, sickness, unemployment benefits, amount of pension, waves, regional dummies, kind of dwelling and degree of urbanization.[26]

[25] I do not look at other categories such as being a student, homemaker, looking after children (or other persons). See the Table B.8 for the description of the outcome variables.

[26] For what concerns the occupation, I follow the ISCO-88 (COM) International Standard Classification of Occupations and I define the variable as follows: (1) Legislators, senior officials and managers; (2) Professionals; (3) Technicians and associate professionals; (4) Clerks; (5) Service workers and shop and market sales workers; (6) Skilled agricultural and fishery workers; (7) Craft and related trades workers; (8)Plant and machine operators and assemblers; (9) Unskilled operators. Armed forces are dropped.

2.4.2 Results

In the first stage, I compute the propensity score for a dummy which defines the treatment "health shock". Then, I run a regression (probit) for the treatment variable on the left hand side, and the all the pre-treatment covariates (t_1) which determine selection into the treatment on the right hand side. This is the same of doing a t-test between treated and controls (Panel A in Table B.7). I estimate the predicted probability of being treated considering the optimum number of blocks divided by percentiles using `pscore` STATA command. Within each block I have individual with similar characteristics as it is shown in Table B.7. In detail, the optimum number of blocks describe the fact that there is no differences in the mean propensity score between treated and controls (Panel B and Panel C in Table B.7). Next I focus on the common support area where individuals have similar propensity score. Finally I use different matching models.

Clearly, I estimate the propensity score for the individuals who undergo a change in their health status using a probit model. The probability of belonging to the treated is a function of the pre-treatment characteristics, as discussed in the previous sub-section in detail.[27] In order to satisfy the balancing hypothesis, I use a different specification for each country. I split the dataset into k strata of the propensity score and within each stratum, I test that the average propensity score of treated and controls does not differ.[28] Then, I restrict the analysis to the common support, improving the quality of matches as explained by Becker and Ichino (2002). Thus, it implies that the test of the balancing property is applied only to observations whose propensity score lies on the intersection between the two supports of the propensity score of treated and controls. The idea is to ensure that there are treated subjects which are comparable to the control ones in terms of propensity scores. The Table B.7, in Appendix, presents the estimated propensity score across European countries.[29] The within-country distribution of scores

[27]The propensity score estimates are shown in Table B.7 in Appendix. Some variables have been dropped because of collinearity.

[28]The balancing hypothesis is satisfied if the observables do not differ - on average - between treated and control groups. See Table B.7 in Appendix for further details.

[29]I consider support overlap condition which states that there is no value of covariates for which the probability of being treated is zero or one. The analysis only concerns values of X for which this probability is strictly between zero and one. In practice, this is implemented by imposing constraints on X such that this probability exceeds a threshold value strictly above zero and falls short of another threshold value strictly below one.

among the two groups is similar, giving support to the CIA.[30]

Figure 2.3 shows the main results for the whole sample (aged 16-65) using the kernel matching estimator. The ATT measures the probability of transit to a different labour market statuses at period t_3.[31] Distinct colours are used in order to stress the differences across countries. In most of the countries under analysis, individuals who undergo a health shock at t_1 exhibit a significant negative drop in the likelihood to remain in full-time employment at t_3 compared to those who do not.

Transition from full-time to full-time

In this Section I focus both (i) on the effect of health shocks on the probability of not moving from full-time unemployment at t_3, and (ii) on how the labour market outcomes differ across countries. Figure 2.3(a) shows the negative effect of "bad" health on the likelihood of being full-time employed at t_3. The greatest negative effects are found in Romania and Ireland, ranging from 23 to 21 percentage points less likely to remain in the full-time position, respectively. The countries with a relatively low levels of integration policy show a negative likelihood to stay in full-time job.[32] This subgroup, covering also the Czech Republic, Italy, Portugal, the Slovak Republic and Spain, has comparatively underdeveloped employment and rehabilitation policies. They are characterized by a strong compensation orientation and long sickness benefit payment duration which may discourage disabled labour market participation. Austria, Poland and Hungary register among the lowest effects in term of drop out from full-time. In Austria, for instance, vocational rehabilitation became compulsory at the end of 1990s and each claim for a disability benefit is automatically treated as a request for rehabilitation which, on the other hand, may decrease the chances to drop out. In the past 15 years, Poland has improved the initiatives to help disabled in order to integrate into the regular labour market. Hungary follows, since 2008, a similar rehabilitation process. Thus, they operate on the supply side of the labour market. It aims at increasing the productivity of people with disability by restoring and developing their skills and capabilities so they can participate in the general workforce (OECD, 2010).

[30] All the estimates are obtained under the common support assumption.

[31] The Figure 2.3 refers to the estiamtes in Table B.9 which are in Appendix. Each column presents the estimated effect of a drop in health status on the probability of staying in full-time employment or transit to part-time, unemployment, retirement, inactivity. Furthermore, I estimate also the drop in the numbers of hours country-by-country.

[32] For clarity, Table B.4 and Figure 2.2 show the scores for each disability policy.

Transition from full-time to the other labour market statuses

Norway and Sweden reveal that the exit from full-time as a result of a health shock leads to part-time work with probabilities ranging between 9 and 10 more percentage points. These countries have the most generous welfare system in Europe, but they also have the strongest employment-orientated disability policy, encouraging, *de facto*, individuals to stay in the labour market at least as part-time worker. Denmark and Finland show a different pattern with respect to the other Nordic countries (Figure 2.3(b)). Differently from the others, Denmark has expanded by a great amount all employment subsidies for people with disability. The effectiveness of wage subsidies depends on the degree of targeting and it is typically much higher with a more restrictive system (such as in Finland) than with a generous system like the Danish one, which produces a large deadweight loss and requires constant re-adjustment. Nevertheless, the effect in both countries is positive but not statistically different from zero.

In the Czech Republic and France, estimates show that the drop from full-time is paralleled by an increase in the probability of being unemployed. In both countries, the exit from the labour market is a combined effect of people that transit either to unemployment or to inactive status (Figure 2.3(c) and 2.3(e), respectively). In the United Kingdom, the negative transition from full-time to unemployment may be partially explained by the increase in promotion of work incentives for people on disability benefits. This was a high priority in the UK, where a special tax credit was introduced in 1999 which later on was merged into the general Working Tax Credit in addition to a new temporary earnings supplement, the Return to Work Credit (2003). Both credits constitute a wage top-up for people with disability in low paid employment to ensure work pays.

The effect of the transition to retirement reveals a significant and positive impact in Romania (around 20 percentage points more), in Hungary and in most of the Mediterranean countries. Despite using a sample with people aged below 65 years old, I still need to consider early retirement as an option even if it is not a well-defined state. For that reason, I consider retirement and inactive status as separate categories (Bardasi et al., 2000; Disney et al., 1994). The empirical analysis uncovers a significant and positive probability of switching to inactivity across Europe. In the countries overlooking the Mediterranean Sea, individuals who suffer from a health shock show a higher

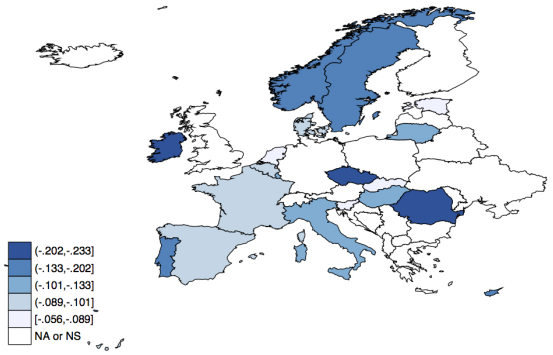
probability of being inactive at t_3 than those who do not report a "bad" health status. These countries are characterized by high sickness benefit duration, and a low score in both work incentives and monitoring which may induce people to stay outside the labour market due to the considerably high benefits.

I advance the hypothesis that the differences between countries in terms of likelihood of staying in full-time employment after a health shock occurs may depend on the generosity of disability benefits provided in different countries, as previously argued in the literature. The effect of ATT seems to depend on the kind of policy under which individuals suffering from a health shock receive generous benefits, i.e. they are more likely to exit the labour market after a health shock occurs, unless good integration policies are present in the country. This is the relationship I study in Section 2.5.[33]

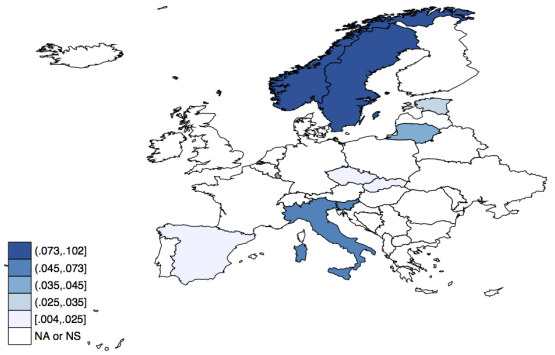
Using the second measure of health shock - changes in chronic condition, the main results are fairly consistent. This indicator helps to strengthen the analysis and make it comparable to what has been already done in the literature (Garcia-Gomez, 2011). As expected, the magnitude of the effect is smaller with respect to the previous one given the fact that the former health shock measure rules out cases which are considered as illnesses but do not strongly limit the usual work activity (Table B.10).

[33]I would need to follow individuals over time to see whether they go back to work or transit to inactivity once the unemployment benefits expire. Unfortunately, the data at hand do not provide a large enough sample size to perform this analysis.

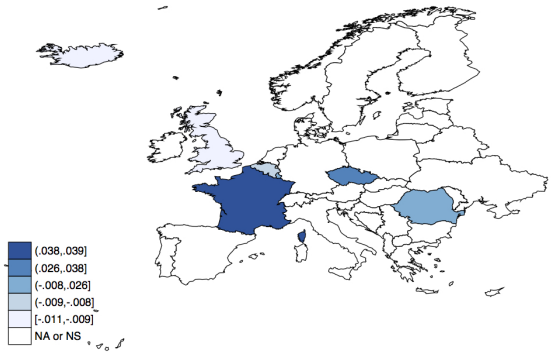
Figure 2.3: Transition from full-time job to:



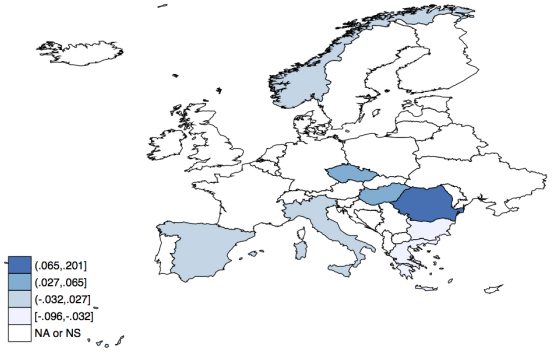
(a) Full-time



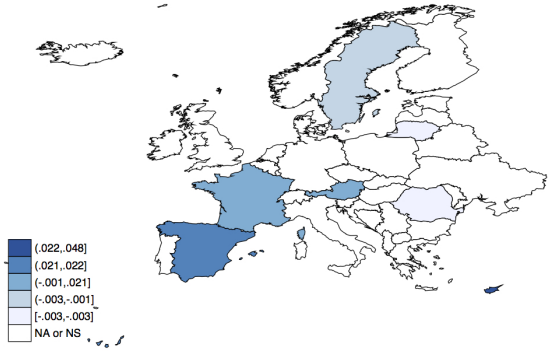
(b) Part-time



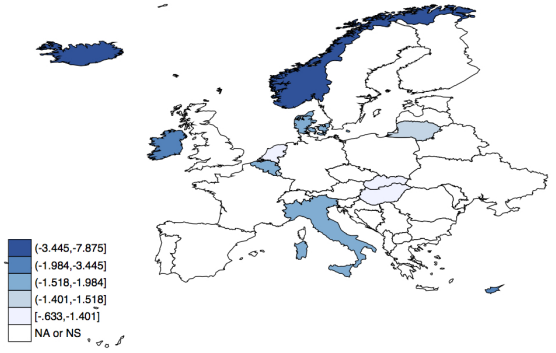
(c) Unemployed



(d) Retired



(e) % Inactive



(f) Number of worked hours per week

2.4.3 Robustness checks and subgroup analysis

In this Section, I consider various robustness checks. First, the estimates are fairly stable even when I implement a different matching algorithm, the nearest neighbour. The results for both measures of health shock appear consistent with respect to the ones in the previous Section. All the results are in the Appendix, Table B.11 and Table B.12, respectively.

Second, I split the sample into different subgroups in order to test whether possible heterogenous effects are in place. I carry out the analysis (i) by gender in Table B.13 and B.14 for male and female, correspondingly; (ii) by age in Table B.16 and B.15 for elderly and young, respectively.[34] For each subgroup I estimate the ATT on the probability of remaining in full-time employment at t_3. I do not find dramatic differences across genders, although significance is reduced in a few cases, especially for females. Due to the selection criteria, the male sample is generally larger than the female one. If women tend to work more part-time than the men, selecting full-time workers at t_1 leads to a smaller female sub-sample. Nevertheless, I generally find a bigger effect for the female who live in the Scandinavian countries and Baltic states where it seems more evident the gender gap due to health related problems. As expected, I provide evidence on the fact that the health shock has greater effect for older individuals.[35]

Third, following the idea that more educated individuals have a better health condition later in life and better labour market prospects (Currie, 2009; Cutler and Lleras-Muney, 2010), I investigate possible heterogenous effects due to (iii) different educational achievement. I split the sample in two groups: the more educated one, namely tertiary education or more, and the less educated one, with people who achieved lower levels of schooling. Across European countries, the findings show that more educated people are less affected by an health shock with only three exceptions: Ireland, Norway and Romania (see Table B.17).

Finally, I consider some sensitivity checks about the reliability of CIA. By restricting all the individuals to be full-time in the first period, the ATT estimates are identical to the ones obtained taking differences. Therefore, in the presence of time-invariant unobserved heterogeneity the parameters of interest would be recovered. While the

[34] As in the related literature, I define an individual as being old if he/she is 49 years or more.

[35] In few cases, namely Denmark, Ireland and Slovakia, the effect is slightly higher for young people.

presence of unobserved heterogeneity time-variant is tested through the creation of a counfonding variables which show the sensitivity of the results. As a check, I follow the simulation approach implemented by Nannicini (2007) and Ichino et al. (2008). They suggest a sensitivity analysis - which is not a test of the CIA which is intrinsically non testable because the data are uninformative about the distribution of Y_0 for treated units - that provides valuable information in order to draw conclusions on the reliability of matching estimates. This form of sensitivity analysis makes assumptions about the type of unobserved characteristics, such as the relation with the independent variable of interest and the strength of the relation with the outcome, to estimate the true effect of the treatment, correcting for the confounder. By changing these characteristics, the plausibility of an unobserved covariate of sufficient strength to change the conclusions regarding the treatment effect can be evaluated.

In this contest, I recreate different confounders that attempt to violate the CIA. As recommended by (Nannicini, 2007), the results of this simulation based sensitivity analysis should be read in terms of the deviation between point estimates rather than the changing in significant levels. This analysis reveals that the results are generally robust with respect to simulated confounders such as young, old, male and female confounders. While this does not mean there are no unobserved heterogeneity issues, these tests do indicate that the results are robust to almost implausibly strong confounders. Finally, Groenwold et al. (2010) state that this method is a more conservative estimate due to the fact the correlations between the unobserved covariates and the observed covariates are not taken into account.[36]

[36]See Table B.18 for the estimates using the simulation approach by Nannicini (2007).

2.5 Health shocks and integration policy

In Section 2.4, I investigate the relationship of suffering from a health shock and labour market outcomes later on. Here I shed light on the fact that the ATT differences across countries may be due to heterogeneity in the country-specific institutional setup. As shown in Section 2.2, the 27 European countries under analysis exhibit differences in both compensation and integration index scores. In what follows, I assess to which extent such heterogeneity is able to explain cross-country distribution of estimated ATT. I study whether it exists a relationship between ATT of leaving employment and the disability policy indicators which are country-specific. Then I check the results using the Principal Components Analysis (PCA) to group some of these indicators according to their similarity and differences. The main advantage of PCA is that, once these patterns have been found, it is possible to reduce the number of dimensions of the index, without loss of any information. PCA extracts orthogonal linear combinations from a set of variables. This method is attractive for two reasons. Firstly, it is technically equal to a rotation of the dimensional axes, such that one can minimize the variance from the observations. The second reason is related to the fairly intuitive interpretation of the PCA: the coefficient of each variable is related to how much information it provides about the other variables.

First, I regress the ATT (of dropping out from full-time) on the 10 indicators of the "compensation" disability policy. The strength of this association is investigated through a standard OLS regression. I find a negative correlation between the estimated ATT of remaining in full-time job and the sickness payment duration. The intuition behind this is that individuals living in countries characterised by larger duration benefits are the ones with a higher likelihood of dropping out from full-time employment after a health shock occurs. These results hold when adding a rich set of country specific controlling variables. Then, I repeat the same analysis with the 10 components of the "integration" disability policy. The main result is that work incentives are positively correlated with the ATT, i.e. the higher the work incentives, the higher the probability of staying in full-time after a health shock. Also in this case the result is robust to taking into account other covariates.

Second, I determine the number of principal components using the screeplot, which is

Table 2.3: Drop out from FT and Policy integration sub-components

	(1)	(2)		(3)	(4)		(5)	(6)
Compensation policy			**Integration policy**			**Principal Component**		
Population Coverage	-0.006		*Consistency*	-0.026		*PC1: Sickness payment*	**-0.018***	0.023
	(0.019)			(0.032)			(0.010)	(0.020)
Min. required disability	0.008		*Complexity of the benefits*	0.001		*PC2: Employment programmes*	0.013	**0.071***
	(0.010)			(0.024)			(0.008)	(0.038)
Work incapacity benefit	-0.008		*Employer obligations*	0.040		*PC3: Benefit coverage*	0.014	-0.014
	(0.016)			(0.032)			(0.009)	(0.015)
Max. payment level	-0.001		*Supported employment*	-0.036		*PC4: Low spending in rehabilitation*	**-0.027***	0.001
	(0.012)			(0.034)			(0.015)	(0.015)
Permanence of benefit	-0.002		*Subsidised employment*	0.025		*PC5: Absence in monitoring*	**-0.036*****	-0.007
	(0.010)			(0.018)			(0.010)	(0.024)
Medical criteria	-0.018		*Sheltered employment*	-0.019		*PC6: Inclusiveness in the programmes*	**-0.043***	-0.030
	(0.016)			(0.022)			(0.023)	(0.026)
Vocational criteria	0.003		*Comprehensiveness rehabilitation*	0.028		*PC7: Benefit duration*	**-0.023****	**-0.034*****
	(0.009)			(0.020)			(0.010)	(0.007)
Sickness payment	0.004		*Timing rehabilitation*	-0.038				
	(0.013)			(0.038)				
Sickness payment duration	**-0.033****	**-0.038****	*Disability benefit suspension*	-0.007				
	(0.013)	(0.015)		(0.012)				
Sickness monitoring	-0.007		*Work incentives*	**0.041***	**0.022***			
	(0.007)			(0.021)	(0.012)			
Economic Variables		X			X			X
Social Expenditure		X			X			X
Constant	0.077	0.163		-0.149	-0.022		-0.093***	-0.168
	(0.117)	(0.375)		(0.161)	(0.486)		(0.013)	(0.383)
Obs	19	19		19	19		19	19
R sq.	0.643	0.728		0.358	0.602		0.627	0.660

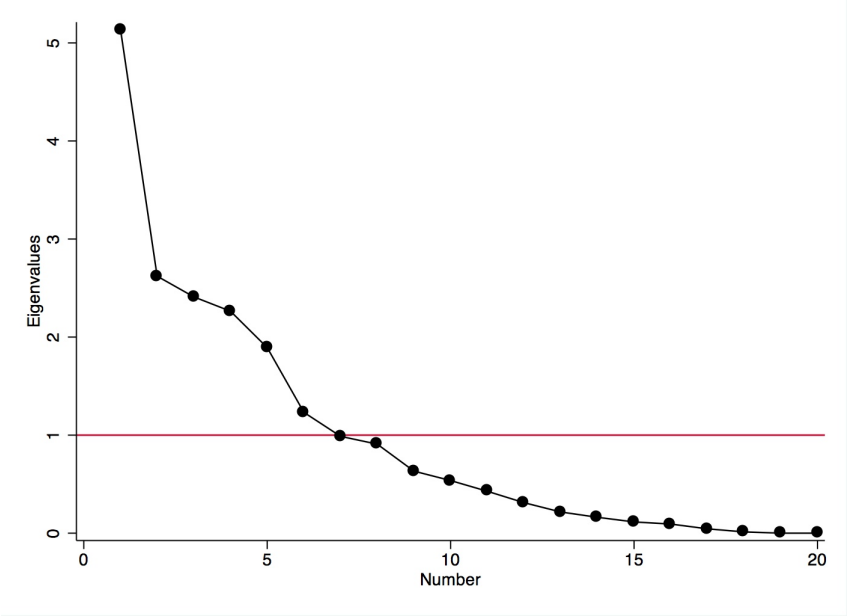
Note: ***Significant at the 1 %; **5%; *10% level. Standard Errors Clustered at the country level are reported in parentheses. Dependent variable is the ATTK estimates of being full-time worker in t3. All the variables are from EUROSTAT (2009). PC is the principal component. Economic variables: gdp per capita, population, rate of employment and unemployment (aged 15-64). Social expenditure variables: social protection, sickness/health care, disability, unemployment benefit. They are measured as a percentage of GDP. I consider rate of unemployment and rate of employment with individuals aged 15 to 64 years old.

the plot of the eigenvalues ordered from the largest to the smallest, shown in Figure 2.4. It visually demonstrates the proportion of total variance that each principal component is accounting for. Figure 2.4 shows the screeplot for the 20 principal components. The empirical rule to choose the principal components is to select the eigenvalues greater than one, so the first 7 components.[37]

After isolating these 7 main components, I proceed to assess the relationship between the estimated ATT of dropping out from full-time employment and the "new" indicators of the disability policy drawn from the PCA. Table 2.3 presents the OLS results and also in this case, the results confirm the previous findings. Without any controls in the covariates, I find that the probability of remaning in full-time job negatively depends on ammount of sickness payment, with low rehabilitation and benefit duration, as I expect. After controlling for the economic and social country specific I still find negative effect between full-time at t_3 and duration of the disability benefit while the quality of employment program supports to stay in full-time job. Encouraging work incentives for disabled people has a positive impact on the ATT. In other words, individuals living in countries characterised by higher work incentives within disability policies are less likely to drop out from full-time employment after a health shock occurs, which confirm

[37]I use the cosine squared of each component shown in order to understand which are the most important in terms of contribution. Components with a large value of cos_i^2 explain a relatively large portion of the total variance. I can interpret the first component in terms of vocational rehabilitation, while the second one is more related to work incentives.

Figure 2.4: Scree plot of the 20 disability policy sub-components



the previous analysis.

2.6 Conclusion

This study contributes to the literature about the impact of health shock on labour status. To the best of my knowledge, the only closely related paper is the one by Garcia-Gomez (2011). This analysis strengthens and improves the understanding of this branch of research by quantifying the effects of an adverse health shock on the individual labour market transitions across Europe. Matching techniques are used to control for the non-experimental nature of the data.

It contributes to the existing literature in three different ways. First, it deepens the understanding of the relationship between health and labour market dynamics, using a comparative empirical analysis among 27 European countries. Second, with respect to previous literature and in particular to Garcia-Gomez (2011), a different measure of health shock is used - limitation in daily activities. The purpose of using this indicator is to isolate the presence of long-standing limitations, ruling out cases in which individuals are affected by chronic illnesses that do not substantially limit their usual work activity. Finally, it provides evidence on how heterogeneous effects of health shocks on labour market outcomes depend on social security arrangements across Europe.

The question I empirically address is: what is the effect of a health shock on labour market transitions across Europe? The empirical analysis reveals a significant causal effect of a health shock on the likelihood of leaving full-time employment. Individuals who incur an adverse health shock are significantly more likely to transit either into part-time, unemployment or inactive status. The pooled effect across Europe is negative. Nevertheless, results differ across countries depending on the country-specific social security system. The largest effects are found in Romania and Ireland, ranging from 23% to 21% respectively. It is assessed as close to zero in Bulgaria and Austria.

I employ some ideas coming from the literature on the evaluation of active labour market programmes and I adapt them to this particular panel data case. This non-parametric approach has the key advantage that its validity does not depend on arbitrary functional form assumptions such as other conventional econometric models but fully exploits the panel data dimension. In particular, I use the formal causal framework suggested by Rosenbaum and Rubin (1983) and recently adapted by Lechner and Vazquez-Alvarez (2011) and Garcia-Gomez (2011) for the health and labour case. The

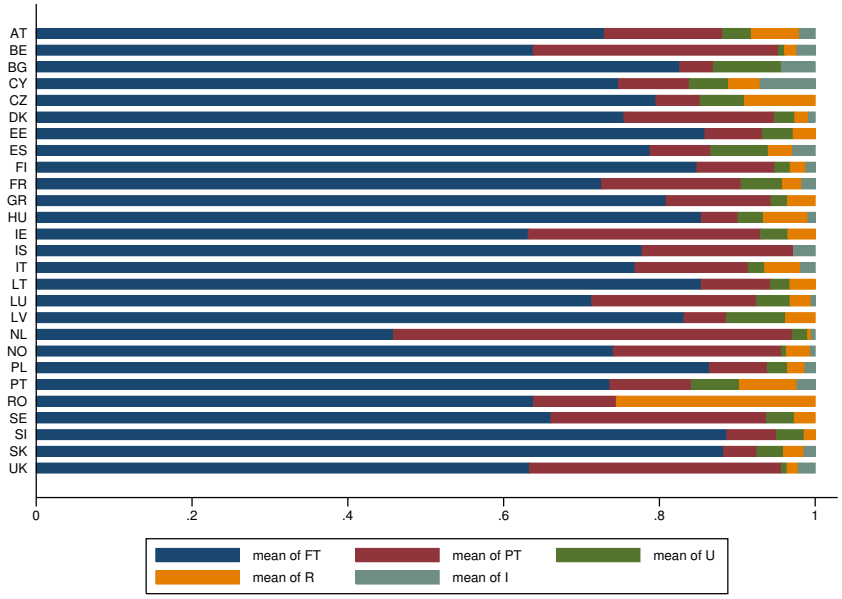
identification strategy involves matching individuals who undergo a health shock with their counterparts in a control group, using the propensity score matching method.

Furthermore, I provide some insight on the real effectiveness of disability policies in 27 European countries from 2003 and 2009, using the European Union Statistics on Income and Living Conditions dataset (EU-SILC). I argue that these discrepancies are explained through the heterogeneity in social security systems across Europe. Individuals living in countries characterised by higher work incentives within integration disability policies are less likely to drop out from full-time employment after a health shock occurred. It is therefore of great interest to empirically investigate this type of comparative analysis in view of the standardisation of EU policies.

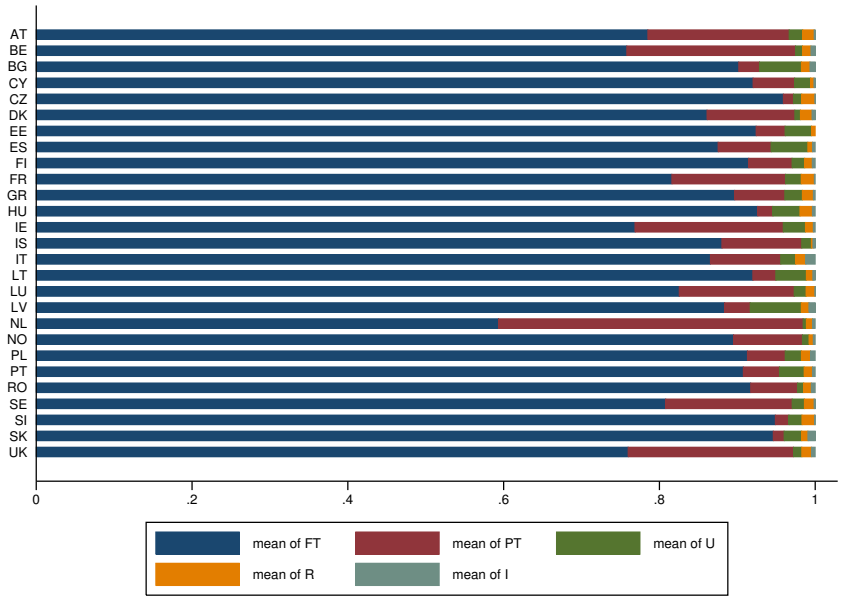
This study proposes possible lines for future research. First, it would be of interest to analyse transitions between the different non-employment statuses in order to better understand an individual's transition from unemployment to inactivity and/or to employment once unemployment benefits expire. Another possibility is to determine the effect of disability within a household in order to evaluate the impact of the onset of disability, not only for the individuals but also for the economic situation of the household (in terms of the labour supply of the members in good health).

Appendix A

Figure A.1: Labour market statuses at t_3 (mean)



(a) Treated



(b) Controls

Appendix B

Table B.1: The sub-components of policy indicators

X	Description
1	coverage
2	minimum degree of incapacity needed for benefit entitlement
3	degree of incapacity needed for a full benefit
4	disability benefit level (replacement rate for average earnings with a continuous work record)
5	permanence of benefits (from strictly permanent to strictly temporary)
6	medical assessment
7	vocational assessment (from strict own occupation assessment to all jobs available)
8	sickness benefit level (distinguishing short and long-term sickness absence)
9	sickness benefit duration (including the period of continued wage payment)
10	sickness monitoring (from no checks on sickness absence to strict steps for monitoring)
Y	**Description**
1	coverage consistency (access to different programmes and possibility to combine them)
2	assessment structure (responsibility and consistency)
3	anti-discrimination legislation covering employer responsibility for work retention
4	supported employment programme (extent, permanence and flexibility)
5	subsidised employment programme (extent, permanence and flexibility)
6	sheltered employment sector (extent and transitory nature)
7	vocational rehabilitation programme (obligation and extent of spending)
8	timing of rehabilitation (from early intervention to late intervention)
9	benefit suspension regulations (from considerable duration to nonexistent)
10	additional work incentives (including possibilities to combine work and benefit receipt)

Source: compiled by the author using data from OECD (2010).

Table B.2: OECD disability policy typology: classification of the compensation indicator scores

X	**5 points**	**4 points**	**3 points**	**2 points**	**1 points**	**0 points**
X1. Population coverage	Total population (residents)	Some of those out of the labour force	Labour force plus means-tested non-contrib. scheme	Labour force with voluntary self-insurance	Labour force	Employees
X2. Minimum required disability	0-25%	26-40%	41-55%	56-70%	71-85%	86-100%
X3. Disability level for full benefit	less 50%	50-61%	62-73%	74-85%	86-99%	100%
X4. Maximum disability benefit payment level	RR greater 85%	RR (85 % and 75%)	RR (75 % and 50%)	RR (50 % and 35%)	RR (35 % and 25%)	RR less 20%
X5. Permanence of benefit payments	Strictly permanent	De facto permanent	Self-reported review only	Regulated review procedure	Strictly temporary unless fully (= 100%) disabled	Strictly temporary in all cases
X6. Medical assessment criteria	Treating doctor exclusively	Treating doctor predominantly	Insurance doctor predominantly	Insurance doctor exclusively	Team of experts in the insurance	Insurance team
X7. Vocational assessment criteria	Strict own	Previous earnings	Own-occupation partial benefits	Current labour	All jobs available	All jobs available taken into account strictly applied
X8. Sickness payment level	RR = 100% also for long-term sickness absence	RR = 100% (short-term) greater 75% (long-term) sickness absence	RR = 75% (short-term) greater 50% (long-term) sickness absence	75 greater RR greater 50% for any type of sickness absence	RR greater 50% (short-term) ¡ 50% (long-term) sickness absence	RR less 50% also for short-term sickness absence
X9. Sickness benefit payment duration	One year or more short or no wage payment period	One year or more significant wage payment period	Six-twelve months short or no wage payment period	Six-twelve months significant wage payment period	Less than six months short or no wage payment period	Less than six months significant wage payment period
X10. Sickness absence monitoring	Lenient sickness certificate requirements	Sickness certificate and occupational health service with risk prevention	Frequent sickness certificates	Strict follow-up steps with early intervention	Strict controls of sickness certificate	Strict follow-up steps

Source: compiled by the author using data from OECD (2010). Note: RR=replacement rate.

Table B.3: OECD disability policy typology: classification of the integration indicator scores

Y	**5 points**	**4 points**	**3 points**	**2 points**	**1 points**	**0 points**
Y1. Consistency across supports in coverage rules	All programmes accessible	Minor discrepancy flexible mixture	Minor discrepancy restricted mixture	Major discrepancy flexible mixture	Major discrepancy restricted mixture	Strong differences in eligibility
Y2. Complexity of the benefits and supports systems	Same agency for assessment for all programmes	One agency for integration benefits co-ordinated	Same agency for benefits and vocational rehabilitation	One agency for integration benefits not co-ordinated	Different agencies for most programmes	Different agencies for all kinds of assessments
Y3. Employer obligations for their employees and new hires	Major obligations towards employees and new applicants	Major obligations towards employees less for applicants	Some obligations towards employees and new applicants	Some obligations towards employees none for applicants	No obligations at all but dismissal protection	No obligations of any kind
Y4. Supported employment programmes	Strong programme permanent option	Strong programme only time-limited	Intermediary also permanent	Intermediary only time-limited	Very limited programme	Not existent
Y5. Subsidised employment programmes	Strong and flexible programme with a permanent option	Strong and flexible programme but time-limited	Intermediary either permanent or flexible	Intermediary neither permanent nor flexible	Very limited programme	Not existent
Y6. Sheltered employment programmes	Strong focus with significant transition rates	Strong focus but largely permanent employment	Intermediary focus with some "new" attempts	Intermediary focus "traditional" programme	Very limited programme	Not existent
Y7. Comprehensiveness of vocational rehabilitation	Compulsory rehabilitation with large spending	Compulsory rehabilitation with low spending	Intermediary view relatively large spending	Intermediary view relatively low spending	Voluntary rehabilitation with large spending	Voluntary rehabilitation with low spending
Y8. Timing of vocational rehabilitation	In theory and practice any time (e.g. still at work)	In theory any time in practice not really early	Early intervention increasingly encouraged	Generally de facto relatively late intervention	After long-term sickness or for disability recipients	Only for disability benefit recipients
Y9. Disability benefit suspension option	Two years or more	At least one but less than two years	More than three but less than 12 months	Up to three months	Some but not for disability benefits	None
Y10. Work incentives for beneficiaries	Permanent in-work benefit provided	Benefit continued for a considerable (trial) period	Income beyond pre-disability level allowed	Income up to pre-disability level also partial benefit	Income up to pre-disability level no partial benefit	Some additional income allowed

Source: compiled by the author using data from OECD (2010).

Table B.4: Disability policy typology: country scores (2009)

Countries	x1	x2	x3	x4	x5	x6	x7	x8	x9	x10	X total
AT	2	3	4	2	1	1	4	3	2	2	24
BE	3	2	3	1	4	2	4	2	2	2	25
CZ	1	4	3	3	0	2	1	0	5	5	24
DK	5	2	1	3	4	4	2	4	3	0	28
FI	5	4	4	3	2	3	2	3	3	3	32
FR	3	2	1	3	1	2	4	2	5	2	25
GR	3	3	2	5	2	1	3	2	2	2	25
HU	1	3	2	3	2	1	4	3	5	4	28
IE	3	1	2	1	4	3	2	1	5	4	26
IT	3	2	0	3	1	1	3	3	5	5	26
LU	2	1	2	5	3	2	2	5	4	2	28
NL	4	4	2	3	2	1	0	4	4	0	24
NO	5	3	2	4	2	4	2	5	4	2	33
PL	3	3	4	4	0	1	3	3	2	2	25
PT	3	2	3	5	4	1	4	1	5	5	33
SK	1	4	3	2	4	2	1	2	5	2	26
ES	3	4	1	4	5	0	3	2	4	1	27
SE	5	5	1	5	4	3	1	4	4	5	37
UK	3	1	2	1	2	3	1	1	2	5	21
Countries	**y1**	**y2**	**y3**	**y4**	**y5**	**y6**	**y7**	**y8**	**y9**	**y10**	**Y total**
AT	2	3	3	4	4	2	5	4	0	3	30
BE	3	3	3	1	5	2	2	3	2	0	24
CZ	3	1	4	1	1	3	1	4	0	3	21
DK	4	4	2	3	5	2	5	4	5	3	37
FI	2	2	4	3	3	3	4	4	5	2	32
FR	3	2	3	3	5	4	1	2	0	3	26
GR	3	2	3	0	2	3	0	1	0	2	16
HU	2	3	4	3	3	2	3	2	4	2	28
IE	3	2	2	1	3	2	0	1	1	2	17
IT	4	2	4	1	1	2	0	2	0	2	18
LU	2	4	3	2	4	3	2	3	0	1	24
NL	4	4	4	2	2	4	4	4	2	5	35
NO	4	5	4	2	4	4	5	4	5	0	37
PL	4	2	2	0	3	4	2	2	0	3	22
PT	3	2	2	1	2	2	1	1	1	1	16
SK	3	2	4	2	2	3	0	2	0	3	21
ES	4	3	3	1	2	3	2	2	0	2	22
SE	3	4	5	2	4	3	3	3	5	0	32
UK	4	4	4	3	1	2	1	3	5	5	32

Source: compiled by the author using data from OECD (2009).

Table B.5: Summary statistics across Europe

Countries			**AUSTRIA**					**BELGIUM**					**BULGARIA**					**CYPRUS**					**CZECH REPUBLIC**	
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Wave 2005	6289	0.00	0.00	0.00	0.00	5957	0.00	0.00	0.00	0.00	2394	0.00	0.00	0.00	0.00	4260	0.00	0.00	0.00	0.00	9529	0.00	0.00	0.00	0.00
Wave 2006	6289	0.22	0.41	0.00	1.00	5957	0.17	0.38	0.00	1.00	2394	0.00	0.00	0.00	0.00	4260	0.00	0.00	0.00	0.00	9529	0.00	0.00	0.00	0.00
Wave 2007	6289	0.31	0.46	0.00	1.00	5957	0.24	0.43	0.00	1.00	2394	0.00	0.00	0.00	0.00	4260	0.33	0.47	0.00	1.00	9529	0.22	0.41	0.00	1.00
Wave 2008	6289	0.23	0.42	0.00	1.00	5957	0.29	0.45	0.00	1.00	2394	0.47	0.50	0.00	1.00	4260	0.35	0.48	0.00	1.00	9529	0.42	0.49	0.00	1.00
Wave 2009	6289	0.24	0.43	0.00	1.00	5957	0.29	0.46	0.00	1.00	2394	0.53	0.50	0.00	1.00	4260	0.32	0.47	0.00	1.00	9529	0.36	0.48	0.00	1.00
General Health																									
(good=0)	6288	0.95	0.23	0.00	1.00	5957	0.94	0.24	0.00	1.00	2393	0.83	0.38	0.00	1.00	4260	0.95	0.23	0.00	1.00	9529	0.83	0.38	0.00	1.00
(bad=1)	6288	0.05	0.23	0.00	1.00	5957	0.06	0.24	0.00	1.00	2393	0.17	0.38	0.00	1.00	4260	0.05	0.23	0.00	1.00	9529	0.17	0.38	0.00	1.00
Age	6289	39.80	10.37	17.00	63.00	5957	40.38	9.97	16.00	63.00	2394	41.14	10.62	17.00	63.00	4260	40.44	10.72	17.00	63.00	9529	41.61	10.67	17.00	63.00
Age squared	6289	1691.52	810.15	289.00	3969.00	5957	1729.55	812.54	256.00	3969.00	2394	1804.76	869.74	289.00	3969.00	4260	1750.39	879.49	289.00	3969.00	9529	1845.10	885.61	289.00	3969.00
Sex																									
(female=0)	6289	0.43	0.49	0.00	1.00	5957	0.45	0.50	0.00	1.00	2394	0.46	0.50	0.00	1.00	4260	0.45	0.50	0.00	1.00	9529	0.46	0.50	0.00	1.00
(male=1)	6289	0.57	0.49	0.00	1.00	5957	0.55	0.50	0.00	1.00	2394	0.54	0.50	0.00	1.00	4260	0.55	0.50	0.00	1.00	9529	0.54	0.50	0.00	1.00
Marriage status	6286	1.79	0.58	1.00	3.00	5943	1.84	0.59	1.00	3.00	2389	1.87	0.54	1.00	3.00	4260	1.86	0.47	1.00	3.00	9529	1.93	0.58	1.00	3.00
1. Never	6286	0.29	0.45	0.00	1.00	5943	0.27	0.44	0.00	1.00	2389	0.22	0.41	0.00	1.00	4260	0.19	0.39	0.00	1.00	9529	0.21	0.41	0.00	1.00
2. Married	6286	0.62	0.49	0.00	1.00	5943	0.62	0.48	0.00	1.00	2389	0.70	0.46	0.00	1.00	4260	0.76	0.43	0.00	1.00	9529	0.66	0.48	0.00	1.00
3. Separated/Widowed/Divorced	6286	0.09	0.28	0.00	1.00	5943	0.11	0.31	0.00	1.00	2389	0.09	0.28	0.00	1.00	4260	0.05	0.22	0.00	1.00	9529	0.14	0.34	0.00	1.00
Consensual union																									
(no=0)	6281	0.28	0.45	0.00	1.00	5862	0.25	0.43	0.00	1.00	2391	0.25	0.43	0.00	1.00	4260	0.22	0.42	0.00	1.00	9529	0.28	0.45	0.00	1.00
(yes=1)	6281	0.72	0.45	0.00	1.00	5862	0.75	0.43	0.00	1.00	2391	0.75	0.43	0.00	1.00	4260	0.78	0.42	0.00	1.00	9529	0.72	0.45	0.00	1.00
Education	6289	3.20	0.68	1.00	4.00	5804	3.35	0.81	1.00	4.00	2393	3.00	0.68	1.00	4.00	4257	3.01	1.01	1.00	4.00	9529	3.12	0.44	1.00	4.00
1. Primary	6289	0.01	0.09	0.00	1.00	5804	0.04	0.19	0.00	1.00	2393	0.02	0.14	0.00	1.00	4257	0.14	0.35	0.00	1.00	9529	0.00	0.01	0.00	1.00
2. Low Secondary	6289	0.13	0.33	0.00	1.00	5804	0.10	0.30	0.00	1.00	2393	0.18	0.38	0.00	1.00	4257	0.08	0.27	0.00	1.00	9529	0.05	0.21	0.00	1.00
3. High Secondary	6289	0.52	0.50	0.00	1.00	5804	0.34	0.47	0.00	1.00	2393	0.59	0.49	0.00	1.00	4257	0.41	0.49	0.00	1.00	9529	0.79	0.41	0.00	1.00
4. Tertiary	6289	0.34	0.47	0.00	1.00	5804	0.52	0.50	0.00	1.00	2393	0.21	0.41	0.00	1.00	4257	0.37	0.48	0.00	1.00	9529	0.16	0.37	0.00	1.00
Occupations	6266	4.75	2.22	1.00	9.00	5878	4.20	2.42	1.00	9.00	2369	5.71	2.55	1.00	9.00	4260	4.78	2.46	1.00	9.00	9529	4.97	2.35	1.00	9.00
1. Manager	6266	0.00	0.07	0.00	1.00	5878	0.00	0.05	0.00	1.00	2369	0.00	0.07	0.00	1.00	4260	0.01	0.12	0.00	1.00	9529	0.00	0.06	0.00	1.00
2. Professionals	6266	0.06	0.24	0.00	1.00	5878	0.10	0.30	0.00	1.00	2369	0.06	0.23	0.00	1.00	4260	0.02	0.14	0.00	1.00	9529	0.04	0.20	0.00	1.00
3. Technicians and associate professionals	6266	0.09	0.29	0.00	1.00	5878	0.21	0.40	0.00	1.00	2369	0.11	0.31	0.00	1.00	4260	0.17	0.38	0.00	1.00	9529	0.09	0.29	0.00	1.00
4. Clerical support workers	6266	0.16	0.36	0.00	1.00	5878	0.14	0.35	0.00	1.00	2369	0.08	0.27	0.00	1.00	4260	0.19	0.40	0.00	1.00	9529	0.24	0.43	0.00	1.00
5. Service and sales workers	6266	0.18	0.39	0.00	1.00	5878	0.21	0.40	0.00	1.00	2369	0.06	0.24	0.00	1.00	4260	0.13	0.33	0.00	1.00	9529	0.09	0.29	0.00	1.00
6. Skilled agricultural, forestry and fishery workers	6266	0.20	0.40	0.00	1.00	5878	0.09	0.29	0.00	1.00	2369	0.14	0.35	0.00	1.00	4260	0.14	0.35	0.00	1.00	9529	0.12	0.33	0.00	1.00
7. Craft and related trades	6266	0.04	0.20	0.00	1.00	5878	0.01	0.10	0.00	1.00	2369	0.04	0.19	0.00	1.00						9529	0.02	0.13	0.00	1.00
8. Plant and machine operators	6266	0.14	0.35	0.00	1.00	5878	0.10	0.30	0.00	1.00	2369	0.19	0.40	0.00	1.00	4260	0.14	0.35	0.00	1.00	9529	0.21	0.41	0.00	1.00
9. Unskilled operators	6266	0.04	0.20	0.00	1.00	5878	0.06	0.23	0.00	1.00	2369	0.16	0.37	0.00	1.00	4260	0.05	0.22	0.00	1.00	9529	0.12	0.32	0.00	1.00
Type of contract	5514	1.06	0.23	1.00	2.00	5269	1.09	0.28	1.00	2.00	2109	1.11	0.32	1.00	2.00	3657	1.11	0.31	1.00	2.00	8472	1.12	0.33	1.00	2.00
1. Permanent	5514	0.94	0.23	0.00	1.00	5269	0.91	0.28	0.00	1.00	2109	0.89	0.32	0.00	1.00	3657	0.89	0.31	0.00	1.00	8472	0.88	0.33	0.00	1.00
2. Temporary	5514	0.06	0.23	0.00	1.00	5269	0.09	0.28	0.00	1.00	2109	0.11	0.32	0.00	1.00	3657	0.11	0.31	0.00	1.00	8472	0.12	0.33	0.00	1.00
Self-employed																									
(yes=1)	6289	0.12	0.33	0.00	1.00	5931	0.11	0.31	0.00	1.00	2379	0.08	0.27	0.00	1.00	4260	0.14	0.35	0.00	1.00	9529	0.11	0.31	0.00	1.00
(no=0)	6289	0.88	0.33	0.00	1.00	5931	0.89	0.31	0.00	1.00	2379	0.92	0.27	0.00	1.00	4260	0.86	0.35	0.00	1.00	9529	0.89	0.31	0.00	1.00
Cash income (Log)	6289	8.56	3.14	0.00	12.52	5957	8.67	3.18	0.00	12.03	2394	6.40	2.42	0.00	9.42	4260	9.81	0.62	7.48	11.64	9529	7.52	2.74	0.00	10.79
NON-cash income (Log)	5356	0.03	0.28	0.00	9.83	5060	0.29	0.82	0.00	14.30	2394	0.03	0.12	0.00	1.23										
Cash employee income																									
(no=0)	6289	0.11	0.32	0.00	1.00	5957	0.12	0.32	0.00	1.00	2394	0.12	0.33	0.00	1.00	4260	0.19	0.31	0.00	1.00	9529	0.11	0.32	0.00	1.00
(yes=1)	6289	0.89	0.32	0.00	1.00	5957	0.88	0.32	0.00	1.00	2394	0.88	0.33	0.00	1.00	4260	0.81	0.31	0.00	1.00	9529	0.89	0.32	0.00	1.00
NON-cash employee income																									
(no=0)	6289	0.82	0.38	0.00	1.00	5957	0.70	0.46	0.00	1.00	2394	0.90	0.30	0.00	1.00	4260	0.00	0.00	0.00	0.00	9529	0.00	0.00	0.00	0.00
(yes=1)	6289	0.18	0.38	0.00	1.00	5957	0.30	0.46	0.00	1.00	2394	0.10	0.30	0.00	1.00	4260	1.00	0.00	1.00	1.00	9529	1.00	0.00	1.00	1.00
Benefit																									
1. Disability (Log)	6289	0.01	0.29	0.00	10.31	5957	0.01	0.27	0.00	12.00	2394	0.00	0.06	0.00	1.10	4260	0.00	0.07	0.00	2.96	9529	0.02	0.26	0.00	8.06
2. Sickness (Log)	6289	0.01	0.22	0.00	8.80	5957	0.02	0.33	0.00	13.20	2394	0.00	0.01	0.00	0.42	4260	0.01	0.21	0.00	11.71	9529	0.03	0.16	0.00	3.56
3. Unemployment (Log)	6289	0.15	0.89	0.00	19.20	5957	0.27	1.43	0.00	41.00	2394	0.00	0.03	0.00	0.72	4260	0.14	2.43	0.00	152.32	9529	0.01	0.10	0.00	2.89
Disability																									
(no=0)	6289	1.00	0.05	0.00	1.00	5957	1.00	0.06	0.00	1.00	2394	0.99	0.08	0.00	1.00	4260	1.00	0.03	0.00	1.00	9529	0.99	0.10	0.00	1.00
(yes=1)	6289	0.00	0.05	0.00	1.00	5957	0.00	0.06	0.00	1.00	2394	0.01	0.08	0.00	1.00	4260	0.00	0.03	0.00	1.00	9529	0.01	0.10	0.00	1.00
Sickness	6289	0.01	0.10	0.00	1.00	5957	0.01	0.10	0.00	1.00	2394	0.00	0.04	0.00	1.00	4260	0.01	0.09	0.00	1.00	9529	0.09	0.28	0.00	1.00
(no=0)	6289	0.99	0.10	0.00	1.00	5957	0.99	0.10	0.00	1.00	2394	1.00	0.04	0.00	1.00	4260	0.99	0.09	0.00	1.00	9529	0.91	0.28	0.00	1.00
(yes=1)	6289	0.01	0.10	0.00	1.00	5957	0.01	0.10	0.00	1.00	2394	0.00	0.04	0.00	1.00	4260	0.01	0.09	0.00	1.00	9529	0.09	0.28	0.00	1.00
Unemployment	6289	0.05	0.22	0.00	1.00	5957	0.07	0.25	0.00	1.00	2394	0.01	0.09	0.00	1.00	4260	0.05	0.22	0.00	1.00	9529	0.03	0.16	0.00	1.00
(no=0)	6289	0.95	0.22	0.00	1.00	5957	0.93	0.25	0.00	1.00	2394	0.99	0.09	0.00	1.00	4260	0.95	0.22	0.00	1.00	9529	0.97	0.16	0.00	1.00
(yes=1)	6289	0.05	0.22	0.00	1.00	5957	0.07	0.25	0.00	1.00	2394	0.01	0.09	0.00	1.00	4260	0.05	0.22	0.00	1.00	9529	0.03	0.16	0.00	1.00
Family size	6289	2.46	1.03	1.00	7.00	5957	2.30	0.90	1.00	7.00	2394	3.12	1.27	1.00	10.00	4260	2.89	1.14	1.00	7.00	9529	2.49	0.99	1.00	7.00
H. income minus old-age and survivor's benefits	6289	38.10	24.06	-3.40	313.49	5957	38.69	24.48	-40.31	486.60	2394	3.80	3.18	-1.71	72.52	4260	37.83	22.79	-3.71	421.96	9529	10.97	6.94	-0.06	162.42
H. income minus other transfers	6289	40.28	24.98	-4.40	323.49	5957	39.39	24.36	-40.31	486.60	2394	4.23	3.19	-0.06	72.52	4260	39.24	23.65	-0.11	421.96	9529	11.40	6.93	-0.01	162.42
H. income	6289	44.27	24.99	0.02	330.35	5957	42.59	24.39	0.06	507.00	2394	4.39	3.19	0.08	72.63	4260	41.62	24.29	0.00	421.96	9529	12.11	6.83	0.78	163.89
Urban area	6289	0.28	0.45	0.00	1.00	5957	0.49	0.50	0.00	1.00	2394	0.37	0.48	0.00	1.00	4260	0.57	0.50	0.00	1.00	9529	0.28	0.45	0.00	1.00
Dwelling type																									
(detached house=0)	6289	0.35	0.48	0.00	1.00	5957	0.16	0.36	0.00	1.00	2394	0.41	0.49	0.00	1.00	4260	0.19	0.39	0.00	1.00	9529	0.50	0.50	0.00	1.00
(apartment=1)	6289	0.65	0.48	0.00	1.00	5957	0.84	0.36	0.00	1.00	2394	0.59	0.49	0.00	1.00	4260	0.81	0.39	0.00	1.00	9529	0.50	0.50	0.00	1.00

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Countries	DENMARK					ESTONIA					SPAIN					FINLAND					FRANCE				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Wave 2005	4301	0.12	0.33	0.00	1.00	6170	0.00	0.00	0.00	0.00	14216	0.00	0.00	0.00	0.00	3525	0.00	0.00	0.00	0.00	18305	0.00	0.00	0.00	0.00
Wave 2006	4301	0.23	0.42	0.00	1.00	6170	0.31	0.46	0.00	1.00	14216	0.21	0.41	0.00	1.00	3525	0.26	0.44	0.00	1.00	18305	0.24	0.43	0.00	1.00
Wave 2007	4301	0.24	0.43	0.00	1.00	6170	0.21	0.40	0.00	1.00	14216	0.24	0.43	0.00	1.00	3525	0.23	0.42	0.00	1.00	18305	0.26	0.44	0.00	1.00
Wave 2008	4301	0.21	0.41	0.00	1.00	6170	0.20	0.40	0.00	1.00	14216	0.26	0.44	0.00	1.00	3525	0.23	0.42	0.00	1.00	18305	0.25	0.43	0.00	1.00
Wave 2009	4301	0.20	0.40	0.00	1.00	6170	0.28	0.45	0.00	1.00	14216	0.29	0.45	0.00	1.00	3525	0.28	0.45	0.00	1.00	18305	0.25	0.43	0.00	1.00
General Health																									
(good=0)	4301	0.93	0.26	0.00	1.00	6170	0.80	0.40	0.00	1.00	14215	0.89	0.32	0.00	1.00	3525	0.91	0.28	0.00	1.00	18303	0.90	0.30	0.00	1.00
(bad=1)	4301	0.07	0.26	0.00	1.00	6170	0.20	0.40	0.00	1.00	14215	0.11	0.32	0.00	1.00	3525	0.09	0.28	0.00	1.00	18303	0.10	0.30	0.00	1.00
Age	4301	43.88	9.95	17.00	63.00	6170	40.63	10.79	17.00	63.00	14216	40.43	10.49	17.00	71.00	3525	43.28	10.66	18.00	63.00	18305	41.22	10.01	17.00	63.00
Age squared	4301	2024.44	873.38	289.00	3969.00	6170	1767.16	871.97	289.00	3969.00	14216	1744.79	858.32	289.00	5041.00	3525	1986.35	902.06	324.00	3969.00	18305	1799.01	821.04	289.00	3969.00
Sex																									
(female=0)	4301	0.49	0.50	0.00	1.00	6170	0.50	0.50	0.00	1.00	14216	0.38	0.49	0.00	1.00	3525	0.46	0.50	0.00	1.00	18305	0.46	0.50	0.00	1.00
(male=1)	4301	0.51	0.50	0.00	1.00	6170	0.50	0.50	0.00	1.00	14216	0.62	0.49	0.00	1.00	3525	0.54	0.50	0.00	1.00	18305	0.54	0.50	0.00	1.00
Marriage status	4300	1.84	0.54	1.00	3.00	5793	1.83	0.61	1.00	3.00	14211	1.75	0.54	1.00	3.00	3525	1.82	0.61	1.00	3.00	18303	1.76	0.59	1.00	3.00
1. Never	4300	0.24	0.43	0.00	1.00	5793	0.29	0.45	0.00	1.00	14211	0.30	0.46	0.00	1.00	3525	0.30	0.46	0.00	1.00	18303	0.32	0.47	0.00	1.00
2. Married	4300	0.68	0.47	0.00	1.00	5793	0.59	0.49	0.00	1.00	14211	0.65	0.48	0.00	1.00	3525	0.59	0.49	0.00	1.00	18303	0.60	0.49	0.00	1.00
3. Separated/Widowed/Divorced	4300	0.08	0.27	0.00	1.00	5793	0.12	0.32	0.00	1.00	14211	0.05	0.22	0.00	1.00	3525	0.11	0.32	0.00	1.00	18303	0.08	0.27	0.00	1.00
Consensual union																									
(no=0)	4301	0.18	0.38	0.00	1.00	6162	0.29	0.45	0.00	1.00	14165	0.29	0.46	0.00	1.00	3525	0.25	0.43	0.00	1.00	18305	0.20	0.40	0.00	1.00
(yes=1)	4301	0.82	0.38	0.00	1.00	6162	0.71	0.45	0.00	1.00	14165	0.71	0.46	0.00	1.00	3525	0.75	0.43	0.00	1.00	18305	0.80	0.40	0.00	1.00
Education	4286	3.22	0.69	1.00	4.00	6166	3.31	0.64	1.00	4.00	14122	2.81	1.09	1.00	4.00	3519	3.26	0.79	1.00	4.00	17287	3.16	0.80	1.00	4.00
1. Primary	4286	0.00	0.02	0.00	1.00	6166	0.00	0.07	0.00	1.00	14122	0.16	0.36	0.00	1.00	3519	0.04	0.20	0.00	1.00	17287	0.05	0.22	0.00	1.00
2. Low Secondary	4286	0.15	0.36	0.00	1.00	6166	0.09	0.28	0.00	1.00	14122	0.24	0.43	0.00	1.00	3519	0.09	0.28	0.00	1.00	17287	0.09	0.29	0.00	1.00
3. High Secondary	4286	0.48	0.50	0.00	1.00	6166	0.51	0.50	0.00	1.00	14122	0.24	0.42	0.00	1.00	3519	0.44	0.50	0.00	1.00	17287	0.50	0.50	0.00	1.00
4. Tertiary	4286	0.37	0.48	0.00	1.00	6166	0.40	0.49	0.00	1.00	14122	0.36	0.48	0.00	1.00	3519	0.43	0.50	0.00	1.00	17287	0.36	0.48	0.00	1.00
Occupations	4272	4.12	2.31	1.00	9.00	6161	4.94	2.73	1.00	9.00	14186	5.05	2.56	1.00	9.00	3523	3.92	2.44	1.00	9.00	18226	4.52	2.51	1.00	9.00
1. Manager	4272	0.01	0.08	0.00	1.00	6161	0.01	0.08	0.00	1.00	14186	0.01	0.09	0.00	1.00	3523	0.01	0.09	0.00	1.00	18226	0.01	0.12	0.00	1.00
2. Professionals	4272	0.07	0.25	0.00	1.00	6161	0.13	0.33	0.00	1.00	14186	0.06	0.24	0.00	1.00	3523	0.18	0.38	0.00	1.00	18226	0.08	0.27	0.00	1.00
3. Technicians and associate professionals	4272	0.20	0.40	0.00	1.00	6161	0.13	0.33	0.00	1.00	14186	0.15	0.35	0.00	1.00	3523	0.20	0.40	0.00	1.00	18226	0.15	0.36	0.00	1.00
4. Clerical support workers	4272	0.25	0.43	0.00	1.00	6161	0.13	0.34	0.00	1.00	14186	0.11	0.31	0.00	1.00	3523	0.15	0.35	0.00	1.00	18226	0.19	0.39	0.00	1.00
5. Service and sales workers	4272	0.11	0.31	0.00	1.00	6161	0.05	0.21	0.00	1.00	14186	0.12	0.32	0.00	1.00	3523	0.06	0.24	0.00	1.00	18226	0.13	0.33	0.00	1.00
6. Skilled agricultural, forestry and fishery workers	4272	0.12	0.32	0.00	1.00	6161	0.12	0.32	0.00	1.00	14186	0.15	0.36	0.00	1.00	3523	0.13	0.34	0.00	1.00	18226	0.11	0.31	0.00	1.00
7. Craft and related trades	4272	0.02	0.15	0.00	1.00	6161	0.03	0.17	0.00	1.00	14186	0.03	0.18	0.00	1.00						18226	0.04	0.20	0.00	1.00
8. Plant and machine operators	4272	0.10	0.30	0.00	1.00	6161	0.16	0.37	0.00	1.00	14186	0.16	0.37	0.00	1.00	3523	0.09	0.29	0.00	1.00	18226	0.11	0.31	0.00	1.00
9. Unskilled operators	4272	0.06	0.25	0.00	1.00	6161	0.16	0.37	0.00	1.00	14186	0.08	0.27	0.00	1.00	3523	0.06	0.23	0.00	1.00	18226	0.09	0.29	0.00	1.00
Type of contract	3925	1.00	0.00	1.00	1.00	5681	1.03	0.16	1.00	2.00	11629	1.25	0.43	1.00	2.00	2522	1.13	0.34	1.00	2.00	16225	1.12	0.32	1.00	2.00
1. Permanent	3925	1.00	0.00	1.00	1.00	5681	0.97	0.16	0.00	1.00	11629	0.75	0.43	0.00	1.00	2522	0.87	0.34	0.00	1.00	16225	0.88	0.32	0.00	1.00
2. Temporary	3925	0.00	0.00	0.00	0.00	5681	0.03	0.16	0.00	1.00	11629	0.25	0.43	0.00	1.00	2522	0.13	0.34	0.00	1.00	16225	0.12	0.32	0.00	1.00
Self-employed																									
(yes=1)	4301	0.09	0.28	0.00	1.00	6169	0.07	0.26	0.00	1.00	14212	0.18	0.38	0.00	1.00	3525	0.26	0.44	0.00	1.00	18304	0.08	0.28	0.00	1.00
(no=0)	4301	0.91	0.28	0.00	1.00	6169	0.93	0.26	0.00	1.00	14212	0.82	0.38	0.00	1.00	3525	0.74	0.44	0.00	1.00	18304	0.92	0.28	0.00	1.00
Cash income (Log)						6170	7.64	2.13	0.00	10.69	14216	7.74	3.71	0.00	11.63						18305	8.87	2.83	0.00	12.33
NON-cash income (Log)						5223	0.08	0.33	0.00	3.77	12316	0.09	0.71	0.00	40.00						4552	0.02	0.26	0.00	9.60
Cash employee income																									
(no=0)	4301	0.13	0.32	0.00	1.00	6170	0.07	0.25	0.00	1.00	14216	0.18	0.39	0.00	1.00	3525	0.70	0.78	0.00	1.00	18305	0.09	0.28	0.00	1.00
(yes=1)	4301	0.87	0.32	0.00	1.00	6170	0.93	0.25	0.00	1.00	14216	0.82	0.39	0.00	1.00	3525	0.30	0.22	0.00	1.00	18305	0.91	0.28	0.00	1.00
NON-cash employee income																									
(no=0)	4301	0.00	0.00	0.00	0.00	6170	0.76	0.43	0.00	1.00	14216	0.82	0.38	0.00	1.00	3525	0.21	0.41	0.00	1.00	18305	0.25	0.43	0.00	1.00
(yes=1)	4301	1.00	0.00	1.00	1.00	6170	0.24	0.43	0.00	1.00	14216	0.18	0.38	0.00	1.00	3525	0.79	0.41	0.00	1.00	18305	0.75	0.43	0.00	1.00
Benefit																									
1. Disability (Log)						6170	0.01	0.08	0.00	1.61	14216	0.01	0.24	0.00	16.80						18305	0.02	0.55	0.00	41.58
2. Sickness (Log)						6170	0.02	0.07	0.00	1.53	14216	0.02	0.39	0.00	17.50						18305	0.08	0.99	0.00	54.15
3. Unemployment (Log)						6170	0.01	0.17	0.00	6.77	14216	0.11	0.66	0.00	12.60						18305	0.27	1.88	0.00	106.94
Disability																									
(no=0)						6170	0.99	0.11	0.00	1.00	14216	1.00	0.04	0.00	1.00						18305	1.00	0.06	0.00	1.00
(yes=1)						6170	0.01	0.11	0.00	1.00	14216	0.00	0.04	0.00	1.00						18305	0.00	0.06	0.00	1.00
Sickness						6170	0.10	0.30	0.00	1.00	14216	0.01	0.08	0.00	1.00						18305	0.04	0.19	0.00	1.00
(no=0)						6170	0.90	0.30	0.00	1.00	14216	0.99	0.08	0.00	1.00						18305	0.96	0.19	0.00	1.00
(yes=1)						6170	0.10	0.30	0.00	1.00	14216	0.01	0.08	0.00	1.00						18305	0.04	0.19	0.00	1.00
Unemployment						6170	0.02	0.12	0.00	1.00	14216	0.04	0.20	0.00	1.00						18305	0.05	0.23	0.00	1.00
(no=0)						6170	0.98	0.12	0.00	1.00	14216	0.96	0.20	0.00	1.00						18305	0.95	0.23	0.00	1.00
(yes=1)						6170	0.02	0.12	0.00	1.00	14216	0.04	0.20	0.00	1.00						18305	0.05	0.23	0.00	1.00
Family size						6170	2.74	1.08	1.00	8.00	14216	2.67	1.05	1.00	8.00						18305	2.29	0.87	1.00	7.00
H. income minus old-age and survivor's benefits	4301	48.74	33.34	-618.13	1210.60	6170	8.59	7.54	-9.34	385.07	14195	27.71	18.79	-14.34	426.64	3525	40.12	40.29	-2.95	1474.55	18305	34.90	21.55	-90.10	488.80
H. income minus other transfers	4301	48.91	33.35	-618.13	1210.60	6170	9.01	7.53	-7.62	385.87	14195	29.38	18.83	-10.65	426.64	3525	40.79	40.23	-2.95	1474.55	18305	36.06	21.80	-41.61	488.80
H. income	4301	52.13	32.88	2.78	1211.12	6170	9.56	7.59	0.36	385.92	14195	30.28	18.85	0.64	426.64	3525	43.88	40.08	0.95	1474.55	18305	39.28	21.57	12.74	494.98
Urban area						6170	0.34	0.47	0.00	1.00	14216	0.47	0.50	0.00	1.00	3525	0.25	0.43	0.00	1.00	18305	0.45	0.50	0.00	1.00
Dwelling type																									
(detached house=0)	4301	0.18	0.38	0.00	1.00	6170	0.59	0.49	0.00	1.00	14216	0.63	0.48	0.00	1.00	3525	0.26	0.44	0.00	1.00	18305	0.30	0.46	0.00	1.00
(apartment=1)	4301	0.82	0.38	0.00	1.00	6170	0.41	0.49	0.00	1.00	14216	0.37	0.48	0.00	1.00	3525	0.74	0.44	0.00	1.00	18305	0.70	0.46	0.00	1.00

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Countries			GREECE					HUNGARY					IRELAND					ICELAND					ITALY		
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Wave 2005	9255	0.21	0.41	0.00	1.00	6631	0.00	0.00	0.00	0.00	3302	0.00	0.00	0.00	0.00	2133	0.00	0.00	0.00	0.00	24785	0.00	0.00	0.00	0.00
Wave 2006	9255	0.19	0.39	0.00	1.00	6631	0.00	0.00	0.00	0.00	3302	0.25	0.44	0.00	1.00	2133	0.29	0.45	0.00	1.00	24785	0.29	0.45	0.00	1.00
Wave 2007	9255	0.19	0.39	0.00	1.00	6631	0.29	0.46	0.00	1.00	3302	0.28	0.45	0.00	1.00	2133	0.23	0.42	0.00	1.00	24785	0.26	0.44	0.00	1.00
Wave 2008	9255	0.21	0.41	0.00	1.00	6631	0.35	0.48	0.00	1.00	3302	0.24	0.43	0.00	1.00	2133	0.23	0.42	0.00	1.00	24785	0.23	0.42	0.00	1.00
Wave 2009	9255	0.20	0.40	0.00	1.00	6631	0.36	0.48	0.00	1.00	3302	0.23	0.42	0.00	1.00	2133	0.25	0.43	0.00	1.00	24785	0.22	0.42	0.00	1.00
General Health																									
(good=0)	9255	0.97	0.17	0.00	1.00	6618	0.72	0.45	0.00	1.00	3302	0.97	0.17	0.00	1.00	2132	0.94	0.24	0.00	1.00	24781	0.82	0.38	0.00	1.00
(bad=1)	9255	0.03	0.17	0.00	1.00	6618	0.28	0.45	0.00	1.00	3302	0.03	0.17	0.00	1.00	2132	0.06	0.24	0.00	1.00	24781	0.18	0.38	0.00	1.00
Age	9255	40.86	10.39	17.00	63.00	6631	39.89	10.22	18.00	63.00	3302	43.18	10.84	16.00	67.00	2133	42.57	11.18	17.00	63.00	24785	40.21	10.09	17.00	63.00
Age squared	9255	1777.82	863.91	289.00	3969.00	6631	1695.17	820.84	324.00	3969.00	3302	1982.34	907.23	256.00	4489.00	2133	1936.85	946.05	289.00	3969.00	24785	1718.75	817.67	289.00	3969.00
Sex																									
(female=0)	9255	0.38	0.49	0.00	1.00	6631	0.46	0.50	0.00	1.00	3302	0.43	0.49	0.00	1.00	2133	0.45	0.50	0.00	1.00	24785	0.40	0.49	0.00	1.00
(male=1)	9255	0.62	0.49	0.00	1.00	6631	0.54	0.50	0.00	1.00	3302	0.57	0.49	0.00	1.00	2133	0.55	0.50	0.00	1.00	24785	0.60	0.49	0.00	1.00
Marriage status	9255	1.79	0.51	1.00	3.00	6631	1.87	0.63	1.00	3.00	3302	1.80	0.54	1.00	3.00	2129	0.58	0.49	0.00	1.00	24785	1.75	0.56	1.00	3.00
1. Never	9255	0.26	0.44	0.00	1.00	6631	0.27	0.44	0.00	1.00	3302	0.27	0.44	0.00	1.00	2129	0.29	0.40	0.00	1.00	24785	0.31	0.46	0.00	1.00
2. Married	9255	0.70	0.46	0.00	1.00	6631	0.58	0.49	0.00	1.00	3302	0.67	0.47	0.00	1.00	2129	0.62	0.40	0.00	1.00	24785	0.63	0.48	0.00	1.00
3. Separated/Widowed/Divorced	9255	0.04	0.20	0.00	1.00	6631	0.15	0.35	0.00	1.00	3302	0.07	0.25	0.00	1.00	2129	0.09	0.20	0.00	1.00	24785	0.06	0.24	0.00	1.00
Consensual union																									
(no=0)	9255	0.28	0.45	0.00	1.00	6631	0.32	0.47	0.00	1.00	3302	0.21	0.41	0.00	1.00	2129	0.21	0.41	0.00	1.00	24781	0.36	0.48	0.00	1.00
(yes=1)	9255	0.72	0.45	0.00	1.00	6631	0.68	0.47	0.00	1.00	3302	0.79	0.41	0.00	1.00	2129	0.79	0.41	0.00	1.00	24781	0.64	0.48	0.00	1.00
Education	9225	2.68	1.16	1.00	4.00	6631	3.14	0.63	1.00	4.00	3279	2.98	1.06	1.00	4.00	2129	2.80	0.82	1.00	4.00	24746	2.79	0.87	1.00	4.00
1. Primary	9225	0.25	0.43	0.00	1.00	6631	0.01	0.08	0.00	1.00	3279	0.13	0.33	0.00	1.00	2129	0.00	0.07	0.00	1.00	24746	0.07	0.25	0.00	1.00
2. Low Secondary	9225	0.12	0.32	0.00	1.00	6631	0.11	0.32	0.00	1.00	3279	0.19	0.39	0.00	1.00	2129	0.44	0.50	0.00	1.00	24746	0.29	0.46	0.00	1.00
3. High Secondary	9225	0.32	0.47	0.00	1.00	6631	0.61	0.49	0.00	1.00	3279	0.26	0.44	0.00	1.00	2129	0.31	0.46	0.00	1.00	24746	0.41	0.49	0.00	1.00
4. Tertiary	9225	0.31	0.46	0.00	1.00	6631	0.27	0.44	0.00	1.00	3279	0.42	0.49	0.00	1.00	2129	0.25	0.49	0.00	1.00	24746	0.22	0.42	0.00	1.00
Occupations	9255	4.87	2.41	1.00	9.00	6618	4.95	2.55	1.00	9.00	3302	4.13	2.69	1.00	9.00	2115	4.02	2.45	1.00	9.00	24651	4.63	2.48	1.00	9.00
1. Manager	9255	0.01	0.10	0.00	1.00	6618	0.01	0.11	0.00	1.00	3302	0.00	0.05	0.00	1.00	2115	0.00	0.00	0.00	0.00	24651	0.01	0.11	0.00	1.00
2. Professionals	9255	0.08	0.27	0.00	1.00	6618	0.08	0.27	0.00	1.00	3302	0.21	0.41	0.00	1.00	2115	0.16	0.37	0.00	1.00	24651	0.08	0.28	0.00	1.00
3. Technicians and associate professionals	9255	0.16	0.36	0.00	1.00	6618	0.14	0.35	0.00	1.00	3302	0.19	0.39	0.00	1.00	2115	0.20	0.40	0.00	1.00	24651	0.11	0.31	0.00	1.00
4. Clerical support workers	9255	0.07	0.26	0.00	1.00	6618	0.14	0.34	0.00	1.00	3302	0.06	0.24	0.00	1.00	2115	0.08	0.28	0.00	1.00	24651	0.22	0.42	0.00	1.00
5. Service and sales workers	9255	0.10	0.30	0.00	1.00	6618	0.08	0.28	0.00	1.00	3302	0.13	0.34	0.00	1.00	2115	0.12	0.33	0.00	1.00	24651	0.12	0.33	0.00	1.00
6. Skilled agricultural, forestry and fishery workers	9255	0.13	0.34	0.00	1.00	6618	0.13	0.33	0.00	1.00	3302	0.14	0.35	0.00	1.00	2115	0.05	0.22	0.00	1.00	24651	0.10	0.30	0.00	1.00
7. Craft and related trades	9255	0.15	0.36	0.00	1.00	6618	0.03	0.16	0.00	1.00	3302	0.01	0.07	0.00	1.00	2115	0.12	0.32	0.00	1.00	24651	0.02	0.15	0.00	1.00
8. Plant and machine operators	9255	0.16	0.37	0.00	1.00	6618	0.20	0.40	0.00	1.00	3302	0.11	0.31	0.00	1.00	2115	0.06	0.23	0.00	1.00	24651	0.16	0.37	0.00	1.00
9. Unskilled operators	9255	0.07	0.26	0.00	1.00	6618	0.13	0.34	0.00	1.00	3302	0.07	0.25	0.00	1.00	2115	0.00	0.00	0.00	0.00	24651	0.09	0.29	0.00	1.00
Type of contract	5752	1.21	0.40	1.00	2.00	5827	1.08	0.27	1.00	2.00	2629	1.05	0.22	1.00	2.00	1811	1.09	0.28	1.00	2.00	18473	1.13	0.33	1.00	2.00
1. Permanent	5752	0.79	0.40	0.00	1.00	5827	0.92	0.27	0.00	1.00	2629	0.95	0.22	0.00	1.00	1811	0.09	0.28	0.00	1.00	18473	0.87	0.33	0.00	1.00
2. Temporary	5752	0.21	0.40	0.00	1.00	5827	0.08	0.27	0.00	1.00	2629	0.05	0.22	0.00	1.00	1811	0.00	0.00	0.00	0.00	18473	0.13	0.33	0.00	1.00
Self-employed																									
(yes=1)	9255	0.38	0.49	0.00	1.00	6572	0.10	0.30	0.00	1.00	3302	0.18	0.38	0.00	1.00	2133	0.15	0.36	0.00	1.00	24708	0.25	0.43	0.00	1.00
(no=0)	9255	0.62	0.49	0.00	1.00	6572	0.90	0.30	0.00	1.00	3302	0.82	0.38	0.00	1.00	2133	0.85	0.36	0.00	1.00	24708	0.75	0.43	0.00	1.00
Cash income (Log)	9255	5.76	4.55	0.00	11.74						3302	8.25	3.79	0.00	13.46						24785	7.26	4.14	0.00	12.68
NON-cash income (Log)	9255	0.03	0.21	0.00	5.37						3302	0.18	1.46	0.00	51.60						24785	0.08	0.40	0.00	13.44
Cash employee income						6631	1.00	0.00	1.00	1.00															
(no=0)	9255	0.38	0.49	0.00	1.00	6572	0.20	0.30	0.00	1.00	3302	0.17	0.38	0.00	1.00	2133	0.25	0.37	0.00	1.00	24785	0.24	0.43	0.00	1.00
(yes=1)	9255	0.62	0.49	0.00	1.00	6572	0.80	0.30	0.00	1.00	3302	0.83	0.38	0.00	1.00	2133	0.75	0.37	0.00	1.00	24785	0.76	0.43	0.00	1.00
NON-cash employee income																									
(no=0)	9255	0.98	0.15	0.00	1.00	6631	0.00	0.00	0.00	0.00	3302	0.96	0.19	0.00	1.00	2133	1.00	0.00	1.00	1.00	24785	0.94	0.24	0.00	1.00
(yes=1)	9255	0.02	0.15	0.00	1.00	6631	1.00	0.00	1.00	1.00	3302	0.04	0.19	0.00	1.00	2133	0.00	0.00	0.00	0.00	24785	0.06	0.24	0.00	1.00
Benefit																									
1. Disability (Log)	9255	0.00	0.15	0.00	7.42						3302	0.07	0.57	0.00	12.11	2133	2.21	0.82	1.00	6.00	24785	0.04	0.50	0.00	20.80
2. Sickness (Log)	9255	0.00	0.09	0.00	7.50						3302	0.00	0.10	0.00	3.34	2133	0.59	0.49	0.00	1.00					
3. Unemployment (Log)	9255	0.06	0.38	0.00	14.68						3302	0.39	3.84	0.00	169.18						24785	0.40	2.21	0.00	139.47
Disability																									
(no=0)	9255	1.00	0.03	0.00	1.00						3302	0.95	0.22	0.00	1.00	2133	1.00	0.05	0.00	1.00	24785	0.99	0.11	0.00	1.00
(yes=1)	9255	0.00	0.03	0.00	1.00						3302	0.05	0.22	0.00	1.00	2133	0.00	0.05	0.00	1.00	24785	0.01	0.11	0.00	1.00
Sickness	9255	0.00	0.05	0.00	1.00						3302	0.00	0.05	0.00	1.00	2133	0.01	0.10	0.00	1.00	24785	1.00	0.00	1.00	1.00
(no=0)	9255	1.00	0.05	0.00	1.00						3302	1.00	0.05	0.00	1.00	2133	0.99	0.10	0.00	1.00	24785	0.00	0.00	0.00	0.00
(yes=1)	9255	0.00	0.05	0.00	1.00						3302	0.00	0.05	0.00	1.00	2133	0.01	0.10	0.00	1.00	24785	1.00	0.00	1.00	1.00
Unemployment	9255	0.03	0.18	0.00	1.00						3302	0.07	0.25	0.00	1.00						24785	0.13	0.34	0.00	1.00
(no=0)	9255	0.97	0.18	0.00	1.00						3302	0.93	0.25	0.00	1.00						24785	0.87	0.34	0.00	1.00
(yes=1)	9255	0.03	0.18	0.00	1.00						3302	0.07	0.25	0.00	1.00						24785	0.13	0.34	0.00	1.00
Family size	9255	2.68	1.06	1.00	10.00						3302	2.31	0.83	1.00	6.00						24785	2.58	1.03	1.00	7.00
H. income minus old-age and survivor's benefits	9255	22.29	17.59	-34.25	356.37	6631	8.76	7.09	-15.15	105.62	3302	9.76	9.09	-12.15	1105.68	2129	1.70	0.58	1.00	3.00	24785	34.02	25.84	-81.08	928.69
H. income minus other transfers	9255	24.17	17.84	-34.25	356.37	6631	9.44	7.19	-15.15	105.62	3302	52.30	51.21	-26.48	1502.60	2129	0.36	0.48	0.00	1.00	24785	37.28	26.73	-68.85	928.69
H. income	9255	24.73	17.82	14.25	359.41	6631	10.38	7.12	0.15	107.45	3302	56.75	51.39	5.22	1510.76	2132	62.67	39.49	-10.52	512.98	24785	38.93	27.03	8.25	928.69
Urban area	9255	0.35	0.48	0.00	1.00	6631	0.31	0.46	0.00	1.00	3302	0.30	0.46	0.00	1.00						24785	0.33	0.47	0.00	1.00
Dwelling type																									
(detached house=0)	9255	0.51	0.50	0.00	1.00	6631	0.32	0.47	0.00	1.00	3302	0.01	0.11	0.00	1.00	2133	0.60	0.49	0.00	1.00	24785	0.51	0.50	0.00	1.00
(apartment=1)	9255	0.49	0.50	0.00	1.00	6631	0.68	0.47	0.00	1.00	3302	0.99	0.11	0.00	1.00	2133	0.40	0.49	0.00	1.00	24785	0.49	0.50	0.00	1.00

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Countries	LITHUANIA					LUXEMBOURG					LATVIA					NETHERLAND					NORWAY				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Wave 2005	4680	0.00	0.00	0.00	0.00	9528	0.18	0.38	0.00	1.00	3177	0.00	0.00	0.00	0.00	5525	0.00	0.00	0.00	0.00	8161	0.22	0.41	0.00	1.00
Wave 2006	4680	0.00	0.00	0.00	0.00	9528	0.19	0.39	0.00	1.00	3177	0.00	0.00	0.00	0.00	5525	0.00	0.00	0.00	0.00	8161	0.21	0.41	0.00	1.00
Wave 2007	4680	0.29	0.45	0.00	1.00	9528	0.20	0.40	0.00	1.00	3177	0.29	0.46	0.00	1.00	5525	0.38	0.48	0.00	1.00	8161	0.21	0.41	0.00	1.00
Wave 2008	4680	0.33	0.47	0.00	1.00	9528	0.22	0.41	0.00	1.00	3177	0.32	0.47	0.00	1.00	5525	0.32	0.47	0.00	1.00	8161	0.20	0.40	0.00	1.00
Wave 2009	4680	0.38	0.49	0.00	1.00	9528	0.20	0.40	0.00	1.00	3177	0.39	0.49	0.00	1.00	5525	0.30	0.46	0.00	1.00	8161	0.16	0.37	0.00	1.00
General Health																									
(good=0)	4680	0.61	0.49	0.00	1.00	9527	0.92	0.27	0.00	1.00	3177	0.60	0.49	0.00	1.00	5523	0.95	0.22	0.00	1.00	8160	0.92	0.28	0.00	1.00
(bad=1)	4680	0.39	0.49	0.00	1.00	9527	0.08	0.27	0.00	1.00	3177	0.40	0.49	0.00	1.00	5523	0.05	0.22	0.00	1.00	8160	0.08	0.28	0.00	1.00
Age	4680	43.10	10.25	17.00	78.00	9528	39.04	10.10	17.00	64.00	3177	40.35	11.26	17.00	63.00	5525	41.90	9.79	17.00	63.00	8161	41.95	10.89	18.00	63.00
Age squared	4680	1962.41	866.76	289.00	6084.00	9528	1626.02	812.06	289.00	4096.00	3177	1755.12	915.37	289.00	3969.00	5525	1851.35	828.27	289.00	3969.00	8161	1878.07	925.03	324.00	3969.00
Sex																									
(female=0)	4680	0.52	0.50	0.00	1.00	9528	0.40	0.49	0.00	1.00	3177	0.52	0.50	0.00	1.00	5525	0.45	0.50	0.00	1.00	8161	0.44	0.50	0.00	1.00
(male=1)	4680	0.48	0.50	0.00	1.00	9528	0.60	0.49	0.00	1.00	3177	0.48	0.50	0.00	1.00	5525	0.55	0.50	0.00	1.00	8161	0.56	0.50	0.00	1.00
Marriage status	4680	1.97	0.50	1.00	3.00	9528	1.81	0.61	1.00	3.00	3176	1.95	0.68	1.00	3.00	5525	1.80	0.60	1.00	3.00	8161	1.73	0.62	1.00	3.00
1. Never	4680	0.14	0.34	0.00	1.00	9528	0.30	0.46	0.00	1.00	3176	0.26	0.44	0.00	1.00	5525	0.30	0.46	0.00	1.00	8161	0.36	0.48	0.00	1.00
2. Married	4680	0.75	0.43	0.00	1.00	9528	0.59	0.49	0.00	1.00	3176	0.53	0.50	0.00	1.00	5525	0.60	0.49	0.00	1.00	8161	0.54	0.50	0.00	1.00
3. Separated/Widowed/Divorced	4680	0.11	0.31	0.00	1.00	9528	0.11	0.31	0.00	1.00	3176	0.21	0.41	0.00	1.00	5525	0.10	0.30	0.00	1.00	8161	0.09	0.29	0.00	1.00
Consensual union																									
(no=0)	4680	0.25	0.43	0.00	1.00	9526	0.71	0.45	0.00	1.00	3177	0.38	0.49	0.00	1.00	5525	0.26	0.44	0.00	1.00	8161	0.24	0.43	0.00	1.00
(yes=1)	4680	0.75	0.43	0.00	1.00	9526	0.29	0.45	0.00	1.00	3177	0.62	0.49	0.00	1.00	5525	0.74	0.44	0.00	1.00	8161	0.76	0.43	0.00	1.00
Education	4679	3.59	0.59	1.00	4.00	9467	2.88	1.09	1.00	4.00	3177	3.23	0.72	1.00	4.00	5463	3.28	0.78	1.00	4.00	8072	3.35	0.63	1.00	4.00
1. Primary	4679	0.00	0.04	0.00	1.00	9467	0.19	0.39	0.00	1.00	3177	0.03	0.17	0.00	1.00	5463	0.02	0.15	0.00	1.00	8072	0.00	0.04	0.00	1.00
2. Low Secondary	4679	0.05	0.22	0.00	1.00	9467	0.10	0.30	0.00	1.00	3177	0.08	0.27	0.00	1.00	5463	0.13	0.34	0.00	1.00	8072	0.08	0.27	0.00	1.00
3. High Secondary	4679	0.30	0.46	0.00	1.00	9467	0.35	0.48	0.00	1.00	3177	0.52	0.50	0.00	1.00	5463	0.38	0.49	0.00	1.00	8072	0.49	0.50	0.00	1.00
4. Tertiary	4679	0.65	0.48	0.00	1.00	9467	0.36	0.48	0.00	1.00	3177	0.37	0.48	0.00	1.00	5463	0.46	0.50	0.00	1.00	8072	0.43	0.50	0.00	1.00
Occupations	4680	4.88	2.71	1.00	9.00	9522	4.37	2.49	1.00	9.00	3174	4.99	2.62	1.00	9.00	5411	3.57	2.15	1.00	9.00	7830	3.92	2.21	1.00	9.00
1. Manager	4680	0.00	0.05	0.00	1.00	9522	0.01	0.08	0.00	1.00	3174	0.00	0.05	0.00	1.00	5411	0.00	0.06	0.00	1.00	7830	0.00	0.05	0.00	1.00
2. Professionals	4680	0.09	0.29	0.00	1.00	9522	0.06	0.25	0.00	1.00	3174	0.09	0.28	0.00	1.00	5411	0.12	0.32	0.00	1.00	7830	0.12	0.33	0.00	1.00
3. Technicians and associate professionals	4680	0.21	0.41	0.00	1.00	9522	0.20	0.40	0.00	1.00	3174	0.14	0.35	0.00	1.00	5411	0.26	0.44	0.00	1.00	7830	0.17	0.38	0.00	1.00
4. Clerical support workers	4680	0.10	0.29	0.00	1.00	9522	0.22	0.42	0.00	1.00	3174	0.16	0.37	0.00	1.00	5411	0.22	0.42	0.00	1.00	7830	0.26	0.44	0.00	1.00
5. Service and sales workers	4680	0.06	0.24	0.00	1.00	9522	0.12	0.32	0.00	1.00	3174	0.05	0.22	0.00	1.00	5411	0.13	0.34	0.00	1.00	7830	0.07	0.26	0.00	1.00
6. Skilled agricultural, forestry and fishery workers	4680	0.11	0.31	0.00	1.00	9522	0.09	0.28	0.00	1.00	3174	0.14	0.34	0.00	1.00	5411	0.09	0.29	0.00	1.00	7830	0.16	0.37	0.00	1.00
7. Craft and related trades	4680	0.05	0.21	0.00	1.00	9522	0.03	0.17	0.00	1.00	3174	0.04	0.19	0.00	1.00						7830	0.03	0.17	0.00	1.00
8. Plant and machine operators	4680	0.17	0.37	0.00	1.00	9522	0.11	0.32	0.00	1.00	3174	0.16	0.37	0.00	1.00	5411	0.07	0.25	0.00	1.00	7830	0.10	0.30	0.00	1.00
9. Unskilled operators	4680	0.11	0.32	0.00	1.00	9522	0.05	0.23	0.00	1.00	3174	0.11	0.31	0.00	1.00	5411	0.05	0.22	0.00	1.00	7830	0.06	0.24	0.00	1.00
Type of contract	4212	1.05	0.23	1.00	2.00	8676	1.09	0.29	1.00	2.00	2889	1.07	0.25	1.00	2.00	4995	1.10	0.29	1.00	2.00	7428	1.09	0.28	1.00	2.00
1. Permanent	4212	0.95	0.23	0.00	1.00	8676	0.91	0.29	0.00	1.00	2889	0.93	0.25	0.00	1.00	4995	0.90	0.29	0.00	1.00	7428	0.91	0.28	0.00	1.00
2. Temporary	4212	0.05	0.23	0.00	1.00	8676	0.09	0.29	0.00	1.00	2889	0.07	0.25	0.00	1.00	4995	0.10	0.29	0.00	1.00	7428	0.09	0.28	0.00	1.00
Self-employed																									
(yes=1)	4680	0.10	0.30	0.00	1.00	9528	0.09	0.28	0.00	1.00	3176	0.09	0.28	0.00	1.00	5502	0.09	0.29	0.00	1.00	8146	0.08	0.27	0.00	1.00
(no=0)	4680	0.90	0.30	0.00	1.00	9528	0.91	0.28	0.00	1.00	3176	0.91	0.28	0.00	1.00	5502	0.91	0.29	0.00	1.00	8146	0.92	0.27	0.00	1.00
Cash income (Log)	4680	7.13	2.60	0.00	10.74	9528	9.66	2.45	0.00	13.25	3177	7.17	2.49	0.00	11.12										
NON-cash income (Log)						8810	0.09	1.59	0.00	136.30	2649	0.02	0.16	0.00	3.45										
Cash employee income																									
(no=0)	4680	0.11	0.31	0.00	1.00	9528	0.06	0.23	0.00	1.00	3177	0.10	0.30	0.00	1.00	5411	0.12	0.32	0.00	1.00	7428	0.80	0.34	0.00	1.00
(yes=1)	4680	0.89	0.31	0.00	1.00	9528	0.94	0.23	0.00	1.00	3177	0.90	0.30	0.00	1.00	5411	0.88	0.32	0.00	1.00	7428	0.20	0.34	0.00	1.00
NON-cash employee income																									
(no=0)	4680	0.00	0.00	0.00	0.00	9528	0.90	0.30	0.00	1.00	3177	0.80	0.40	0.00	1.00	5525	0.00	0.00	0.00	0.00	8161	0.00	0.00	0.00	0.00
(yes=1)	4680	1.00	0.00	1.00	1.00	9528	0.10	0.30	0.00	1.00	3177	0.20	0.40	0.00	1.00	5525	1.00	0.00	1.00	1.00	8161	1.00	0.00	1.00	1.00
Benefit																									
1. Disability (Log)						9528	0.08	2.30	0.00	200.00	3177	0.01	0.10	0.00	2.10										
2. Sickness (Log)	1020	0.05	0.18	0.00	2.55	9528	0.00	0.24	0.00	21.60	3177	0.01	0.08	0.00	2.48										
3. Unemployment (Log)	3819	0.01	0.10	0.00	3.76	9528	0.16	1.61	0.00	53.02	3177	0.03	0.23	0.00	6.32										
Disability																									
(no=0)	4680	0.00	0.00	0.00	0.00	9528	0.99	0.09	0.00	1.00	3177	0.99	0.09	0.00	1.00										
(yes=1)	4680	1.00	0.00	1.00	1.00	9528	0.01	0.09	0.00	1.00	3177	0.01	0.09	0.00	1.00										
Sickness	4680	0.83	0.38	0.00	1.00	9528	0.00	0.03	0.00	1.00	3177	0.07	0.25	0.00	1.00										
(no=0)	4680	0.17	0.38	0.00	1.00	9528	1.00	0.03	0.00	1.00	3177	0.93	0.25	0.00	1.00										
(yes=1)	4680	0.83	0.38	0.00	1.00	9528	0.00	0.03	0.00	1.00	3177	0.07	0.25	0.00	1.00										
Unemployment	4680	0.19	0.39	0.00	1.00	9528	0.02	0.14	0.00	1.00	3177	0.04	0.21	0.00	1.00										
(no=0)	4680	0.81	0.39	0.00	1.00	9528	0.98	0.14	0.00	1.00	3177	0.96	0.21	0.00	1.00										
(yes=1)	4680	0.19	0.39	0.00	1.00	9528	0.02	0.14	0.00	1.00	3177	0.04	0.21	0.00	1.00										
Family size	4680	2.57	0.95	1.00	7.00	9528	2.38	1.01	1.00	8.00	3177	2.60	1.16	1.00	8.00										
H. income minus old-age and survivor's benefits	4680	7.26	5.08	-0.85	59.14	9528	59.01	41.14	-178.77	766.77	3177	7.29	6.15	-1.48	79.01	5525	37.26	22.49	-71.12	560.72	8160	54.83	59.44	-382.76	2717.94
H. income minus other transfers	4680	7.73	5.14	-0.02	59.14	9528	61.97	41.16	-178.77	766.77	3177	7.81	6.23	-1.48	79.01	5525	37.86	22.31	-71.12	560.72	8160	55.52	59.35	-382.76	2717.94
H. income	4680	8.08	5.16	0.01	59.14	9528	67.84	41.56	0.31	766.77	3177	8.23	6.34	0.83	79.25	5525	39.66	22.13	69.29	563.91	8161	61.38	58.96	2.76	2717.94
Urban area	4680	0.50	0.50	0.00	1.00	9528	0.46	0.50	0.00	1.00	3177	0.49	0.50	0.00	1.00						8161	0.52	0.50	0.00	1.00
Dwelling type																									
(detached house=0)	4680	0.62	0.49	0.00	1.00	9528	0.35	0.48	0.00	1.00	3177	0.66	0.47	0.00	1.00	5525	0.16	0.37	0.00	1.00	8161	0.17	0.37	0.00	1.00
(apartment=1)	4680	0.38	0.49	0.00	1.00	9528	0.65	0.48	0.00	1.00	3177	0.34	0.47	0.00	1.00	5525	0.84	0.37	0.00	1.00	8161	0.83	0.37	0.00	1.00

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Countries			**POLAND**					**PORTUGAL**					**ROMANIA**					**SWEDEN**					**SLOVENIA**		
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Wave 2005	14097	0.00	0.00	0.00	0.00	6817	0.00	0.00	0.00	0.00	3029	0.00	0.00	0.00	0.00	5067	0.00	0.00	0.00	0.00	3191	0.00	0.00	0.00	0.00
Wave 2006	14097	0.00	0.00	0.00	0.00	6817	0.24	0.43	0.00	1.00	3029	0.00	0.00	0.00	0.00	5067	0.25	0.43	0.00	1.00	3191	0.00	0.00	0.00	0.00
Wave 2007	14097	0.33	0.47	0.00	1.00	6817	0.24	0.43	0.00	1.00	3029	0.00	0.00	0.00	0.00	5067	0.24	0.43	0.00	1.00	3191	0.34	0.48	0.00	1.00
Wave 2008	14097	0.34	0.47	0.00	1.00	6817	0.31	0.46	0.00	1.00	3029	0.00	0.00	0.00	0.00	5067	0.23	0.42	0.00	1.00	3191	0.33	0.47	0.00	1.00
Wave 2009	14097	0.33	0.47	0.00	1.00	6817	0.21	0.40	0.00	1.00	3029	1.00	0.00	1.00	1.00	5067	0.28	0.45	0.00	1.00	3191	0.32	0.47	0.00	1.00
General Health																									
(good=0)	14097	0.74	0.44	0.00	1.00	6816	0.71	0.45	0.00	1.00	3029	0.91	0.28	0.00	1.00	4966	0.93	0.26	0.00	1.00	3191	0.78	0.41	0.00	1.00
(bad=1)	14097	0.26	0.44	0.00	1.00	6816	0.29	0.45	0.00	1.00	3029	0.09	0.28	0.00	1.00	4966	0.07	0.26	0.00	1.00	3191	0.22	0.41	0.00	1.00
Age	14097	40.01	10.05	17.00	63.00	6817	40.08	11.27	1.00	80.00	3029	39.52	10.39	17.00	63.00	5067	42.33	11.30	18.00	63.00	3191	40.73	9.43	18.00	63.00
Age squared	14097	1701.57	805.40	289.00	3969.00	6817	1732.97	916.62	1.00	6400.00	3029	1669.60	837.28	289.00	3969.00	5067	1919.38	966.11	324.00	3969.00	3191	1747.49	771.43	324.00	3969.00
Sex																									
(female=0)	14097	0.46	0.50	0.00	1.00	6817	0.44	0.50	0.00	1.00	3029	0.42	0.49	0.00	1.00	5067	0.47	0.50	0.00	1.00	3191	0.48	0.50	0.00	1.00
(male=1)	14097	0.54	0.50	0.00	1.00	6817	0.56	0.50	0.00	1.00	3029	0.58	0.49	0.00	1.00	5067	0.53	0.50	0.00	1.00	3191	0.52	0.50	0.00	1.00
Marriage status	14097	1.87	0.48	1.00	3.00	6817	1.81	0.53	1.00	3.00	3029	1.85	0.53	1.00	3.00	5067	1.95	0.87	1.00	3.00	3184	1.70	0.56	1.00	3.00
1. Never	14097	0.19	0.39	0.00	1.00	6817	0.25	0.44	0.00	1.00	3029	0.23	0.42	0.00	1.00	5067	0.40	0.49	0.00	1.00	3184	0.35	0.48	0.00	1.00
2. Married	14097	0.75	0.43	0.00	1.00	6817	0.69	0.46	0.00	1.00	3029	0.69	0.46	0.00	1.00	5067	0.25	0.43	0.00	1.00	3184	0.59	0.49	0.00	1.00
3. Separated/Widowed/Divorced	14097	0.06	0.24	0.00	1.00	6817	0.06	0.24	0.00	1.00	3029	0.08	0.27	0.00	1.00	5067	0.35	0.48	0.00	1.00	3184	0.05	0.23	0.00	1.00
Consensual union																									
(no=0)	14097	0.23	0.42	0.00	1.00	6817	0.28	0.45	0.00	1.00	3029	0.27	0.44	0.00	1.00	5067	0.12	0.33	0.00	1.00	3183	0.27	0.44	0.00	1.00
(yes=1)	14097	0.77	0.42	0.00	1.00	6817	0.72	0.45	0.00	1.00	3029	0.73	0.44	0.00	1.00	5067	0.88	0.33	0.00	1.00	3183	0.73	0.44	0.00	1.00
Education	14095	3.08	0.76	1.00	4.00	6628	1.94	1.10	1.00	4.00	3022	2.98	0.70	1.00	4.00	5062	3.29	0.73	1.00	4.00	3187	3.09	0.76	1.00	4.00
1. Primary	14095	0.08	0.28	0.00	1.00	6628	0.50	0.50	0.00	1.00	3022	0.02	0.14	0.00	1.00	5062	0.03	0.16	0.00	1.00	3187	0.06	0.25	0.00	1.00
2. Low Secondary	14095	0.00	0.05	0.00	1.00	6628	0.20	0.40	0.00	1.00	3022	0.19	0.39	0.00	1.00	5062	0.08	0.27	0.00	1.00	3187	0.05	0.23	0.00	1.00
3. High Secondary	14095	0.66	0.47	0.00	1.00	6628	0.16	0.37	0.00	1.00	3022	0.58	0.49	0.00	1.00	5062	0.47	0.50	0.00	1.00	3187	0.61	0.49	0.00	1.00
4. Tertiary	14095	0.25	0.43	0.00	1.00	6628	0.14	0.34	0.00	1.00	3022	0.21	0.41	0.00	1.00	5062	0.42	0.49	0.00	1.00	3187	0.27	0.45	0.00	1.00
Occupations	14076	5.20	2.41	1.00	9.00	6817	5.41	2.46	1.00	9.00	3029	5.56	2.32	1.00	9.00	5043	4.21	2.27	1.00	9.00	3068	4.74	2.45	1.00	9.00
1. Manager	14076	0.00	0.06	0.00	1.00	6817	0.01	0.08	0.00	1.00	3029	0.01	0.07	0.00	1.00	5043	0.00	0.07	0.00	1.00	3068	0.00	0.07	0.00	1.00
2. Professionals	14076	0.05	0.22	0.00	1.00	6817	0.07	0.25	0.00	1.00	3029	0.03	0.16	0.00	1.00	5043	0.05	0.22	0.00	1.00	3068	0.05	0.21	0.00	1.00
3. Technicians and associate professionals	14076	0.15	0.35	0.00	1.00	6817	0.09	0.28	0.00	1.00	3029	0.12	0.32	0.00	1.00	5043	0.23	0.42	0.00	1.00	3068	0.16	0.36	0.00	1.00
4. Clerical support workers	14076	0.11	0.31	0.00	1.00	6817	0.09	0.29	0.00	1.00	3029	0.11	0.32	0.00	1.00	5043	0.21	0.41	0.00	1.00	3068	0.21	0.41	0.00	1.00
5. Service and sales workers	14076	0.07	0.26	0.00	1.00	6817	0.10	0.30	0.00	1.00	3029	0.04	0.20	0.00	1.00	5043	0.08	0.27	0.00	1.00	3068	0.12	0.32	0.00	1.00
6. Skilled agricultural, forestry and fishery workers	14076	0.10	0.30	0.00	1.00	6817	0.16	0.37	0.00	1.00	3029	0.11	0.32	0.00	1.00	5043	0.16	0.37	0.00	1.00	3068	0.12	0.33	0.00	1.00
7. Craft and related trades	14076	0.15	0.36	0.00	1.00	6817	0.06	0.23	0.00	1.00	3029	0.17	0.38	0.00	1.00	5043	0.02	0.14	0.00	1.00	3068	0.02	0.13	0.00	1.00
8. Plant and machine operators	14076	0.18	0.38	0.00	1.00	6817	0.22	0.42	0.00	1.00	3029	0.19	0.39	0.00	1.00	5043	0.11	0.31	0.00	1.00	3068	0.12	0.33	0.00	1.00
9. Unskilled operators	14076	0.11	0.31	0.00	1.00	6817	0.09	0.28	0.00	1.00	3029	0.12	0.32	0.00	1.00	5043	0.10	0.29	0.00	1.00	3068	0.14	0.35	0.00	1.00
Type of contract	10905	1.25	0.43	1.00	2.00	5493	1.17	0.38	1.00	2.00	2252	1.03	0.18	1.00	2.00	4452	1.06	0.24	1.00	2.00	2936	1.12	0.32	1.00	2.00
1. Permanent	10905	0.75	0.43	0.00	1.00	5493	0.83	0.38	0.00	1.00	2252	0.97	0.18	0.00	1.00	4452	0.94	0.24	0.00	1.00	2936	0.88	0.32	0.00	1.00
2. Temporary	10905	0.25	0.43	0.00	1.00	5493	0.17	0.38	0.00	1.00	2252	0.03	0.18	0.00	1.00	4452	0.06	0.24	0.00	1.00	2936	0.12	0.32	0.00	1.00
Self-employed																									
(yes=1)	14097	0.23	0.42	0.00	1.00	6817	0.19	0.39	0.00	1.00	3029	0.26	0.44	0.00	1.00	5063	0.10	0.30	0.00	1.00	3177	0.07	0.26	0.00	1.00
(no=0)	14097	0.77	0.42	0.00	1.00	6817	0.81	0.39	0.00	1.00	3029	0.74	0.44	0.00	1.00	5063	0.90	0.30	0.00	1.00	3177	0.93	0.26	0.00	1.00
Cash income (Log)	14097	6.19	3.49	0.00	11.98	6817	7.19	3.62	0.00	12.49	3029	5.74	3.39	0.00	10.06	5067	9.40	2.07	0.00	11.81	3191	8.49	2.36	0.00	11.01
NON-cash income (Log)	11677	0.03	0.20	0.00	8.37	1394	0.07	0.53	0.00	9.10	3027	0.06	0.98	0.00	27.54	4469	0.23	0.82	0.00	16.35	2616	0.05	0.35	0.00	9.94
Cash employee income																									
(no=0)	14097	0.24	0.42	0.00	1.00	6817	0.20	0.40	0.00	1.00	3029	0.26	0.44	0.00	1.00	5067	0.04	0.20	0.00	1.00	3191	0.07	0.25	0.00	1.00
(yes=1)	14097	0.76	0.42	0.00	1.00	6817	0.80	0.40	0.00	1.00	3029	0.74	0.44	0.00	1.00	5067	0.96	0.20	0.00	1.00	3191	0.93	0.25	0.00	1.00
NON-cash employee income																									
(no=0)	14097	0.74	0.44	0.00	1.00	6817	0.20	0.40	0.00	1.00	3029	0.99	0.10	0.00	1.00	5067	0.62	0.49	0.00	1.00	3191	0.74	0.44	0.00	1.00
(yes=1)	14097	0.26	0.44	0.00	1.00	6817	0.80	0.40	0.00	1.00	3029	0.01	0.10	0.00	1.00	5067	0.38	0.49	0.00	1.00	3191	0.26	0.44	0.00	1.00
Benefit																									
1. Disability (Log)	14097	0.01	0.15	0.00	7.08	6817	0.00	0.10	0.00	3.64	3029	0.00	0.03	0.00	0.93	5067	0.05	0.53	0.00	11.07	3191	0.02	0.22	0.00	6.71
2. Sickness (Log)	14097	0.00	0.03	0.00	1.86	6815	0.01	0.17	0.00	9.00	3029	0.00	0.01	0.00	0.43	5067	0.25	0.98	0.00	17.98	3191	0.10	0.48	0.00	12.35
3. Unemployment (Log)	14097	0.02	0.15	0.00	3.53	6817	0.07	0.62	0.00	18.40	3029	0.00	0.04	0.00	1.02	5067	0.29	1.32	0.00	14.33	3191	0.02	0.23	0.00	5.43
Disability																									
(no=0)	14097	0.99	0.07	0.00	1.00	6817	1.00	0.03	0.00	1.00	3029	1.00	0.03	0.00	1.00	5067	0.99	0.10	0.00	1.00	3191	0.99	0.08	0.00	1.00
(yes=1)	14097	0.01	0.07	0.00	1.00	6817	0.00	0.03	0.00	1.00	3029	0.00	0.03	0.00	1.00	5067	0.01	0.10	0.00	1.00	3191	0.01	0.08	0.00	1.00
Sickness	14097	0.00	0.07	0.00	1.00	6817	0.01	0.10	0.00	1.00	3029	0.00	0.04	0.00	1.00	5067	0.26	0.44	0.00	1.00	3191	0.16	0.37	0.00	1.00
(no=0)	14097	1.00	0.07	0.00	1.00	6817	0.99	0.10	0.00	1.00	3029	1.00	0.04	0.00	1.00	5067	0.74	0.44	0.00	1.00	3191	0.84	0.37	0.00	1.00
(yes=1)	14097	0.00	0.07	0.00	1.00	6817	0.01	0.10	0.00	1.00	3029	0.00	0.04	0.00	1.00	5067	0.26	0.44	0.00	1.00	3191	0.16	0.37	0.00	1.00
Unemployment	14097	0.02	0.14	0.00	1.00	6817	0.02	0.14	0.00	1.00	3029	0.00	0.06	0.00	1.00	5067	0.08	0.27	0.00	1.00	3191	0.02	0.14	0.00	1.00
(no=0)	14097	0.98	0.14	0.00	1.00	6817	0.98	0.14	0.00	1.00	3029	1.00	0.06	0.00	1.00	5067	0.92	0.27	0.00	1.00	3191	0.98	0.14	0.00	1.00
(yes=1)	14097	0.02	0.14	0.00	1.00	6817	0.02	0.14	0.00	1.00	3029	0.00	0.06	0.00	1.00	5067	0.08	0.27	0.00	1.00	3191	0.02	0.14	0.00	1.00
Family size	14097	2.93	1.19	1.00	9.00	6817	2.87	1.11	1.00	8.00	3029	2.75	1.15	1.00	8.00	5067	1.93	0.69	1.00	6.00	3191	2.75	1.03	1.00	8.00
H. income minus old-age and survivor's benefits	14097	7.20	5.99	-2.78	178.94	6817	19.18	16.91	-1.03	266.00	3029	4.26	3.99	-1.46	60.03	5067	36.94	21.33	-12.16	503.72	3191	22.27	12.33	-1.51	130.42
H. income minus other transfers	14097	8.06	6.03	-0.56	178.94	6817	20.72	17.27	-0.30	275.90	3026	4.61	4.01	-1.46	60.03	5067	37.63	21.42	-12.16	503.72	3191	23.61	12.35	-1.51	130.42
H. income	14097	8.56	5.92	0.03	178.94	6817	21.71	17.20	0.04	275.90	3029	4.86	4.01	1.46	60.03	5067	41.81	21.07	0.82	505.15	3191	25.59	12.04	0.77	133.13
Urban area	14097	0.32	0.47	0.00	1.00	6817	0.34	0.47	0.00	1.00	3029	0.40	0.49	0.00	1.00	5067	0.21	0.41	0.00	1.00					
Dwelling type																									
(detached house=0)	14097	0.43	0.50	0.00	1.00	6817	0.31	0.46	0.00	1.00	3029	0.45	0.50	0.00	1.00	5067	0.36	0.48	0.00	1.00	3191	0.30	0.46	0.00	1.00
(apartment=1)	14097	0.57	0.50	0.00	1.00	6817	0.69	0.46	0.00	1.00	3029	0.55	0.50	0.00	1.00	5067	0.64	0.48	0.00	1.00	3191	0.70	0.46	0.00	1.00

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Countries	**SLOVAKIA**					**UNITED KINGDOM**				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Wave 2005	6350	0.00	0.00	0.00	0.00	6875	0.00	0.00	0.00	0.00
Wave 2006	6350	0.00	0.00	0.00	0.00	6875	0.00	0.00	0.00	0.00
Wave 2007	6350	0.30	0.46	0.00	1.00	6875	0.36	0.48	0.00	1.00
Wave 2008	6350	0.32	0.47	0.00	1.00	6875	0.34	0.47	0.00	1.00
Wave 2009	6350	0.38	0.49	0.00	1.00	6875	0.29	0.46	0.00	1.00
General Health										
(good=0)	6348	0.74	0.44	0.00	1.00	6875	0.92	0.27	0.00	1.00
(bad=1)	6348	0.26	0.44	0.00	1.00	6875	0.08	0.27	0.00	1.00
Age	6350	39.16	10.59	19.00	67.00	6875	42.70	11.10	16.00	63.00
Age squared	6350	1645.27	832.88	361.00	4489.00	6875	1946.46	939.83	256.00	3969.00
Sex										
(female=0)	6350	0.46	0.50	0.00	1.00	6875	0.50	0.50	0.00	1.00
(male=1)	6350	0.54	0.50	0.00	1.00	6875	0.50	0.50	0.00	1.00
Marriage status	6348	1.80	0.53	1.00	3.00	6875	1.88	0.61	1.00	3.00
1. Never	6348	0.26	0.44	0.00	1.00	6875	0.25	0.43	0.00	1.00
2. Married	6348	0.68	0.47	0.00	1.00	6875	0.62	0.49	0.00	1.00
3. Separated/Widowed/Divorced	6348	0.06	0.24	0.00	1.00	6875	0.13	0.34	0.00	1.00
Consensual union										
(no=0)	6334	0.32	0.47	0.00	1.00	6875	0.23	0.42	0.00	1.00
(yes=1)	6334	0.68	0.47	0.00	1.00	6875	0.77	0.42	0.00	1.00
Education	6350	3.18	0.45	1.00	4.00	6850	3.30	0.67	2.00	4.00
1. Primary	6350	0.00	0.02	0.00	1.00	6850	0.00	0.00	0.00	0.00
2. Low Secondary	6350	0.03	0.16	0.00	1.00	6850	0.12	0.33	0.00	1.00
3. High Secondary	6350	0.77	0.42	0.00	1.00	6850	0.46	0.50	0.00	1.00
4. Tertiary	6350	0.20	0.40	0.00	1.00	6850	0.42	0.49	0.00	1.00
Occupations	6315	4.91	2.45	1.00	9.00	6789	4.11	2.49	1.00	9.00
1. Manager	6315	0.00	0.00	0.00	0.00	6789	0.00	0.00	0.00	0.00
2. Professionals	6315	0.06	0.23	0.00	1.00	6789	0.16	0.36	0.00	1.00
3. Technicians and associate professionals	6315	0.14	0.34	0.00	1.00	6789	0.18	0.38	0.00	1.00
4. Clerical support workers	6315	0.20	0.40	0.00	1.00	6789	0.14	0.34	0.00	1.00
5. Service and sales workers	6315	0.09	0.28	0.00	1.00	6789	0.15	0.36	0.00	1.00
6. Skilled agricultural, forestry and fishery workers	6315	0.13	0.33	0.00	1.00	6789	0.14	0.35	0.00	1.00
7. Craft and related trades	6315	0.01	0.09	0.00	1.00	6789	0.01	0.10	0.00	1.00
8. Plant and machine operators	6315	0.19	0.39	0.00	1.00	6789	0.08	0.27	0.00	1.00
9. Unskilled operators	6315	0.13	0.34	0.00	1.00	6789	0.06	0.24	0.00	1.00
Type of contract	5710	1.13	0.33	1.00	2.00	5946	1.03	0.18	1.00	2.00
1. Permanent	5710	0.87	0.33	0.00	1.00	5946	0.97	0.18	0.00	1.00
2. Temporary	5710	0.13	0.33	0.00	1.00	5946	0.03	0.18	0.00	1.00
Self-employed										
(yes=1)	6348	0.10	0.30	0.00	1.00	6872	0.11	0.31	0.00	1.00
(no=0)	6348	0.90	0.30	0.00	1.00	6872	0.89	0.31	0.00	1.00
Cash income (Log)						3669	8.76	3.24	0.00	12.64
NON-cash income (Log)						3669	0.40	1.60	0.00	29.40
Cash employee income										
(no=0)	6348	0.10	0.20	0.00	1.00	6875	0.06	0.24	0.00	1.00
(yes=1)	6348	0.90	0.20	0.00	1.00	6875	0.94	0.24	0.00	1.00
NON-cash employee income										
(no=0)	6350	0.00	0.00	0.00	0.00	6875	0.49	0.50	0.00	1.00
(yes=1)	6350	1.00	0.00	1.00	1.00	6875	0.51	0.50	0.00	1.00
Benefit										
1. Disability (Log)						3669	0.03	0.38	0.00	12.08
2. Sickness (Log)						3669	0.03	0.72	0.00	38.02
3. Unemployment (Log)						3669	0.00	0.13	0.00	4.29
Disability										
(no=0)						6875	0.53	0.50	0.00	1.00
(yes=1)						6875	0.47	0.50	0.00	1.00
Sickness						6875	0.47	0.50	0.00	1.00
(no=0)						6875	0.53	0.50	0.00	1.00
(yes=1)						6875	0.47	0.50	0.00	1.00
Unemployment						6875	0.47	0.50	0.00	1.00
(no=0)						6875	0.53	0.50	0.00	1.00
(yes=1)						6875	0.47	0.50	0.00	1.00
Family size						6875	2.13	0.74	1.00	6.00
H. income minus old-age and survivor's benefits	6350	8.67	5.44	-4.11	77.53	6839	48.92	54.53	-6.00	2400.33
H. income minus other transfers	6350	9.34	5.62	-4.11	79.94	6839	50.77	55.10	-6.00	2403.02
H. income	6350	9.93	5.55	2.96	79.94	6839	53.06	54.83	0.46	2404.87
Urban area	6350	0.28	0.45	0.00	1.00	6654	0.74	0.44	0.00	1.00
Dwelling type										
(detached house=0)	6350	0.54	0.50	0.00	1.00	6875	0.09	0.28	0.00	1.00
(apartment=1)	6350	0.46	0.50	0.00	1.00	6875	0.91	0.28	0.00	1.00

Table B.6: Treated and controls summary statistics across Europe

	AUSTRIA						BELGIUM						BULGARIA						CYPRUS						CZECH REPUBLIC					
		Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls		
Variable	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.
Wave 2005	248	0.000	0.000	6041	0.000	0.000	133	0.000	0.000	5824	0.000	0.000	23	0.000	0.000	2371	0.000	0.000	100	0.000	0.000	4160	0.000	0.000	194	0.000	0.000	9335	0.000	0.000
Wave 2006	248	0.266	0.443	6041	0.219	0.413	133	0.180	0.386	5824	0.172	0.377	23	0.000	0.000	2371	0.000	0.000	100	0.000	0.000	4160	0.000	0.000	194	0.000	0.000	9335	0.000	0.000
Wave 2007	248	0.286	0.453	6041	0.309	0.462	133	0.263	0.442	5824	0.243	0.429	23	0.000	0.000	2371	0.000	0.000	100	0.320	0.469	4160	0.335	0.472	194	0.294	0.457	9335	0.216	0.412
Wave 2008	248	0.165	0.372	6041	0.234	0.424	133	0.286	0.453	5824	0.290	0.454	23	0.000	0.000	2371	0.476	0.500	100	0.380	0.488	4160	0.346	0.476	194	0.376	0.486	9335	0.418	0.493
Wave 2009	248	0.282	0.451	6041	0.238	0.426	133	0.271	0.446	5824	0.295	0.456	23	1.000	0.000	2371	0.524	0.500	100	0.300	0.461	4160	0.319	0.466	194	0.330	0.471	9335	0.365	0.482
General Health	248	0.274	0.447	6040	0.045	0.207	133	0.278	0.450	5824	0.057	0.232	23	0.565	0.507	2370	0.166	0.372	100	0.340	0.476	4160	0.047	0.211	194	0.521	0.501	9335	0.167	0.373
Age	248	45.819	9.256	6041	39.553	10.337	133	45.609	8.844	5824	40.256	9.961	23	48.870	10.146	2371	41.060	10.595	100	50.050	8.579	4160	40.210	10.663	194	48.258	9.125	9335	41.471	10.653
Age squared	248	2184.673	806.846	6041	1671.279	803.907	133	2157.805	773.810	5824	1719.765	810.831	23	2486.696	888.841	2371	1798.148	867.118	100	2577.870	816.456	4160	1730.496	871.417	194	2411.639	820.768	9335	1833.325	883.106
Sex	248	0.573	0.496	6041	0.574	0.495	133	0.556	0.499	5824	0.549	0.498	23	0.522	0.511	2371	0.535	0.499	100	0.630	0.485	4160	0.546	0.498	194	0.505	0.501	9335	0.537	0.499
Consensual union	248	0.798	0.403	6034	0.712	0.453	132	0.727	0.447	5730	0.750	0.433	23	0.565	0.507	2368	0.750	0.433	100	0.900	0.302	4160	0.774	0.418	194	0.691	0.463	9335	0.717	0.451
Self-employed	248	1.851	0.357	6041	1.879	0.326	133	1.887	0.318	5798	1.888	0.315	23	2.000	0.000	2356	1.918	0.275	100	1.810	0.394	4160	1.860	0.347	194	1.881	0.324	9335	1.890	0.313
Cash employee income	248	8.391	3.308	6041	8.571	3.129	133	8.667	3.147	5824	8.670	3.179	23	6.489	2.107	2371	6.398	2.427	100	10.142	0.532	4160	9.798	0.626	194	7.320	2.677	9335	7.524	2.737
NON-cash employee income	214	0.034	0.397	5142	0.032	0.272	114	0.181	0.498	4946	0.289	0.827	23	0.032	0.082	2371	0.027	0.120												
Disability (Log)	248	0.020	0.232	6041	0.014	0.296	133	0.125	0.748	5824	0.010	0.252	23	0.061	0.219	2371	0.004	0.054	100	0.000	0.000	4160	0.002	0.072	194	0.122	0.522	9335	0.020	0.252
Sickness (Log)	248	0.093	0.702	6041	0.011	0.169	133	0.099	0.590	5824	0.021	0.326	23	0.000	0.000	2371	0.000	0.009	100	0.020	0.111	4160	0.010	0.215	194	0.120	0.349	9335	0.030	0.148
Unemployment (Log)	248	0.196	0.947	6041	0.150	0.893	133	0.283	1.392	5824	0.267	1.430	23	0.000	0.000	2371	0.003	0.035	100	0.140	0.615	4160	0.139	2.462	194	0.034	0.162	9335	0.013	0.101
Family size	248	2.383	1.003	6041	2.459	1.034	133	2.226	0.901	5824	2.299	0.896	23	2.739	1.137	2371	3.123	1.272	100	2.860	1.119	4160	2.887	1.139	194	2.423	0.969	9335	2.494	0.993
H. income minus old-age and survivor's benefits	248	33.439	25.871	6041	38.293	23.969	133	36.034	42.885	5824	38.752	23.893	23	3.171	2.328	2371	3.807	3.189	100	31.711	16.004	4160	37.979	22.909	194	9.644	8.721	9335	10.993	6.895
H. income minus other transfers	248	35.268	26.076	6041	40.489	24.915	133	36.444	42.803	5824	39.456	23.773	23	3.495	2.245	2371	4.241	3.200	100	35.773	29.862	4160	39.325	23.478	194	10.152	8.696	9335	11.429	6.885
H. income	248	39.234	26.258	6041	44.473	24.922	133	40.173	44.076	5824	42.648	23.757	23	3.691	2.255	2371	4.400	3.199	100	38.310	29.588	4160	41.700	24.145	194	11.056	8.669	9335	12.133	6.781
Marriage status	248	1.935	0.528	6038	1.789	0.583	133	2.053	0.594	5810	1.832	0.590	23	2.174	0.650	2366	1.864	0.534	100	1.980	0.317	4160	1.859	0.475	194	2.144	0.593	9335	1.922	0.582
1. Never	248	0.173	0.379	6038	0.297	0.457	133	0.150	0.359	5810	0.272	0.445	23	0.130	0.344	2366	0.219	0.414	100	0.060	0.239	4160	0.193	0.395	194	0.113	0.318	9335	0.211	0.408
2. Married	248	0.718	0.451	6038	0.616	0.486	133	0.647	0.480	5810	0.624	0.484	23	0.565	0.507	2366	0.697	0.460	100	0.900	0.302	4160	0.755	0.430	194	0.629	0.484	9335	0.656	0.475
3. Separated/Widowed/Divorced	248	0.109	0.312	6038	0.086	0.281	133	0.203	0.404	5810	0.104	0.305	23	0.304	0.470	2366	0.084	0.277	100	0.040	0.197	4160	0.052	0.223	194	0.258	0.439	9335	0.133	0.340
Education	248	3.060	0.697	6041	3.204	0.678	129	3.054	0.860	5675	3.355	0.803	23	3.000	0.603	2370	3.000	0.682	99	2.293	1.100	4158	3.027	1.000	194	3.052	0.475	9335	3.118	0.444
1. Primary	248	0.008	0.090	6041	0.008	0.092	129	0.062	0.242	5675	0.035	0.185	23	0.043	0.209	2370	0.019	0.135	99	0.364	0.483	4158	0.135	0.342	194	0.000	0.000	9335	0.000	0.010
2. Low Secondary	248	0.190	0.393	6041	0.123	0.329	129	0.155	0.363	5675	0.101	0.302	23	0.043	0.209	2370	0.177	0.382	99	0.111	0.316	4158	0.081	0.273	194	0.088	0.283	9335	0.046	0.210
3. High Secondary	248	0.536	0.500	6041	0.524	0.499	129	0.450	0.499	5675	0.336	0.472	23	0.783	0.422	2370	0.591	0.492	99	0.394	0.491	4158	0.405	0.491	194	0.773	0.420	9335	0.789	0.408
4. Tertiary	248	0.266	0.443	6041	0.344	0.475	129	0.333	0.473	5675	0.528	0.499	23	0.130	0.344	2370	0.214	0.410	99	0.131	0.339	4158	0.378	0.485	194	0.139	0.347	9335	0.165	0.371
Occupations	245	5.008	2.354	6021	4.737	2.217	133	4.541	2.569	5745	4.193	2.420	23	6.304	2.670	2346	5.701	2.552	100	6.120	2.371	4160	4.744	2.457	194	5.361	2.412	9335	4.962	2.346
1. Manager	245	0.008	0.090	6021	0.005	0.069	133	0.015	0.122	5745	0.002	0.044	23	0.000	0.000	2346	0.005	0.068	100	0.000	0.000	4160	0.014	0.119	194	0.000	0.000	9335	0.004	0.063
2. Professionals	245	0.065	0.248	6021	0.059	0.236	133	0.075	0.265	5745	0.101	0.301	23	0.087	0.288	2346	0.056	0.230	100	0.010	0.100	4160	0.020	0.139	194	0.041	0.199	9335	0.042	0.201
3. Technicians and associate professionals	245	0.053	0.225	6021	0.093	0.290	133	0.165	0.373	5745	0.207	0.405	23	0.043	0.209	2346	0.108	0.311	100	0.070	0.256	4160	0.172	0.378	194	0.113	0.318	9335	0.094	0.292
4. Clerical support workers	245	0.159	0.367	6021	0.156	0.363	133	0.143	0.351	5745	0.139	0.346	23	0.043	0.209	2346	0.082	0.274	100	0.110	0.314	4160	0.196	0.397	194	0.129	0.336	9335	0.245	0.430
5. Service and sales workers	245	0.163	0.370	6021	0.183	0.387	133	0.180	0.386	5745	0.207	0.405	23	0.043	0.209	2346	0.063	0.242	100	0.110	0.314	4160	0.128	0.334	194	0.119	0.324	9335	0.089	0.285
6. Skilled agricultural, forestry and fishery workers	245	0.196	0.398	6021	0.200	0.400	133	0.128	0.335	5745	0.093	0.291	23	0.174	0.388	2346	0.145	0.352	100	0.110	0.314	4160	0.140	0.347	194	0.124	0.330	9335	0.125	0.331
7. Craft and related trades	245	0.053	0.225	6021	0.041	0.197	133	0.023	0.149	5745	0.011	0.103	23	0.000	0.000	2346	0.038	0.192	100	0.040	0.197	4160	0.018	0.134	194	0.026	0.159	9335	0.018	0.132
8. Plant and machine operators	245	0.139	0.346	6021	0.140	0.347	133	0.083	0.276	5745	0.102	0.303	23	0.217	0.422	2346	0.194	0.395	100	0.210	0.409	4160	0.139	0.346	194	0.222	0.416	9335	0.209	0.407
9. Unskilled operators	245	0.033	0.178	6021	0.043	0.202	133	0.060	0.239	5745	0.057	0.232	23	0.087	0.288	2346	0.164	0.370	100	0.120	0.327	4160	0.051	0.221	194	0.134	0.342	9335	0.118	0.323
Permanent contract	210	0.962	0.192	5304	0.942	0.234	118	0.966	0.182	5151	0.911	0.285	23	0.652	0.487	2086	0.890	0.313	81	0.914	0.283	3576	0.888	0.316	171	0.854	0.354	8301	0.880	0.325
Temporary contract	210	0.038	0.192	5304	0.058	0.234	118	0.034	0.182	5151	0.089	0.285	23	0.348	0.487	2086	0.110	0.313	81	0.086	0.283	3576	0.112	0.316	171	0.146	0.354	8301	0.120	0.325
Disability																														
(no=0)	248	0.992	0.090	6041	0.997	0.053	133	0.962	0.191	5824	0.998	0.049	23	0.913	0.288	2371	0.994	0.079	100	1.000	0.000	4160	0.999	0.031	194	0.943	0.232	9335	0.991	0.093
(yes=1)	248	0.008	0.090	6041	0.003	0.053	133	0.038	0.191	5824	0.002	0.049	23	0.087	0.288	2371	0.006	0.079	100	0.000	0.000	4160	0.001	0.031	194	0.057	0.232	9335	0.009	0.093
Sickness																														
(no=0)	248	0.964	0.187	6041	0.992	0.091	133	0.962	0.191	5824	0.991	0.095	23	1.000	0.000	2371	0.999	0.036	100	0.960	0.197	4160	0.993	0.086	194	0.789	0.409	9335	0.914	0.281
(yes=1)	248	0.036	0.187	6041	0.008	0.091	133	0.038	0.191	5824	0.009	0.095	23	0.000	0.000	2371	0.001	0.036	100	0.040	0.197	4160	0.007	0.086	194	0.211	0.409	9335	0.086	0.281
Unemployment																														
(no=0)	248	0.927	0.260	6041	0.951	0.215	133	0.917	0.276	5824	0.933	0.250	23	1.000	0.000	2371	0.992	0.089	100	0.930	0.256	4160	0.952	0.214	194	0.938	0.242	9335	0.975	0.158
(yes=1)	248	0.073	0.260	6041	0.049	0.215	133	0.083	0.276	5824	0.067	0.250	23	0.000	0.000	2371	0.008	0.089	100	0.070	0.256	4160	0.048	0.214	194	0.062	0.242	9335	0.025	0.158
Urban area	248	0.298	0.458	6041	0.277	0.447	133	0.466	0.501	5824	0.486	0.500	23	0.522	0.511	2371	0.372	0.483	100	0.520	0.502	4160	0.569	0.495	194	0.263	0.441	9335	0.279	0.448
Dwelling type	248	0.601	0.491	6041	0.656	0.475	133	0.82	0.39	5824	0.84	0.36	23	0.348	0.487	2371	0.592	0.492	100	0.890	0.314	4160	0.811	0.391	194	0.546	0.499	9335	0.502	0.500

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	DENMARK						ESTONIA						SPAIN						FINLAND						FRANCE					
		Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls	
Variable	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.
Wave 2005	117	0.085	0.281	4184	0.126	0.332	365	0.000	0.000	5805	0.000	0.000	463	0.000	0.000	13753	0.000	0.000	266	0.000	0.000	3259	0.000	0.000	537	0.000	0.000	17768	0.000	0.000
Wave 2006	117	0.214	0.412	4184	0.232	0.422	365	0.482	0.500	5805	0.304	0.460	463	0.227	0.419	13753	0.211	0.408	266	0.361	0.481	3259	0.253	0.435	537	0.196	0.397	17768	0.246	0.431
Wave 2007	117	0.205	0.406	4184	0.239	0.427	365	0.214	0.410	5805	0.205	0.404	463	0.227	0.419	13753	0.242	0.428	266	0.316	0.466	3259	0.225	0.418	537	0.257	0.437	17768	0.259	0.438
Wave 2008	117	0.239	0.429	4184	0.207	0.405	365	0.167	0.374	5805	0.204	0.403	463	0.257	0.437	13753	0.258	0.438	266	0.135	0.343	3259	0.239	0.427	537	0.248	0.432	17768	0.248	0.432
Wave 2009	117	0.256	0.439	4184	0.195	0.396	365	0.137	0.344	5805	0.287	0.453	463	0.289	0.454	13753	0.289	0.453	266	0.188	0.391	3259	0.284	0.451	537	0.300	0.459	17768	0.247	0.431
General Health	117	0.291	0.456	4184	0.066	0.249	365	0.499	0.501	5805	0.182	0.386	463	0.369	0.483	13752	0.104	0.306	266	0.207	0.406	3259	0.078	0.268	537	0.400	0.490	17766	0.091	0.288
Age	117	45.658	9.824	4184	43.830	9.952	365	47.014	10.256	5805	40.228	10.697	463	45.773	10.032	13753	40.253	10.457	266	45.064	10.280	3259	43.130	10.677	537	45.248	9.643	17768	41.096	9.993
Age squared	117	2180.359	871.144	4184	2020.079	873.150	365	2315.195	906.458	5805	1732.696	858.214	463	2195.605	887.401	13753	1729.609	853.218	266	2136.041	892.496	3259	1974.136	901.871	537	2140.171	823.854	17768	1788.698	818.771
Sex	117	0.299	0.460	4184	0.521	0.500	365	0.529	0.500	5805	0.502	0.500	463	0.564	0.496	13753	0.617	0.486	266	0.474	0.500	3259	0.546	0.498	537	0.482	0.500	17768	0.538	0.499
Consensual union	117	0.812	0.392	4184	0.821	0.383	365	0.786	0.410	5797	0.710	0.454	460	0.780	0.414	13705	0.703	0.457	266	0.722	0.449	3259	0.754	0.431	537	0.778	0.416	17768	0.796	0.403
Self-employed	117	1.915	0.281	4184	1.913	0.283	365	1.918	0.275	5804	1.930	0.256	463	1.771	0.421	13749	1.822	0.383	266	1.665	0.473	3259	1.744	0.436	537	1.912	0.283	17767	1.916	0.277
Cash employee income							365	7.385	2.197	5805	7.655	2.127	463	7.185	4.027	13753	7.762	3.695							537	8.764	2.882	17768	8.878	2.826
NON-cash employee income							313	0.060	0.282	4910	0.078	0.333	399	0.081	0.784	11917	0.089	0.708							161	0.030	0.295	4391	0.016	0.260
Disability (Log)							365	0.018	0.134	5805	0.006	0.070	463	0.068	0.605	13753	0.006	0.214							537	0.034	0.411	17768	0.016	0.550
Sickness (Log)							365	0.029	0.099	5805	0.015	0.072	463	0.049	0.486	13753	0.020	0.387							537	0.220	1.353	17768	0.075	0.982
Unemployment (Log)							365	0.012	0.112	5805	0.011	0.169	463	0.056	0.379	13753	0.108	0.664							537	0.238	1.720	17768	0.273	1.882
Family size	117	1.897	0.532	4184	1.974	0.588	365	2.712	1.156	5805	2.745	1.076	463	2.607	1.059	13753	2.675	1.050	266	1.880	0.701	3259	1.914	0.659	537	2.313	0.870	17768	2.289	0.871
H. income minus old-age and survivor's benefits	117	54.050	109.402	4184	48.591	28.456	365	6.877	4.964	5805	8.698	7.661	460	24.963	20.844	13735	27.807	18.708	266	35.426	22.609	3259	40.499	41.375	537	30.964	21.290	17768	35.014	21.544
H. income minus other transfers	117	54.263	109.373	4184	48.763	28.473	365	7.393	5.078	5805	9.113	7.646	460	26.556	21.083	13735	29.471	18.747	266	35.902	22.596	3259	41.191	41.313	537	32.299	21.240	17768	36.173	21.805
H. income	117	58.546	108.860	4184	51.947	27.956	365	7.953	5.143	5805	9.665	7.712	460	27.653	21.025	13735	30.364	18.771	266	38.770	22.732	3259	44.292	41.150	537	35.794	20.975	17768	39.382	21.577
Marriage status	117	1.897	0.547	4183	1.838	0.541	339	1.988	0.516	5454	1.817	0.619	463	1.877	0.534	13748	1.748	0.537	266	1.868	0.645	3259	1.813	0.609	537	1.873	0.604	17766	1.752	0.584
1. Never	117	0.205	0.406	4183	0.241	0.428	339	0.139	0.346	5454	0.300	0.458	463	0.212	0.409	13748	0.302	0.459	266	0.282	0.451	3259	0.297	0.457	537	0.253	0.435	17766	0.325	0.468
2. Married	117	0.692	0.464	4183	0.681	0.466	339	0.735	0.442	5454	0.584	0.493	463	0.700	0.459	13748	0.648	0.478	266	0.568	0.496	3259	0.594	0.491	537	0.620	0.486	17766	0.597	0.490
3. Separated/Widowed/Divorced	117	0.103	0.305	4183	0.079	0.269	339	0.127	0.333	5454	0.117	0.321	463	0.089	0.284	13748	0.050	0.218	266	0.150	0.358	3259	0.110	0.312	537	0.127	0.333	17766	0.078	0.268
Education	117	3.171	0.723	4169	3.219	0.691	364	3.228	0.643	5802	3.311	0.641	455	2.378	1.185	13667	2.820	1.088	265	3.004	0.859	3254	3.282	0.777	480	2.883	0.890	16807	3.171	0.791
1. Primary	117	0.000	0.000	4169	0.000	0.022	364	0.003	0.052	5802	0.005	0.068	455	0.330	0.471	13667	0.151	0.358	265	0.091	0.288	3254	0.037	0.190	480	0.108	0.311	16807	0.050	0.219
2. Low Secondary	117	0.188	0.392	4169	0.152	0.359	364	0.110	0.313	5802	0.084	0.278	455	0.215	0.412	13667	0.245	0.430	265	0.094	0.293	3254	0.088	0.284	480	0.135	0.343	16807	0.091	0.288
3. High Secondary	117	0.453	0.500	4169	0.476	0.499	364	0.544	0.499	5802	0.507	0.500	455	0.202	0.402	13667	0.237	0.426	265	0.536	0.500	3254	0.429	0.495	480	0.521	0.500	16807	0.495	0.500
4. Tertiary	117	0.359	0.482	4169	0.372	0.483	364	0.343	0.475	5802	0.404	0.491	455	0.253	0.435	13667	0.367	0.482	265	0.279	0.449	3254	0.445	0.497	480	0.235	0.425	16807	0.363	0.481
Occupations	117	4.154	2.062	4155	4.121	2.312	363	5.587	2.697	5798	4.901	2.722	463	5.551	2.715	13723	5.038	2.555	265	4.340	2.461	3258	3.884	2.439	536	5.409	2.622	17690	4.492	2.499
1. Manager	117	0.000	0.000	4155	0.006	0.077	363	0.006	0.074	5798	0.006	0.077	463	0.011	0.103	13723	0.009	0.094	265	0.008	0.087	3258	0.008	0.091	536	0.007	0.086	17690	0.014	0.118
2. Professionals	117	0.017	0.130	4155	0.069	0.253	363	0.099	0.299	5798	0.130	0.336	463	0.086	0.281	13723	0.061	0.239	265	0.155	0.362	3258	0.182	0.386	536	0.062	0.241	17690	0.080	0.271
3. Technicians and associate professionals	117	0.222	0.418	4155	0.202	0.402	363	0.091	0.288	5798	0.131	0.338	463	0.099	0.299	13723	0.149	0.356	265	0.151	0.359	3258	0.199	0.399	536	0.091	0.288	17690	0.152	0.359
4. Clerical support workers	117	0.265	0.443	4155	0.252	0.434	363	0.107	0.310	5798	0.134	0.340	463	0.063	0.243	13723	0.108	0.311	265	0.121	0.326	3258	0.148	0.355	536	0.146	0.353	17690	0.194	0.395
5. Service and sales workers	117	0.103	0.305	4155	0.112	0.315	363	0.030	0.172	5798	0.048	0.213	463	0.076	0.265	13723	0.120	0.325	265	0.049	0.216	3258	0.060	0.237	536	0.093	0.291	17690	0.129	0.335
6. Skilled agricultural, forestry and fishery workers	117	0.188	0.392	4155	0.113	0.317	363	0.096	0.296	5798	0.119	0.324	463	0.160	0.367	13723	0.150	0.357	265	0.151	0.359	3258	0.130	0.337	536	0.132	0.339	17690	0.111	0.314
7. Craft and related trades	117	0.017	0.130	4155	0.022	0.146	363	0.058	0.234	5798	0.030	0.170	463	0.065	0.246	13723	0.033	0.179	265	0.151	0.359	3258	0.085	0.278	536	0.041	0.199	17690	0.041	0.197
8. Plant and machine operators	117	0.103	0.305	4155	0.102	0.302	363	0.196	0.397	5798	0.161	0.368	463	0.160	0.367	13723	0.162	0.369	265	0.113	0.317	3258	0.089	0.285	536	0.138	0.345	17690	0.108	0.310
9. Unskilled operators	117	0.043	0.203	4155	0.065	0.247	363	0.187	0.391	5798	0.160	0.366	463	0.058	0.235	13723	0.082	0.275	265	0.045	0.208	3258	0.057	0.232	536	0.123	0.329	17690	0.090	0.286
Permanent contract	107	1.000	0.000	3818	1.000	0.000	335	0.973	0.162	5346	0.972	0.165	357	0.768	0.423	11272	0.753	0.431	169	0.882	0.324	2353	0.867	0.340	475	0.903	0.296	15750	0.882	0.323
Temporary contract	107	0.000	0.000	3818	0.000	0.000	335	0.027	0.162	5346	0.028	0.165	357	0.232	0.423	11272	0.247	0.431	169	0.118	0.324	2353	0.133	0.340	475	0.097	0.296	15750	0.118	0.323
Disability																														
(no=0)	117	0.000	0.000	4184	0.000	0.000	365	0.973	0.163	5805	0.990	0.101	463	0.985	0.122	13753	0.999	0.034	266	0.000	0.000	3259	0.000	0.000	537	0.989	0.105	17768	0.997	0.054
(yes=1)	117	1.000	0.000	4184	1.000	0.000	365	0.027	0.163	5805	0.010	0.101	463	0.015	0.122	13753	0.001	0.034	266	1.000	0.000	3259	1.000	0.000	537	0.011	0.105	17768	0.003	0.054
Sickness																														
(no=0)	117	0.000	0.000	4184	0.000	0.000	365	0.819	0.385	5805	0.907	0.290	463	0.978	0.146	13753	0.994	0.080	266	0.000	0.000	3259	0.000	0.000	537	0.929	0.257	17768	0.966	0.182
(yes=1)	117	1.000	0.000	4184	1.000	0.000	365	0.181	0.385	5805	0.093	0.290	463	0.022	0.146	13753	0.006	0.080	266	1.000	0.000	3259	1.000	0.000	537	0.071	0.257	17768	0.034	0.182
Unemployment																														
(no=0)	117	0.000	0.000	4184	0.000	0.000	365	0.970	0.171	5805	0.986	0.118	463	0.970	0.171	13753	0.957	0.202	266	0.000	0.000	3259	0.000	0.000	537	0.953	0.211	17768	0.945	0.228
(yes=1)	117	1.000	0.000	4184	1.000	0.000	365	0.030	0.171	5805	0.014	0.118	463	0.030	0.171	13753	0.043	0.202	266	1.000	0.000	3259	1.000	0.000	537	0.047	0.211	17768	0.055	0.228
Urban area	117	0.333	0.473	4184	0.319	0.466	365	0.200	0.401	5805	0.350	0.477	463	0.467	0.499	13753	0.469	0.499	266	0.214	0.411	3259	0.249	0.433	537	0.436	0.496	17768	0.450	0.497
Dwelling type	117	0.786	0.412	4184	0.824	0.381	365	0.479	0.500	5805	0.404	0.491	463	0.400	0.490	13753	0.367	0.482	266	0.714	0.453	3259	0.737	0.440	537	0.702	0.458	17768	0.697	0.460

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	GREECE						HUNGARY						IRELAND						ICELAND						ITALY					
	Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls		
Variables	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.
Wave 2005	147	0.197	0.399	9108	0.212	0.409	226	0.000	0.000	6405	0.000	0.000	64	0.000	0.000	3238	0.000	0.000	38	0.000	0.000	2095	0.000	0.000	645	0.000	0.000	24140	0.000	0.000
Wave 2006	147	0.231	0.423	9108	0.188	0.391	226	0.000	0.000	6405	0.000	0.000	64	0.234	0.427	3238	0.254	0.435	38	0.342	0.481	2095	0.286	0.452	645	0.160	0.367	24140	0.294	0.456
Wave 2007	147	0.082	0.275	9108	0.190	0.392	226	0.252	0.435	6405	0.296	0.457	64	0.328	0.473	3238	0.276	0.447	38	0.079	0.273	2095	0.238	0.426	645	0.327	0.470	24140	0.254	0.435
Wave 2008	147	0.211	0.409	9108	0.212	0.409	226	0.416	0.494	6405	0.343	0.475	64	0.250	0.436	3238	0.238	0.426	38	0.184	0.393	2095	0.232	0.422	645	0.276	0.447	24140	0.230	0.421
Wave 2009	147	0.279	0.450	9108	0.198	0.399	226	0.332	0.472	6405	0.361	0.480	64	0.188	0.393	3238	0.232	0.422	38	0.395	0.495	2095	0.244	0.430	645	0.237	0.426	24140	0.222	0.416
General Health	147	0.306	0.462	9108	0.027	0.162	225	0.702	0.458	6393	0.269	0.443	64	0.141	0.350	3238	0.028	0.164	38	0.395	0.495	2094	0.054	0.226	645	0.512	0.500	24136	0.167	0.373
Age	147	49.340	9.022	9108	40.727	10.357	226	45.717	9.327	6405	39.679	10.185	64	46.875	10.150	3238	43.111	10.844	38	46.737	11.354	2095	42.492	11.162	645	45.191	9.520	24140	40.079	10.070
Age squared	147	2515.299	834.557	9108	1765.920	859.245	226	2176.628	804.884	6405	1678.176	816.287	64	2298.688	911.433	3238	1976.086	906.173	38	2309.842	1007.923	2095	1930.079	943.789	645	2132.685	824.725	24140	1707.688	814.614
Sex	147	0.551	0.499	9108	0.620	0.485	226	0.487	0.501	6405	0.545	0.498	64	0.594	0.495	3238	0.571	0.495	38	0.474	0.506	2095	0.553	0.497	645	0.532	0.499	24140	0.606	0.489
Consensual union	147	0.837	0.371	9108	0.721	0.448	226	0.788	0.410	6405	0.680	0.467	64	0.766	0.427	3238	0.790	0.407	37	0.757	0.435	2092	0.787	0.409	645	0.701	0.458	24136	0.642	0.480
Self-employed	147	1.483	0.501	9108	1.624	0.484	225	1.902	0.298	6347	1.899	0.301	64	1.797	0.406	3238	1.823	0.381	38	1.816	0.393	2095	1.851	0.357	645	1.743	0.438	24063	1.748	0.434
Cash employee income	147	4.458	4.654	9108	5.786	4.541							64	7.607	4.105	3238	8.258	3.785							645	7.158	4.168	24140	7.260	4.142
NON-cash employee income	147	0.001	0.010	9108	0.026	0.212							64	0.115	0.517	3238	0.185	1.475							645	0.063	0.288	24140	0.079	0.402
Disability (Log)	147	0.085	0.671	9108	0.003	0.121							64	0.273	1.153	3238	0.061	0.548							645	0.223	1.168	24140	0.036	0.465
Sickness (Log)	147	0.000	0.000	9108	0.002	0.092							64	0.000	0.000	3238	0.004	0.098												
Unemployment (Log)	147	0.064	0.292	9108	0.060	0.385							64	0.697	2.515	3238	0.387	3.866							645	0.381	1.689	24140	0.400	2.226
Family size	147	2.878	1.104	9108	2.673	1.061	226	2.699	1.027	6405	2.699	1.059	64	2.125	0.826	3238	2.311	0.834	38	1.947	0.769	2095	2.213	0.819	645	2.581	0.990	24140	2.580	1.027
H. income minus old-age and survivor's benefits	147	19.066	16.880	9108	22.340	17.592	226	7.427	5.748	6405	8.806	7.129	64	32.383	20.002	3238	50.702	51.262	38	45.899	23.457	2094	58.096	39.653	645	32.478	23.417	24140	34.057	25.897
H. income minus other transfers	147	21.347	17.080	9108	24.211	17.850	226	8.160	5.911	6405	9.487	7.224	64	34.488	20.878	3238	52.656	51.571	38	46.989	22.672	2094	59.452	40.094	645	35.647	23.771	24140	37.320	26.804
H. income	147	22.397	16.958	9108	24.770	17.832	226	9.129	5.864	6405	10.421	7.155	64	43.249	35.572	3238	57.020	51.622	38	49.684	22.034	2094	62.907	39.698	645	37.564	24.029	24140	38.970	27.104
Marriage status	147	1.980	0.460	9108	1.784	0.505	226	2.062	0.546	6405	1.867	0.635	64	1.953	0.653	3238	1.797	0.540	37	1.838	0.646	2092	1.699	0.576	645	1.864	0.549	24140	1.744	0.557
1. Never	147	0.116	0.321	9108	0.259	0.438	226	0.119	0.325	6405	0.277	0.447	64	0.234	0.427	3238	0.268	0.443	37	0.297	0.463	2092	0.362	0.481	645	0.228	0.420	24140	0.316	0.465
2. Married	147	0.789	0.409	9108	0.698	0.459	226	0.699	0.460	6405	0.579	0.494	64	0.578	0.498	3238	0.667	0.471	37	0.568	0.502	2092	0.577	0.494	645	0.681	0.467	24140	0.624	0.484
3. Separated/Widowed/Divorced	147	0.095	0.295	9108	0.043	0.203	226	0.181	0.386	6405	0.144	0.351	64	0.188	0.393	3238	0.065	0.247	37	0.135	0.347	2092	0.061	0.239	645	0.091	0.289	24140	0.060	0.238
Education	145	2.021	1.175	9080	2.692	1.152	226	3.049	0.605	6405	3.143	0.626	64	2.484	1.113	3215	2.987	1.054	38	2.553	0.724	2091	2.805	0.816	641	2.596	0.917	24105	2.800	0.863
1. Primary	145	0.510	0.502	9080	0.249	0.432	226	0.004	0.067	6405	0.007	0.084	64	0.234	0.427	3215	0.124	0.330	38	0.000	0.000	2091	0.005	0.069	641	0.117	0.322	24105	0.067	0.250
2. Low Secondary	145	0.124	0.331	9080	0.118	0.323	226	0.146	0.354	6405	0.114	0.317	64	0.297	0.460	3215	0.188	0.391	38	0.579	0.500	2091	0.435	0.496	641	0.353	0.478	24105	0.292	0.455
3. High Secondary	145	0.200	0.401	9080	0.325	0.468	226	0.646	0.479	6405	0.608	0.488	64	0.219	0.417	3215	0.263	0.441	38	0.289	0.460	2091	0.310	0.463	641	0.348	0.477	24105	0.416	0.493
4. Tertiary	145	0.166	0.373	9080	0.308	0.462	226	0.204	0.404	6405	0.271	0.445	64	0.250	0.436	3215	0.424	0.494	38	0.132	0.343	2091	0.250	0.433	641	0.183	0.387	24105	0.225	0.418
Occupations	147	5.279	2.254	9108	4.865	2.409	225	5.471	2.608	6393	4.934	2.547	64	5.109	2.778	3238	4.111	2.683	37	4.216	2.382	2078	4.015	2.451	644	5.143	2.530	24007	4.617	2.481
1. Manager	147	0.000	0.000	9108	0.010	0.099	225	0.009	0.094	6393	0.012	0.110	64	0.000	0.000	3238	0.002	0.050	37	0.000	0.000	2078	0.000	0.000	644	0.006	0.079	24007	0.012	0.110
2. Professionals	147	0.102	0.304	9108	0.078	0.269	225	0.053	0.225	6393	0.077	0.267	64	0.125	0.333	3238	0.212	0.408	37	0.189	0.397	2078	0.159	0.366	644	0.081	0.273	24007	0.084	0.278
3. Technicians and associate professionals	147	0.082	0.275	9108	0.159	0.365	225	0.111	0.315	6393	0.139	0.346	64	0.141	0.350	3238	0.188	0.391	37	0.108	0.315	2078	0.204	0.403	644	0.068	0.252	24007	0.108	0.310
4. Clerical support workers	147	0.034	0.182	9108	0.071	0.258	225	0.124	0.331	6393	0.137	0.344	64	0.063	0.244	3238	0.059	0.235	37	0.135	0.347	2078	0.157	0.364	644	0.177	0.382	24007	0.226	0.418
5. Service and sales workers	147	0.068	0.253	9108	0.104	0.305	225	0.084	0.279	6393	0.084	0.277	64	0.078	0.270	3238	0.131	0.338	37	0.108	0.315	2078	0.083	0.276	644	0.118	0.323	24007	0.121	0.326
6. Skilled agricultural, forestry and fishery workers	147	0.129	0.337	9108	0.132	0.338	225	0.124	0.331	6393	0.127	0.333	64	0.188	0.393	3238	0.138	0.345	37	0.108	0.315	2078	0.123	0.328	644	0.102	0.304	24007	0.101	0.301
7. Craft and related trades	147	0.293	0.456	9108	0.148	0.355	225	0.027	0.161	6393	0.027	0.161	64	0.000	0.000	3238	0.005	0.072	37	0.108	0.315	2078	0.051	0.219	644	0.053	0.224	24007	0.024	0.152
8. Plant and machine operators	147	0.170	0.377	9108	0.160	0.367	225	0.164	0.372	6393	0.200	0.400	64	0.125	0.333	3238	0.107	0.310	37	0.162	0.374	2078	0.117	0.321	644	0.179	0.383	24007	0.161	0.368
9. Unskilled operators	147	0.054	0.228	9108	0.072	0.259	225	0.169	0.375	6393	0.129	0.335	64	0.141	0.350	3238	0.068	0.252	37	0.081	0.277	2078	0.049	0.215	644	0.099	0.299	24007	0.091	0.288
Permanent contract	147	0.704	0.460	5681	0.794	0.404	198	0.919	0.273	5629	0.918	0.274	49	0.959	0.200	2580	0.947	0.224	30	0.933	0.254	1781	0.914	0.281	479	0.860	0.347	17994	0.874	0.332
Temporary contract	147	0.296	0.460	5681	0.206	0.404	198	0.081	0.273	5629	0.082	0.274	49	0.041	0.200	2580	0.053	0.224	30	0.067	0.254	1781	0.086	0.281	479	0.140	0.347	17994	0.126	0.332
Disability																														
(no=0)	147	0.980	0.142	9108	0.999	0.026	226	0.000	0.000	6405	0.000	0.000	64	0.875	0.333	3238	0.952	0.213	38	0.000	0.000	2095	0.000	0.000	645	0.943	0.233	24140	0.988	0.107
(yes=1)	147	0.020	0.142	9108	0.001	0.026	226	1.000	0.000	6405	1.000	0.000	64	0.125	0.333	3238	0.048	0.213	38	1.000	0.000	2095	1.000	0.000	645	0.057	0.233	24140	0.012	0.107
Sickness																														
(no=0)	147	1.000	0.000	9108	0.998	0.047	226	0.000	0.000	6405	0.000	0.000	64	1.000	0.000	3238	0.997	0.055	38	0.000	0.000	2095	0.000	0.000	645	0.000	0.000	24140	0.000	0.000
(yes=1)	147	0.000	0.000	9108	0.002	0.047	226	1.000	0.000	6405	1.000	0.000	64	0.000	0.000	3238	0.003	0.055	38	1.000	0.000	2095	1.000	0.000	645	1.000	0.000	24140	1.000	0.000
Unemployment																														
(no=0)	147	0.946	0.228	9108	0.966	0.181	226	0.000	0.000	6405	0.000	0.000	64	0.906	0.294	3238	0.933	0.250	38	0.000	0.000	2095	0.000	0.000	645	0.868	0.339	24140	0.868	0.339
(yes=1)	147	0.054	0.228	9108	0.034	0.181	226	1.000	0.000	6405	1.000	0.000	64	0.094	0.294	3238	0.067	0.250	38	1.000	0.000	2095	1.000	0.000	645	0.132	0.339	24140	0.132	0.339
Urban area	147	0.272	0.447	9108	0.356	0.479	226	0.265	0.443	6405	0.316	0.465	64	0.266	0.445	3238	0.300	0.458	38	0.500	0.507	2095	0.590	0.492	645	0.302	0.460	24140	0.332	0.471
Dwelling type	147	0.592	0.493	9108	0.491	0.500	226	0.71	0.45	6405	0.68	0.47	64	1.000	0.000	3238	0.989	0.106	38	0.553	0.504	2095	0.600	0.490	645	0.498	0.500	24140	0.492	0.500

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	LITHUANIA						LUXEMBOURG						LATVIA						NETHERLAND						NORWAY					
		Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls			Treated			Controls		
Variables	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.
Wave 2005	135	0.000	0.000	4545	0.000	0.000	389	0.206	0.405	9139	0.178	0.382	193	0.000	0.000	2984	0.000	0.000	216	0.000	0.000	5309	0.000	0.000	178	0.298	0.459	7983	0.214	0.410
Wave 2006	135	0.000	0.000	4545	0.000	0.000	389	0.172	0.378	9139	0.193	0.395	193	0.000	0.000	2984	0.000	0.000	216	0.000	0.000	5309	0.000	0.000	178	0.208	0.407	7983	0.210	0.407
Wave 2007	135	0.400	0.492	4545	0.284	0.451	389	0.198	0.399	9139	0.204	0.403	193	0.415	0.494	2984	0.287	0.453	216	0.241	0.429	5309	0.381	0.486	178	0.242	0.429	7983	0.211	0.408
Wave 2008	135	0.281	0.451	4545	0.335	0.472	389	0.270	0.444	9139	0.219	0.413	193	0.316	0.466	2984	0.316	0.465	216	0.273	0.447	5309	0.323	0.468	178	0.112	0.317	7983	0.204	0.403
Wave 2009	135	0.319	0.468	4545	0.381	0.486	389	0.154	0.362	9139	0.206	0.405	193	0.269	0.445	2984	0.396	0.489	216	0.486	0.501	5309	0.296	0.456	178	0.140	0.348	7983	0.161	0.368
General Health	135	0.696	0.462	4545	0.376	0.484	389	0.316	0.466	9138	0.068	0.252	193	0.741	0.439	2984	0.379	0.485	215	0.321	0.468	5308	0.038	0.191	178	0.376	0.486	7982	0.076	0.265
Age	135	49.556	8.988	4545	42.905	10.227	389	43.010	10.004	9139	38.870	10.069	193	47.155	10.687	2984	39.915	11.151	216	45.574	10.111	5309	41.751	9.743	178	44.303	11.140	7983	41.893	10.883
Age squared	135	2535.941	830.644	4545	1945.374	862.080	389	1949.704	838.278	9139	1612.242	808.105	193	2337.259	935.771	2984	1717.472	901.334	216	2178.759	887.363	5309	1838.028	823.114	178	2086.191	958.914	7983	1873.426	923.786
Sex	135	0.452	0.500	4545	0.483	0.500	389	0.535	0.499	9139	0.606	0.489	193	0.420	0.495	2984	0.486	0.500	216	0.440	0.498	5309	0.552	0.497	178	0.455	0.499	7983	0.563	0.496
Consensual union	135	0.830	0.377	4545	0.751	0.432	389	0.219	0.414	9137	0.292	0.455	193	0.617	0.487	2984	0.618	0.486	216	0.639	0.481	5309	0.745	0.436	178	0.747	0.436	7983	0.759	0.428
Self-employed	135	1.881	0.324	4545	1.901	0.299	389	1.913	0.283	9139	1.914	0.281	193	1.865	0.342	2983	1.914	0.281	215	1.916	0.278	5287	1.911	0.285	178	1.916	0.279	7968	1.919	0.274
Cash employee income	135	7.018	2.555	4545	7.137	2.602	389	9.492	2.547	9139	9.667	2.447	193	6.719	2.742	2984	7.204	2.468												
NON-cash employee income							366	0.046	0.376	8444	0.088	1.626	156	0.005	0.038	2493	0.022	0.163												
Disability (Log)							389	0.100	1.029	9139	0.080	2.336	193	0.051	0.257	2984	0.005	0.077												
Sickness (Log)	118	0.043	0.103	992	0.053	0.186	389	0.000	0.000	9139	0.005	0.247	193	0.021	0.094	2984	0.011	0.080												
Unemployment (Log)	118	0.006	0.060	3701	0.006	0.101	389	0.263	2.054	9139	0.150	1.588	193	0.041	0.185	2984	0.026	0.233												
Family size	135	2.274	0.805	4545	2.578	0.949	389	2.509	1.062	9139	2.374	1.003	193	2.306	1.028	2984	2.623	1.162	216	1.787	0.696	5309	1.906	0.630	178	1.955	0.679	7983	1.944	0.684
H. income minus old-age and survivor's benefits	135	6.681	5.070	4545	7.279	5.082	389	52.169	34.220	9139	59.298	41.383	193	5.261	4.705	2984	7.425	6.206	216	33.582	19.351	5309	37.410	22.597	178	56.272	77.125	7982	54.802	58.994
H. income minus other transfers	135	6.978	5.071	4545	7.755	5.139	389	55.426	34.103	9139	62.249	41.410	193	5.696	4.703	2984	7.945	6.295	216	34.330	19.360	5309	38.006	22.414	178	57.880	76.746	7982	55.471	58.910
H. income	135	7.308	5.111	4545	8.099	5.159	389	61.749	33.948	9139	68.103	41.832	193	6.081	4.734	2984	8.365	6.409	216	36.555	19.027	5309	39.785	22.244	178	64.706	76.218	7983	61.305	58.518
Marriage status	135	2.052	0.411	4545	1.971	0.498	389	1.938	0.602	9139	1.803	0.610	192	2.104	0.663	2984	1.937	0.684	216	1.884	0.682	5309	1.794	0.593	178	1.826	0.590	7983	1.728	0.619
1. Never	135	0.059	0.237	4545	0.139	0.346	389	0.213	0.410	9139	0.304	0.460	192	0.172	0.378	2984	0.268	0.443	216	0.296	0.458	5309	0.300	0.458	178	0.275	0.448	7983	0.365	0.481
2. Married	135	0.830	0.377	4545	0.751	0.432	389	0.635	0.482	9139	0.589	0.492	192	0.552	0.499	2984	0.528	0.499	216	0.523	0.501	5309	0.606	0.489	178	0.624	0.486	7983	0.542	0.498
3. Separated/Widowed/Divorced	135	0.111	0.315	4545	0.110	0.313	389	0.152	0.359	9139	0.107	0.309	192	0.276	0.448	2984	0.204	0.403	216	0.181	0.386	5309	0.094	0.292	178	0.101	0.302	7983	0.093	0.290
Education	135	3.563	0.581	4544	3.596	0.593	384	2.487	1.152	9083	2.892	1.089	193	3.031	0.756	2984	3.240	0.714	212	3.142	0.842	5251	3.285	0.777	174	3.328	0.610	7898	3.349	0.631
1. Primary	135	0.000	0.000	4544	0.002	0.044	384	0.310	0.463	9083	0.183	0.387	193	0.052	0.222	2984	0.028	0.166	212	0.038	0.191	5251	0.023	0.149	174	0.006	0.076	7898	0.002	0.042
2. Low Secondary	135	0.044	0.207	4544	0.050	0.217	384	0.120	0.325	9083	0.102	0.303	193	0.114	0.319	2984	0.078	0.268	212	0.179	0.384	5251	0.131	0.337	174	0.057	0.233	7898	0.080	0.271
3. High Secondary	135	0.348	0.478	4544	0.299	0.458	384	0.344	0.476	9083	0.353	0.478	193	0.585	0.494	2984	0.519	0.500	212	0.387	0.488	5251	0.384	0.486	174	0.540	0.500	7898	0.486	0.500
4. Tertiary	135	0.607	0.490	4544	0.650	0.477	384	0.227	0.419	9083	0.361	0.480	193	0.249	0.433	2984	0.375	0.484	212	0.396	0.490	5251	0.462	0.499	174	0.397	0.491	7898	0.433	0.495
Occupations	135	5.252	2.602	4545	4.870	2.708	389	5.072	2.648	9133	4.337	2.478	193	5.472	2.698	2981	4.961	2.607	208	4.106	2.375	5203	3.547	2.137	168	4.196	2.131	7662	3.912	2.208
1. Manager	135	0.000	0.000	4545	0.003	0.051	389	0.000	0.000	9133	0.006	0.078	193	0.000	0.000	2981	0.002	0.048	208	0.000	0.000	5203	0.004	0.065	168	0.000	0.000	7662	0.002	0.050
2. Professionals	135	0.044	0.207	4545	0.095	0.293	389	0.051	0.221	9133	0.065	0.247	193	0.093	0.292	2981	0.085	0.278	208	0.106	0.308	5203	0.119	0.324	168	0.071	0.258	7662	0.123	0.329
3. Technicians and associate professionals	135	0.207	0.407	4545	0.209	0.407	389	0.147	0.354	9133	0.205	0.403	193	0.114	0.319	2981	0.140	0.347	208	0.202	0.402	5203	0.265	0.441	168	0.155	0.363	7662	0.171	0.377
4. Clerical support workers	135	0.074	0.263	4545	0.096	0.295	389	0.198	0.399	9133	0.223	0.416	193	0.098	0.299	2981	0.169	0.375	208	0.188	0.391	5203	0.226	0.418	168	0.274	0.447	7662	0.255	0.436
5. Service and sales workers	135	0.059	0.237	4545	0.060	0.237	389	0.100	0.301	9133	0.119	0.323	193	0.057	0.232	2981	0.052	0.222	208	0.144	0.352	5203	0.134	0.341	168	0.054	0.226	7662	0.073	0.260
6. Skilled agricultural, forestry and fishery workers	135	0.141	0.349	4545	0.104	0.306	389	0.080	0.271	9133	0.089	0.285	193	0.098	0.299	2981	0.138	0.345	208	0.125	0.332	5203	0.090	0.286	168	0.208	0.407	7662	0.161	0.367
7. Craft and related trades	135	0.067	0.250	4545	0.048	0.214	389	0.049	0.216	9133	0.029	0.169	193	0.083	0.276	2981	0.035	0.183	208	0.019	0.138	5203	0.011	0.104	168	0.060	0.237	7662	0.029	0.167
8. Plant and machine operators	135	0.163	0.371	4545	0.166	0.372	389	0.134	0.341	9133	0.112	0.315	193	0.192	0.395	2981	0.163	0.369	208	0.072	0.259	5203	0.070	0.255	168	0.071	0.258	7662	0.097	0.296
9. Unskilled operators	135	0.111	0.315	4545	0.112	0.315	389	0.069	0.254	9133	0.054	0.226	193	0.083	0.276	2981	0.108	0.311	208	0.087	0.282	5203	0.050	0.218	168	0.083	0.277	7662	0.064	0.244
Permanent contract	119	0.958	0.201	4093	0.946	0.227	354	0.924	0.266	8322	0.908	0.288	166	0.910	0.288	2723	0.936	0.245	195	0.872	0.335	4800	0.905	0.293	162	0.895	0.307	7266	0.911	0.284
Temporary contract	119	0.042	0.201	4093	0.054	0.227	354	0.076	0.266	8322	0.092	0.288	166	0.090	0.288	2723	0.064	0.245	195	0.128	0.335	4800	0.095	0.293	162	0.105	0.307	7266	0.089	0.284
Disability																														
(no=0)	135	0.000	0.000	4545	0.000	0.000	389	0.982	0.133	9139	0.993	0.083	193	0.953	0.211	2984	0.995	0.073	216	0.000	0.000	5309	0.000	0.000	178	0.000	0.000	7983	0.000	0.000
(yes=1)	135	1.000	0.000	4545	1.000	0.000	389	0.018	0.133	9139	0.007	0.083	193	0.047	0.211	2984	0.005	0.073	216	1.000	0.000	5309	1.000	0.000	178	1.000	0.000	7983	1.000	0.000
Sickness																														
(no=0)	135	0.156	0.364	4545	0.174	0.379	389	1.000	0.000	9139	0.999	0.030	193	0.896	0.306	2984	0.936	0.244	216	0.000	0.000	5309	0.000	0.000	178	0.000	0.000	7983	0.000	0.000
(yes=1)	135	0.844	0.364	4545	0.826	0.379	389	0.000	0.000	9139	0.001	0.030	193	0.104	0.306	2984	0.064	0.244	216	1.000	0.000	5309	1.000	0.000	178	1.000	0.000	7983	1.000	0.000
Unemployment																														
(no=0)	135	0.867	0.341	4545	0.807	0.395	389	0.977	0.151	9139	0.981	0.137	193	0.927	0.260	2984	0.957	0.202	216	0.000	0.000	5309	0.000	0.000	178	0.000	0.000	7983	0.000	0.000
(yes=1)	135	0.133	0.341	4545	0.193	0.395	389	0.023	0.151	9139	0.019	0.137	193	0.073	0.260	2984	0.043	0.202	216	1.000	0.000	5309	1.000	0.000	178	1.000	0.000	7983	1.000	0.000
Urban area	135	0.578	0.496	4545	0.494	0.500	389	0.506	0.501	9139	0.457	0.498	193	0.415	0.494	2984	0.492	0.500							178	0.466	0.500	7983	0.520	0.500
Dwelling type	135	0.333	0.473	4545	0.382	0.486	389	0.692	0.462	9139	0.652	0.476	193	0.295	0.457	2984	0.342	0.474	216	0.819	0.386	5309	0.837	0.370	178	0.888	0.317	7983	0.833	0.373

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	POLAND						PORTUGAL						ROMANIA						SWEDEN						SLOVENIA					
Variables	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.	Obs	Mean	Std.
Wave 2005	242	0.000	0.000	13855	0.000	0.000	268	0.000	0.000	6549	0.000	0.000	47	0.000	0.000	2982	0.000	0.000	114	0.000	0.000	4953	0.000	0.000	142	0.000	0.000	3049	0.000	0.000
Wave 2006	242	0.000	0.000	13855	0.000	0.000	268	0.198	0.399	6549	0.238	0.426	47	0.000	0.000	2982	0.000	0.000	114	0.237	0.427	4953	0.251	0.434	142	0.000	0.000	3049	0.000	0.000
Wave 2007	242	0.426	0.495	13855	0.331	0.471	268	0.198	0.399	6549	0.244	0.430	47	0.000	0.000	2982	0.000	0.000	114	0.439	0.498	4953	0.233	0.423	142	0.303	0.461	3049	0.346	0.476
Wave 2008	242	0.302	0.460	13855	0.337	0.473	268	0.321	0.468	6549	0.315	0.464	47	0.000	0.000	2982	0.000	0.000	114	0.184	0.389	4953	0.235	0.424	142	0.366	0.483	3049	0.330	0.470
Wave 2009	242	0.273	0.446	13855	0.332	0.471	268	0.284	0.452	6549	0.202	0.402	47	1.000	0.000	2982	1.000	0.000	114	0.140	0.349	4953	0.280	0.449	142	0.331	0.472	3049	0.325	0.468
General Health	242	0.682	0.467	13855	0.254	0.435	268	0.634	0.483	6548	0.273	0.446	47	0.489	0.505	2982	0.080	0.271	113	0.319	0.468	4853	0.067	0.251	142	0.585	0.495	3049	0.203	0.402
Age	242	46.802	8.597	13855	39.889	10.032	268	47.231	10.999	6549	39.783	11.180	47	49.638	8.845	2982	39.358	10.335	114	43.895	11.847	4953	42.294	11.282	142	43.634	9.064	3049	40.590	9.426
Age squared	242	2264.000	761.389	13855	1691.748	802.679	268	2351.321	994.124	6549	1707.667	904.426	47	2540.532	817.904	2982	1655.872	830.432	114	2065.860	1023.029	4953	1916.008	964.605	142	1985.493	768.702	3049	1736.404	769.895
Sex	242	0.537	0.500	13855	0.542	0.498	268	0.493	0.501	6549	0.561	0.496	47	0.553	0.503	2982	0.581	0.493	114	0.535	0.501	4953	0.533	0.499	142	0.528	0.501	3049	0.525	0.499
Consensual union	242	0.839	0.368	13855	0.766	0.424	268	0.728	0.446	6549	0.718	0.450	47	0.787	0.414	2982	0.728	0.445	114	0.939	0.241	4953	0.874	0.331	141	0.766	0.425	3042	0.731	0.444
Self-employed	242	1.686	0.465	13855	1.775	0.417	268	1.728	0.446	6549	1.812	0.391	47	1.574	0.500	2982	1.746	0.435	114	1.912	0.284	4949	1.903	0.296	142	1.951	0.217	3035	1.924	0.265
Cash employee income	242	5.710	3.736	13855	6.193	3.490	268	6.263	4.022	6549	7.232	3.594	47	3.977	3.810	2982	5.764	3.378	114	9.435	1.562	4953	9.396	2.077	142	8.688	1.769	3049	8.484	2.383
NON-cash employee income	242	0.022	0.206	11469	0.029	0.204	76	0.038	0.332	1318	0.071	0.536	47	0.000	0.000	2980	0.065	0.987	102	0.113	0.522	4367	0.232	0.830	118	0.023	0.172	2498	0.046	0.359
Disability (Log)	242	0.157	0.740	13855	0.007	0.115	268	0.047	0.385	6549	0.001	0.062	47	0.035	0.168	2982	0.000	0.017	114	0.081	0.556	4953	0.046	0.526	142	0.035	0.309	3049	0.015	0.213
Sickness (Log)	242	0.004	0.035	13855	0.001	0.028	268	0.047	0.389	6547	0.008	0.159	47	0.000	0.000	2982	0.001	0.013	114	0.953	2.207	4953	0.234	0.931	142	0.236	0.674	3049	0.098	0.463
Unemployment (Log)	242	0.021	0.165	13855	0.017	0.148	268	0.143	0.766	6549	0.068	0.615	47	0.013	0.087	2982	0.002	0.037	114	0.274	1.265	4953	0.292	1.325	142	0.020	0.237	3049	0.023	0.227
Family size	242	2.971	1.270	13855	2.927	1.185	268	2.761	0.965	6549	2.879	1.113	47	2.787	1.382	2982	2.749	1.145	114	1.868	0.759	4953	1.926	0.687	142	2.873	0.995	3049	2.745	1.030
H. income minus old-age and survivor's benefits	242	6.949	5.167	13855	7.206	5.999	268	13.549	10.161	6549	19.410	17.094	47	3.335	3.402	2982	4.277	3.997	114	31.553	15.682	4953	37.069	21.425	142	19.658	10.102	3049	22.397	12.411
H. income minus other transfers	242	7.823	5.567	13855	8.061	6.042	268	15.527	10.580	6549	20.932	17.460	47	3.680	3.270	2979	4.624	4.021	114	32.572	16.009	4953	37.749	21.512	142	20.565	10.555	3049	23.748	12.416
H. income	242	8.489	5.454	13855	8.566	5.927	268	16.554	10.614	6549	21.916	17.385	47	3.935	3.237	2982	4.874	4.018	114	37.389	15.083	4953	41.910	21.178	142	22.884	9.818	3049	25.712	12.116
Marriage status	242	2.000	0.427	13855	1.870	0.479	268	1.929	0.539	6549	1.800	0.524	47	2.043	0.464	2982	1.844	0.535	114	2.035	0.921	4953	1.953	0.866	141	1.801	0.600	3043	1.697	0.561
1. Never	242	0.091	0.288	13855	0.188	0.391	268	0.183	0.387	6549	0.257	0.437	47	0.085	0.282	2982	0.233	0.423	114	0.404	0.493	4953	0.399	0.490	141	0.298	0.459	3043	0.355	0.479
2. Married	242	0.818	0.386	13855	0.753	0.431	268	0.705	0.457	6549	0.686	0.464	47	0.787	0.414	2982	0.689	0.463	114	0.158	0.366	4953	0.249	0.432	141	0.603	0.491	3043	0.593	0.491
3. Separated/Widowed/Divorced	242	0.091	0.288	13855	0.058	0.234	268	0.112	0.316	6549	0.057	0.232	47	0.128	0.337	2982	0.077	0.267	114	0.439	0.498	4953	0.352	0.478	141	0.099	0.300	3043	0.052	0.221
Education	242	3.012	0.733	13854	3.083	0.759	253	1.498	0.862	6375	1.958	1.103	47	2.543	0.690	2976	2.983	0.696	114	3.096	0.752	4948	3.292	0.725	141	2.887	0.820	3046	3.098	0.756
1. Primary	242	0.087	0.283	13854	0.083	0.275	253	0.696	0.461	6375	0.489	0.500	47	0.065	0.250	2976	0.020	0.141	114	0.035	0.185	4948	0.027	0.163	141	0.092	0.290	3046	0.063	0.243
2. Low Secondary	242	0.000	0.000	13854	0.003	0.054	253	0.162	0.369	6375	0.205	0.404	47	0.370	0.488	2976	0.190	0.392	114	0.132	0.340	4948	0.077	0.267	141	0.121	0.327	3046	0.052	0.222
3. High Secondary	242	0.726	0.447	13854	0.664	0.472	253	0.091	0.288	6375	0.165	0.371	47	0.522	0.505	2976	0.577	0.494	114	0.535	0.501	4948	0.472	0.499	141	0.596	0.492	3046	0.609	0.488
4. Tertiary	242	0.187	0.390	13854	0.251	0.433	253	0.051	0.221	6375	0.141	0.348	47	0.043	0.206	2976	0.213	0.410	114	0.298	0.460	4948	0.424	0.494	141	0.191	0.395	3046	0.276	0.447
Occupations	242	5.415	2.240	13835	5.195	2.415	268	5.963	2.401	6549	5.390	2.459	47	6.213	1.853	2982	5.553	2.326	113	4.788	2.403	4930	4.198	2.264	137	5.270	2.496	2931	4.715	2.446
1. Manager	242	0.004	0.064	13835	0.003	0.058	268	0.000	0.000	6549	0.006	0.078	47	0.000	0.000	2982	0.005	0.073	113	0.000	0.000	4930	0.005	0.070	137	0.007	0.085	2931	0.004	0.066
2. Professionals	242	0.025	0.156	13835	0.052	0.223	268	0.067	0.251	6549	0.069	0.254	47	0.000	0.000	2982	0.026	0.161	113	0.027	0.161	4930	0.052	0.221	137	0.022	0.147	2931	0.047	0.213
3. Technicians and associate professionals	242	0.124	0.331	13835	0.148	0.355	268	0.037	0.190	6549	0.089	0.285	47	0.064	0.247	2982	0.117	0.322	113	0.195	0.398	4930	0.234	0.423	137	0.102	0.304	2931	0.159	0.365
4. Clerical support workers	242	0.095	0.294	13835	0.108	0.311	268	0.075	0.263	6549	0.090	0.287	47	0.043	0.204	2982	0.114	0.318	113	0.195	0.398	4930	0.214	0.410	137	0.219	0.415	2931	0.211	0.408
5. Service and sales workers	242	0.091	0.289	13835	0.070	0.255	268	0.082	0.275	6549	0.100	0.300	47	0.021	0.146	2982	0.042	0.201	113	0.062	0.242	4930	0.081	0.272	137	0.117	0.322	2931	0.115	0.319
6. Skilled agricultural, forestry and fishery workers	242	0.083	0.276	13835	0.103	0.304	268	0.138	0.346	6549	0.159	0.366	47	0.149	0.360	2982	0.114	0.318	113	0.186	0.391	4930	0.163	0.370	137	0.088	0.284	2931	0.122	0.327
7. Craft and related trades	242	0.212	0.409	13835	0.151	0.359	268	0.108	0.311	6549	0.054	0.226	47	0.298	0.462	2982	0.171	0.377	113	0.009	0.094	4930	0.022	0.146	137	0.007	0.085	2931	0.017	0.130
8. Plant and machine operators	242	0.195	0.397	13835	0.176	0.381	268	0.209	0.407	6549	0.223	0.416	47	0.191	0.398	2982	0.192	0.394	113	0.115	0.320	4930	0.106	0.308	137	0.161	0.368	2931	0.120	0.325
9. Unskilled operators	242	0.091	0.289	13835	0.107	0.309	268	0.086	0.281	6549	0.087	0.282	47	0.106	0.312	2982	0.116	0.320	113	0.159	0.368	4930	0.094	0.292	137	0.182	0.388	2931	0.139	0.346
Permanent contract	242	0.801	0.400	10739	0.750	0.433	195	0.872	0.335	5298	0.829	0.377	47	0.926	0.267	2225	0.968	0.177	102	0.951	0.217	4350	0.937	0.243	135	0.904	0.296	2801	0.881	0.324
Temporary contract	242	0.199	0.400	10739	0.250	0.433	195	0.128	0.335	5298	0.171	0.377	47	0.074	0.267	2225	0.032	0.177	102	0.049	0.217	4350	0.063	0.243	135	0.096	0.296	2801	0.119	0.324
Disability	242																													
(no=0)	242	0.938	0.242	13855	0.996	0.066	268	0.985	0.121	6549	1.000	0.021	47	0.957	0.204	2982	1.000	0.018	114	0.965	0.185	4953	0.990	0.102	142	0.979	0.144	3049	0.993	0.081
(yes=1)	242	0.062	0.242	13855	0.004	0.066	268	0.015	0.121	6549	0.000	0.021	47	0.043	0.204	2982	0.000	0.018	114	0.035	0.185	4953	0.010	0.102	142	0.021	0.144	3049	0.007	0.081
Sickness	242																													
(no=0)	242	0.988	0.111	13855	0.996	0.067	268	0.970	0.170	6549	0.991	0.093	47	1.000	0.000	2982	0.998	0.041	114	0.588	0.494	4953	0.741	0.438	142	0.711	0.455	3049	0.841	0.366
(yes=1)	242	0.012	0.111	13855	0.004	0.067	268	0.030	0.170	6549	0.009	0.093	47	0.000	0.000	2982	0.002	0.041	114	0.412	0.494	4953	0.259	0.438	142	0.289	0.455	3049	0.159	0.366
Unemployment	242																													
(no=0)	242	0.975	0.156	13855	0.981	0.138	268	0.963	0.190	6549	0.980	0.139	47	0.979	0.146	2982	0.997	0.058	114	0.912	0.284	4953	0.920	0.272	142	0.986	0.118	3049	0.981	0.138
(yes=1)	242	0.025	0.156	13855	0.019	0.138	268	0.037	0.190	6549	0.020	0.139	47	0.021	0.146	2982	0.003	0.058	114	0.088	0.284	4953	0.080	0.272	142	0.014	0.118	3049	0.019	0.138
Urban area	242	0.343	0.476	13855	0.321	0.467	268	0.310	0.463	6549	0.338	0.473	47	0.426	0.500	2982	0.404	0.491	114	0.219	0.416	4953	0.210	0.407						
Dwelling type	242	0.579	0.495	13855	0.570	0.495	268	0.73	0.44	6549	0.69	0.46	47	0.638	0.486	2982	0.551	0.497	114	0.640	0.482	4953	0.638	0.481	142	0.613	0.489	3049	0.708	0.455

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Table B.7: Propensity score: summary statistics

Panel A: Propensity score estimates	**AUSTRIA**		**BELGIUM**		**BULGARIA**		**CYPRUS**		**CZECH REPUBLIC**		**DENMARK**		**ESTONIA**	
Variables	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Wave 2005											-0.250	0.165		
Wave 2006											-0.228	0.137	0.180	0.082
Wave 2007	-0.111	0.096	-0.095	0.135					0.104	0.094	-0.216	0.133		
Wave 2008	-0.387	0.150	-0.195	0.159			0.045	0.128	-0.064	0.082	-0.040	0.129	-0.452	0.181
Wave 2009	0.002	0.101	-0.188	0.145			-0.014	0.136					-0.497	0.105
General Health (bad=1)	0.796	0.108	0.755	0.130	0.655	0.244	0.815	0.137	0.509	0.075	0.885	0.116	0.517	0.074
Age	0.002	0.029	0.028	0.046	0.052	0.103	0.071	0.055	0.045	0.033	0.015	0.040	-0.043	0.027
Age sq.	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000
Male	-0.056	0.091	-0.029	0.112	0.184	0.258	0.103	0.129	0.146	0.086	-0.382	0.107	0.113	0.085
Consensual union	-0.107	0.158	-0.283	0.142	-4.993	0.304			-0.083	0.147	0.101	0.176	0.000	0.127
Cash employee income	0.051	0.073	0.115	0.131	-0.369	0.256	-0.927	1.286	-0.238	0.085	1.602	1.809	-0.125	0.069
No-cash employee income	0.132	0.142	-0.110	0.129	-1.128	1.707							-0.122	0.164
Disability benefits	-0.225	0.414	-0.032	0.139	0.365	2.556			-0.070	0.194			0.871	0.313
Sickness benefits	0.109	0.132	-0.001	0.164					0.351	0.159			-0.067	0.471
Unemployment benefits	-0.009	0.054	-0.122	0.081			-0.007	0.045	0.203	0.437			-0.196	0.297
Family size	0.009	0.051	-0.063	0.060	-0.039	0.130	-0.073	0.058	0.026	0.046	-0.219	0.113	-0.013	0.036
HH income minus old-age and survivor's benefits	0.002	0.007	0.021	0.020	0.155	0.210	-0.010	0.005			-0.006	0.027	-0.038	0.036
HH income minus other transfers	-0.014	0.010	-0.047	0.023	-0.110	0.522	0.009	0.015	0.018	0.028	-0.010	0.028	-0.008	0.061
HH income	0.006	0.009	0.028	0.012	0.012	0.464	0.001	0.015	-0.039	0.041	0.018	0.007	0.046	0.051
Never Married	-0.109	0.078	0.092	0.089	0.169	0.258	-0.077	0.164	0.013	0.034	-0.034	0.096	0.049	0.073
Married	0.094	0.152	-0.043	0.137			0.098	0.177	0.073	0.071	0.040	0.131	0.025	0.118
Primary	0.141	0.170	-0.098	0.078	0.046	0.271	-0.131	0.078	-0.099	0.145	-0.098	0.081	0.042	0.176
Low Secondary	0.505	0.344	-0.044	0.184	-0.935	0.659	0.158	0.190	-0.008	0.097			0.128	0.363
High Secondary	0.207	0.182	0.093	0.116	-0.084	0.360	0.158	0.142	-0.029	0.097	-0.063	0.100	0.170	0.184
Manager	-0.025	0.047	-0.105	0.060	0.015	0.065	0.110	0.137	-0.009	0.031			0.036	0.019
Professionals	-0.676	0.483	-1.380	0.512									-0.072	0.140
Technicians	-0.504	0.361	-1.045	0.433	-1.120	0.646	0.144	0.396	0.187	0.204	0.682	0.390	-0.221	0.132
Clerical support workers	-0.153	0.289	-0.869	0.375	-0.780	0.571	-0.117	0.360	-0.154	0.171	0.664	0.385	-0.207	0.183
Service and sales workers	-0.190	0.249	-0.880	0.317	-0.516	0.516	0.019	0.385	0.195	0.167	0.545	0.401	-0.115	0.126
Skilled agricultural	-0.212	0.210	-0.587	0.284	-0.571	0.385	-0.162	0.442	0.019	0.154	0.695	0.398	0.144	0.260
Craft and related trades			-0.773	0.237	-0.384	0.337			-0.006	0.253	0.206	0.921	-0.100	0.115
Machine operators	-0.091	0.159	-0.565	0.245	-0.793	0.398	-0.394	0.629	-0.091	0.135	0.782	0.407	-0.165	0.118
Elementary occ.	-0.231	0.205	-0.257	0.238	0.682	0.284	-0.395	0.753	-0.018	0.147	0.439	0.434		
Permanent contract	-0.059	0.190	-0.156	0.219	0.562	0.379	-0.098	0.207	0.029	0.108			0.196	0.239
Disability benefits	-0.433	0.307	-1.024	0.695	0.591	1.859			-0.645	0.435			-0.253	0.158
Sickness benefits	1.332	1.514	-0.422	0.457					-0.336	0.118			-0.375	0.120
Unemployment benefits	-0.438	0.338	0.434	0.263			-0.194	0.224	0.299	0.285			0.252	0.315
Urban area	-0.023	0.241	-0.131	0.098	0.079	0.281	-0.035	0.115	0.047	0.086	0.081	0.098	-0.442	0.085
Dwelling type	0.092	0.084	0.009	0.148	0.525	0.306	0.220	0.167	0.095	0.078			-0.019	0.075
ConstantÅ	-2.484	1.179	0.214	1.516	-4.219	2.275	-4.218	1.364	-0.866	1.096	-2.290	0.966	-1.482	0.897
Log Likelihood	-650.730		-401.286		-176.438		-312.265		-716.022		-438.429		-826.705	
R2	0.123		0.144		0.312		0.186		0.142		0.104		0.168	
Obs	4555		4197		1073		3590		8346		3859		4407	
Panel B: Region of common support	**[.00457931, .64351347]**		**[.00211046, .64813166]**		**[.00334683, .64953804]**		**[.00181679, .66059875]**		**[.00257233, .53311529]**		**[.00334528, .66650913]**		**[.00439767, .67343377]**	
Estimated propensity score		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest
	1%	0.005	0.005	1%	0.002	0.002	1%	0.003	0.003	1%	0.002	0.002	1%	0.003	0.003	1%	0.004	0.003	1%	0.005	0.004
	5%	0.007	0.005	5%	0.003	0.002	5%	0.004	0.003	5%	0.002	0.002	5%	0.003	0.003	5%	0.006	0.003	5%	0.007	0.004
	10%	0.009	0.005	10%	0.004	0.002	10%	0.004	0.003	10%	0.003	0.002	10%	0.004	0.003	10%	0.007	0.003	10%	0.008	0.004
	25%	0.014	0.005	25%	0.007	0.002	25%	0.007	0.003	25%	0.006	0.002	25%	0.006	0.003	25%	0.011	0.003	25%	0.016	0.004
	50%	0.025		50%	0.014		50%	0.017		50%	0.013		50%	0.012		50%	0.020		50%	0.037	
			Largest			Largest			Largest			Largest			Largest			Largest			Largest
	75%	0.044	0.426	75%	0.027	0.496	75%	0.043	0.432	75%	0.027	0.325	75%	0.025	0.389	75%	0.032	0.258	75%	0.080	0.544
	90%	0.082	0.480	90%	0.050	0.541	90%	0.101	0.527	90%	0.061	0.344	90%	0.054	0.392	90%	0.052	0.268	90%	0.158	0.562
	95%	0.130	0.538	95%	0.085	0.584	95%	0.160	0.585	95%	0.101	0.406	95%	0.078	0.402	95%	0.094	0.271	95%	0.224	0.627
	99%	0.266	0.644	99%	0.186	0.648	99%	0.353	0.650	99%	0.252	0.661	99%	0.159	0.533	99%	0.176	0.667	99%	0.377	0.673
Variance	0.002			0.002			0.005			0.002			0.001			0.001			0.006		
Skewness	3.885			6.228			4.333			4.577			4.443			4.592			2.560		
Kurtosis	25.020			65.011			27.403			34.455			35.916			46.331			11.389		
Panel C: Inferior of blocks	**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**		
	Obs = 4,384	0	1	Obs = 3,938	0	1	Obs = 530	0	1	Obs = 2,949	0	1	Obs = 7,428	0	1	Obs = 3,967	0	1	Obs = 4,038	0	1
	0.0045793	3,380	74	0.0021105	1,752	12	0.0033468	406	7	0.0018168	2,093	22	0.0025723	3,830	26	0.0033453	1,154	11	0.0043977	1,459	20
	0.05	562	43	0.0125	1,046	17	0.05	59	4	0.025	442	13	0.0125	1,653	31	0.0125	1,321	30	0.025	894	33
	0.1	206	26	0.025	689	28	0.1	29	5	0.05	205	22	0.025	1,005	39	0.025	995	36	0.05	799	67
	0.2	57	30	0.05	227	17	0.2	10	1	0.1	94	10	0.05	587	32	0.05	228	11	0.1	444	60
	0.4	3	1	0.1	103	14	0.3	1	4	0.2	33	11	0.1	153	33	0.1	138	24	0.2	167	67
	0.6	1	1	0.2	19	6	0.4	1	1	0.4	1	1	0.2	28	8	0.2	13	4	0.4	11	13
				0.4	2	4	0.6	1	1	0.6	1	1	0.4	1	2	0.6	1	1	0.6	2	2
				0.6	1	1															
	Total	4,209	175	Total	3,839	99	Total	507	23	Total	2,869	80	Total	7,257	171	Total	3,850	117	Total	3,776	262

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Panel A: Propensity score estimates	**SPAIN**		**FINLAND**		**FRANCE**		**GREECE**		**HUNGARY**		**IRELAND**		**ICELAND**	
Variables	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Wave 2005							-0.347	0.161						
Wave 2006	0.113	0.074	0.988	0.412							0.014	0.191	0.288	0.295
Wave 2007			1.002	0.412			-0.506	0.184			0.132	0.200	-0.476	0.404
Wave 2008	0.095	0.081	0.653	0.388	0.299	0.162	-0.325	0.158	0.134	0.085				
Wave 2009	0.061	0.071	1.002	0.412	0.173	0.064	-0.132	0.148	-0.007	0.089	-0.009	0.198	0.416	0.273
General Health (bad=1)	0.648	0.058	0.492	0.128	0.853	0.099	1.062	0.155	0.675	0.073	0.792	0.221	1.302	0.234
Age	0.034	0.027	0.060	0.033	-0.013	0.035	0.079	0.051	-0.010	0.033	0.004	0.048	0.049	0.074
Age sq.			-0.001	0.000	0.000	0.000	-0.001	0.001	0.000	0.000	0.000	0.001	0.000	0.001
Male	-0.123	0.060	-0.275	0.100	-0.082	0.100	-0.146	0.128	-0.003	0.077	0.112	0.172	-0.415	0.232
Consensual union	0.386	0.098	-0.036	0.140	0.058	0.136	0.775	0.232	-0.025	0.142	-0.135	0.235	0.296	0.327
Cash employee income	-0.030	0.056	0.162	0.525	0.015	0.080	-0.079	0.114	0.023	0.027	-0.016	0.128		
No-cash employee income					-0.032	0.162	-6.706	9.641	-0.878	1.334	-0.078	0.124		
Disability benefits	-0.129	0.133			-0.186	0.174	0.292	0.707						
Sickness benefits	-0.092	0.066			0.008	0.032								
Unemployment benefits	-0.077	0.081			-0.004	0.016	-0.546	0.303						
Family size	-0.033	0.029	0.036	0.091	0.026	0.049	0.059	0.056	-0.005	0.039	-0.024	0.094	-0.206	0.173
HH income minus old-age and survivor's benefits	-0.008	0.005	0.021	0.019	0.012	0.010	-0.005	0.010	-0.028	0.022	-0.013	0.010	0.009	0.030
HH income minus other transfers	-0.010	0.009	-0.013	0.021	-0.027	0.012	-0.047	0.028	0.000	0.033	-0.006	0.010	0.044	0.047
HH income	0.016	0.007			0.017	0.008	0.052	0.027			0.011	0.004		
Never Married	0.100	0.054	0.016	0.072	0.056	0.079	0.035	0.129	-0.014	0.072	0.192	0.119	0.061	0.170
Married	-0.266	0.093	-0.170	0.118	-0.213	0.118	-0.734	0.216	0.151	0.136	-0.197	0.208	-0.217	0.284
Primary	-0.110	0.030	-0.177	0.069	-0.079	0.068	-0.060	0.065	0.152	0.151	0.025	0.082	0.024	0.144
Low Secondary	-0.162	0.065	-0.349	0.200	0.103	0.145	-0.138	0.187	0.214	0.305	0.111	0.175		
High Secondary	-0.036	0.067	0.056	0.104	0.052	0.106	-0.015	0.135	0.194	0.167	-0.014	0.172	-0.369	0.241
Manager			-0.042	0.056	-0.065	0.460	-0.107	0.054	0.350	0.349	0.121	0.051	0.007	0.058
Professionals	-0.155	0.280	-0.116	0.340	-0.018	0.029			0.052	0.025				
Technicians	-0.210	0.241	-0.280	0.284	-0.131	0.202	-0.630	0.276	0.099	0.164	0.607	0.365	-0.653	0.310
Clerical support workers	-0.335	0.241	-0.318	0.245	-0.099	0.168	-0.653	0.293	0.023	0.147	0.679	0.366	-0.505	0.284
Service and sales workers	-0.316	0.239	-0.539	0.253	-0.148	0.172	-0.406	0.216	0.019	0.151	0.149	0.313	-0.451	0.343
Skilled agricultural	-0.153	0.236	-0.162	0.184	0.118	0.153	-0.161	0.186	-0.044	0.138	0.475	0.253	-0.926	0.398
Craft and related trades	-0.261	0.314	0.136	0.339	-0.290	0.427	-0.176	0.508	0.058	0.262			-0.020	0.540
Machine operators	-0.206	0.235	-0.405	0.246	0.088	0.166	-0.008	0.246	-0.280	0.128	0.145	0.251	-0.401	0.398
Elementary occ.	-0.039	0.065	-0.203	0.218	0.049	0.165	0.064	0.226	-0.120	0.129	0.149	0.235		
Permanent contract	-0.024	0.078	0.070	0.132	-0.234	0.159	0.203	0.137	-0.026	0.129	-0.167	0.326	0.091	0.440
Disability benefits	-1.837	0.662	-0.014	0.012	1.256	0.601	0.236	4.908			0.339	0.204		
Sickness benefits	0.843	0.267	-0.953	0.376	0.165	0.185								
Unemployment benefits	-0.102	0.208	0.260	0.190	0.201	0.239	-0.920	0.464			0.269	0.289		
Urban area	0.026	0.055	-0.026	0.103	0.100	0.101	-0.189	0.118	-0.022	0.088	0.047	0.149	-0.309	0.224
Dwelling type	0.030	0.057	0.145	0.103	-0.039	0.110	-0.070	0.118	-0.009	0.087			0.120	0.231
ConstantÂ	0.352	0.737	-1.802	0.764	-2.049	0.847	-2.323	5.237	-3.224	0.905	-1.294	1.425	-2.490	1.682
Log Likelihood	-1424.925		-557.904		-517.628		-311.583		-766.709		-204.077		-107.169	
R2	0.088		0.096		0.135		0.183		0.113		0.157		0.268	
Obs	11472		2515		3857		5636		5822		1680			
Panel B: Region of common support	**[.00395696, .4806206]**		**[.00622267, .36242498]**		**[.00395696, .4806206]**		**[.00292569, .58352627]**		**[.00536802, .21601084]**		**[.00310029, .58391206]**		**[.00378998, .62192785]**	
Estimated propensity score		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest
	1%	0.005	0.005	1%	0.008	0.006	1%	0.005	0.004	1%	0.003	0.003	1%	0.006	0.005	1%	0.003	0.003	1%	0.004	0.004
	5%	0.008	0.005	5%	0.013	0.006	5%	0.007	0.004	5%	0.003	0.003	5%	0.006	0.005	5%	0.004	0.003	5%	0.004	0.004
	10%	0.010	0.005	10%	0.018	0.006	10%	0.008	0.004	10%	0.004	0.003	10%	0.007	0.005	10%	0.005	0.003	10%	0.005	0.004
	25%	0.014	0.005	25%	0.032	0.006	25%	0.012	0.004	25%	0.005	0.003	25%	0.011	0.005	25%	0.007	0.003	25%	0.007	0.004
	50%	0.020		50%	0.057		50%	0.021		50%	0.009		50%	0.018		50%	0.014		50%	0.014	
			Largest			Largest			Largest			Largest			Largest			Largest			Largest
	75%	0.033	0.458	75%	0.094	0.333	75%	0.037	0.413	75%	0.017	0.382	75%	0.052	0.206	75%	0.026	0.348	75%	0.032	0.372
	90%	0.064	0.463	90%	0.141	0.339	90%	0.075	0.451	90%	0.034	0.403	90%	0.094	0.215	90%	0.048	0.370	90%	0.074	0.398
	95%	0.092	0.477	95%	0.181	0.354	95%	0.139	0.460	95%	0.064	0.422	95%	0.114	0.215	95%	0.083	0.534	95%	0.119	0.567
	99%	0.166	0.532	99%	0.267	0.362	99%	0.255	0.481	99%	0.171	0.584	99%	0.159	0.216	99%	0.174	0.584	99%	0.327	0.622
Variance	0.001			0.003				0.002			0.001			0.001			0.001			0.003	
Skewness	4.216			1.674				3.736104			6.418845			1.632718			6.305019			4.770277	
Kurtosis	32.697			6.583				20.78949			63.59037			5.185242			66.0449			33.44537	
Panel C: Inferior of blocks	**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**		
	Obs = 11,338	0	1	Obs = 2,327	0	1	Obs = 3,800	0	1	Obs = 3,773	0	1	Obs = 5,499	0	1	Obs = 1,985	0	1	Obs = 859	0	1
	0.0051464	2,223	21	0.0062227	984	29	0.003957	2,189	33	0.0029257	2,408	18	0.005368	3,333	46	0.0031003	1424	18	0.00379	710	12
	0.0125	4,930	95	0.05	737	62	0.025	931	32	0.0125	755	15	0.025	680	22	0.025	341	11	0.05	75	6
	0.025	1,688	41	0.1	282	32	0.05	311	20	0.025	237	3	0.05	889	67	0.05	114	10	0.1	29	4
	0.0375	665	35	0.15	95	25	0.1	175	28	0.0375	85	9	0.1	397	59	0.1	46	6	0.2	16	5
	0.05	1,087	85	0.2	61	20	0.2	53	22	0.05	124	11	0.2	2	4	0.2	10	3	0.4	0	1
	0.1	355	57				0.4	2	4	0.1	78	8				0.4	1	1	0.6	0	1
	0.2	39	13							0	13	6									
	0.4	2	2							0.4	2	1									
	Total	10,989	349	Total	2,159	168	Total	3,661	139	Total	3,702	71	Total	5,301	198	Total	1,936	49	Total	830	29

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Panel A: Propensity score estimates	**ITALY**		**LITHUANIA**		**LUX.**		**LATVIA**		**NETHERLAND**		**NORWAY**		**POLAND**	
Variables	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Wave 2005														
Wave 2006					-0.111	0.088					-0.105	0.107		
Wave 2007	0.399	0.062	0.373	0.231	-0.057	0.084	0.173	0.131	-0.430	0.089	-0.084	0.105	0.054	0.098
Wave 2008	0.373	0.064	-0.236	0.104	0.069	0.083	0.136	0.114	-0.305	0.088	-0.273	0.118		
Wave 2009	0.396	0.069	-0.013	0.230	-0.119	0.106	-0.135	0.138			-0.191	0.119	-0.115	0.111
General Health (bad=1)	0.677	0.045	0.385	0.093	0.801	0.069	0.482	0.100	1.213	0.101	0.883	0.087	0.661	0.079
Age	0.019	0.018	0.008	0.036	0.027	0.023	-0.021	0.033	0.020	0.032	0.004	0.027	0.032	0.037
Age sq.	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Male	-0.202	0.046	-0.078	0.102	-0.163	0.063	-0.003	0.115	-0.264	0.082	-0.262	0.084	0.039	0.088
Consensual union	-0.013	0.089	0.089	0.125	-0.116	0.082	-0.062	0.175	-0.103	0.140	-0.287	0.136	0.089	0.238
Cash employee income	-0.881	0.382	-0.090	0.082			0.016	0.094					0.201	0.164
No-cash employee income	0.062	0.035					-0.106	0.763						
Disability benefits					-0.010	0.025	0.350	0.564					0.907	0.477
Sickness benefits													-1.137	2.587
Unemployment benefits					0.004	0.024	0.052	0.239					-0.812	0.581
Family size	0.006	0.024	-0.149	0.060	0.064	0.032	-0.017	0.052	-0.009	0.079	0.016	0.065	0.009	0.036
HH income minus old-age and survivor's benefits	0.002	0.003	0.086	0.054	-0.001	0.003	0.049	0.055	0.030	0.016	-0.001	0.009	-0.015	0.023
HH income minus other transfers	-0.005	0.005	-0.124	0.081	0.001	0.004	-0.043	0.086	-0.043	0.019	-0.006	0.010	0.022	0.051
HH income	0.004	0.004	0.034	0.065	-0.001	0.004	-0.009	0.069	0.013	0.011	0.008	0.004	0.000	0.048
Never Married	0.049	0.106	-0.122	0.107	0.013	0.052	0.008	0.167	0.009	0.064	0.038	0.073	-0.037	0.095
Married	0.122	0.177			-0.046	0.065	-0.084	0.080	-0.137	0.117	0.222	0.115	-0.053	0.231
Primary	0.046	0.034	0.004	0.107	-0.116	0.037			0.026	0.080	-0.128	0.194	0.046	0.068
Low Secondary	0.068	0.065			-0.022	0.095	0.407	0.189	0.135	0.172	-0.619	0.414	0.070	0.104
High Secondary	-0.017	0.055	0.144	0.129	0.062	0.070	0.233	0.109	0.081	0.104	-0.152	0.203		
Manager	-0.205	0.215	0.035	0.030	-0.001	0.021	0.020	0.030	0.003	0.027	0.009	0.036	-0.053	0.051
Professionals	-0.251	0.174							-0.074	0.051	0.170	0.130	-1.298	0.539
Technicians	-0.403	0.112	0.233	0.190	-0.042	0.137	-0.003	0.214	-0.235	0.134	0.294	0.151	-0.440	0.362
Clerical support workers	-0.233	0.083	0.095	0.206	-0.074	0.116	-0.142	0.192	-0.200	0.127	0.282	0.137	-0.363	0.311
Service and sales workers	-0.179	0.085	0.188	0.211	-0.214	0.121	-0.099	0.233	-0.249	0.137	0.072	0.193	-0.144	0.272
Skilled agricultural	-0.134	0.090	0.319	0.170	-0.229	0.122	-0.485	0.192	-0.023	0.151	0.288	0.165	-0.130	0.231
Craft and related trades	-0.010	0.187	0.407	0.359	0.262	0.264	0.242	0.285	0.201	0.342	0.493	0.379		
Machine operators	-0.037	0.082	0.054	0.147	-0.031	0.105	-0.061	0.145	-0.006	0.189	0.274	0.238	-0.112	0.152
Elementary occ.	-0.104	0.089	0.058	0.169	0.024	0.125	-0.395	0.181	0.150	0.202	0.458	0.256	-0.191	0.156
Permanent contract	0.121	0.067	-0.091	0.210	-0.042	0.105	-0.151	0.171	-0.174	0.121	-0.121	0.123	0.004	0.102
Disability benefits	0.765	0.113					0.572	0.694					-0.336	0.973
Sickness benefits			-0.181	0.242									0.988	0.989
Unemployment benefits	0.009	0.062	-0.347	0.240	-0.099	0.274	-0.387	0.230					-0.756	0.415
Urban area	-0.030	0.047	0.121	0.095	0.082	0.057	-0.210	0.102			-0.008	0.077	-0.063	0.090
Dwelling type	-0.003	0.044	-0.053	0.101	0.119	0.069	-0.288	0.114	-0.025	0.105	0.204	0.122	-0.045	0.086
ConstantÂ	-3.211	0.536	-2.579	0.894	-2.226	0.605	-1.389	0.794	-2.121	0.759	-2.067	0.996	-2.515	1.009
Log Likelihood	-1966.143		-484.684		-1221.408		-442.473		-672.605		-643.848		-611.666	
R2	0.109		0.104		0.102		0.138		0.151		0.108		0.141	
Obs	18388		4193		7877		2391		4854		7038		8921	
Panel B: Region of common support	**[.00362863, .40939544]**		**[.00314552, .16288064]**		**[.00501148, .381804]**		**[.00777046, .5037135]**		**[.00773011, .58498012]**		**[.00136814, .25171304]**		**[.00215838, .78999446]**	
Estimated propensity score	Percentiles	Smallest	Percentiles	Smallest	Percentiles	Smallest	Percentiles	Smallest	Percentiles	Smallest	Percentiles	Smallest	Percentiles	Smallest
1%	0.004	0.004	0.003	0.003	0.007	0.005	0.008	0.008	0.008	0.008	0.002	0.001	0.002	0.002
5%	0.005	0.004	0.004	0.003	0.009	0.005	0.010	0.008	0.009	0.008	0.003	0.001	0.003	0.002
10%	0.006	0.004	0.006	0.003	0.012	0.005	0.012	0.008	0.011	0.008	0.005	0.001	0.003	0.002
25%	0.010	0.004	0.010	0.003	0.017	0.005	0.019	0.008	0.015	0.008	0.008	0.001	0.004	0.002
50%	0.016		0.020		0.027		0.039		0.025		0.014		0.008	
		Largest		Largest		Largest		Largest		Largest		Largest		Largest
75%	0.028	0.354	0.042	0.156	0.045	0.360	0.081	0.484	0.043	0.538	0.023	0.214	0.019	0.472
90%	0.069	0.358	0.071	0.158	0.082	0.369	0.140	0.493	0.079	0.572	0.038	0.233	0.049	0.498
95%	0.096	0.360	0.092	0.159	0.136	0.380	0.189	0.496	0.139	0.584	0.076	0.240	0.062	0.667
99%	0.145	0.409	0.129	0.163	0.253	0.382	0.312	0.504	0.349	0.585	0.156	0.252	0.087	0.790
	0.001		0.001		0.002		0.004		0.004		0.001		0.001	
	3.344		1.644		3.243		2.471		4.284		3.683		5.873	
	20.391		5.574		15.675		11.807		25.107		18.953		42.840	
Panel C: Inferior of blocks	**Inferior of block of pscore**		**Inferior of block of pscore**		**Inferior of block of pscore**		**Inferior of block of pscore**		**Inferior of block of pscore**		**Inferior of block of pscore**		**Inferior of block of pscore**	
	Obs = 17,344	0	1	Obs = 3,831	0	1	Obs = 7,842	0	1	Obs = 2,128	0	1	Obs = 4,349	0	1	Obs = 6,966	0	1	Obs = 7,850	0	1
	0.0036286	1,844	7	0.0031455	3,037	49	0.0050115	3,531	59	0.0077705	1,210	32	0.0077301	2,185	38	0.0013681	3,141	24	0.0021584	3,076	11
	0.00625	4,290	45	0.05	556	48	0.025	2,487	86	0.05	460	34	0.025	1,219	41	0.0125	2,208	37	0.00625	2,040	20
	0.0125	5,954	103	0.1	119	22	0.05	757	42	0.1	261	41	0.05	515	42	0.025	1,028	33	0.0125	994	25
	0.025	2,588	103				0.075	258	35	0.2	41	5	0.1	138	21	0.05	242	16	0.025	924	30
	0.05	1,536	114				0.1	349	65	0.25	13	9	0.2	95	30	0.1	193	37	0.05	659	42
	0.1	613	90				0.2	133	40	0.3	6	8	0.4	10	15	0.2	5	2	0.1	15	3
	0.2	44	12							0.4	4	4							0.3	2	3
	0.4	0	1																0.6	2	4
	Total	16,869	475	Total	3,712	119	Total	7,515	327	Total	1,995	133	Total	4,162	187	Total	6,817	149	Total	7,712	138

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Panel A: Propensity score estimates	**PORTUGAL**		**ROMANIA**		**SWEDEN**		**SLOVENIA**		**SLOVAKIA**		**UNITED KINGDOM**	
Variables	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Wave 2005					-0.323	0.113						
Wave 2006												
Wave 2007							-0.232	0.117			-0.026	0.120
Wave 2008					-0.412	0.237	-0.021	0.117	-0.273	0.082		
Wave 2009					-0.523	0.193			0.238	0.070		
General Health (bad=1)	0.290	0.156					0.787	0.098	0.630	0.063	0.853	0.137
Age	0.049	0.042	-0.024	0.060	-0.028	0.034	-0.003	0.046	0.022	0.027	0.106	0.051
Age sq.	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.001	0.000	0.000	-0.001	0.001
Male	-0.454	0.172	0.102	0.160	0.036	0.115	0.042	0.100	-0.187	0.068	-0.307	0.145
Consensual union	0.091	0.323	0.024	0.422	0.317	0.269	0.031	0.152	-4.592	.	0.230	0.192
Cash employee income	-0.086	0.153	-0.388	0.184	-0.135	0.119	0.005	0.019			0.079	0.063
No-cash employee income	0.190	0.213	0.661	1.343	0.064	0.118	0.167	0.120			0.039	0.142
Disability benefits			147.826	5542.595							-0.063	0.134
Sickness benefits	0.140	0.221			0.122	0.034					-0.053	0.295
Unemployment benefits	0.213	0.269										
Family size	0.009	0.085	0.015	0.067	-0.031	0.089	0.137	0.053	-0.081	0.030	0.085	0.095
HH income minus old-age and survivor's benefits	0.010	0.026			-0.013	0.012	0.007	0.018	-0.014	0.020	-0.009	0.006
HH income minus other transfers	-0.071	0.041			0.014	0.016	-0.026	0.024	-0.021	0.039	0.020	0.020
HH income	0.048	0.035	0.013	0.025	-0.007	0.012			0.038	0.035	-0.020	0.020
Never Married	-0.135	0.150	0.069	0.162	-0.064	0.063	0.149	0.098	-0.030	0.073	-0.018	0.101
Married	-0.376	0.316	5.230	0.179	-0.104	0.214	-0.146	0.140	4.657	0.081	-0.254	0.163
Primary	-0.200	0.139	0.433	0.350	-0.007	0.103	-0.002	0.081	-0.008	0.090	0.035	0.103
Low Secondary	0.104	0.213	0.297	0.175	0.390	0.228	0.265	0.203				
High Secondary	0.210	0.291	-0.932	0.446	0.169	0.136	0.073	0.123	-0.062	0.091	-0.033	0.134
Manager	-0.038	0.064	-0.177	0.171	0.073	0.063	0.208	0.660	0.016	0.021	-0.008	0.034
Professionals												
Technicians			0.466	0.787	0.487	0.396	0.187	0.310	-0.187	0.137	0.152	0.189
Clerical support workers	-0.139	0.358	-0.384	0.359	0.415	0.346	0.253	0.301	-0.106	0.115	0.076	0.185
Service and sales workers	-0.791	0.406	-0.360	0.446	0.203	0.334	0.111	0.323	-0.032	0.127	-0.263	0.207
Skilled agricultural	-0.468	0.299			0.279	0.274	0.005	0.329	-0.092	0.119	-0.237	0.210
Craft and related trades			-0.391	0.391	0.182	0.506	-0.016	0.349	0.441	0.282	0.884	0.572
Machine operators	-0.132	0.232	0.187	0.480	-0.012	0.261	0.030	0.323	0.038	0.109	0.179	0.259
Elementary occ.	-0.371	0.313	0.293	0.652	0.143	0.253	0.050	0.324	-0.128	0.123	-0.143	0.306
Permanent contract	0.007	0.226			0.042	0.233	0.090	0.163	0.114	0.092	-0.058	0.375
Disability benefits			133.795	1.579			0.176	0.351			1.275	0.545
Sickness benefits	-0.530	0.998			-0.201	0.120	0.341	0.104			0.632	1.710
Unemployment benefits	-0.257	0.942			0.051	0.174	-0.509	0.456				
Urban area	0.017	0.168	0.511	0.222	0.002	0.131			0.049	0.073	-0.131	0.121
Dwelling type	0.082	0.182	0.090	0.218	-0.067	0.116	-0.155	0.097	-0.078	0.067	0.050	0.219
ConstantÂ	-1.009	1.566	-2.654	0.732	-2.117	1.450	-2.521	1.028	-2.494	0.658	-4.155	1.701
Log Likelihood	-178.282		-186.547		-386.109		-456.973		-1089.387		-274.808	
R2	0.137		0.210		0.096		0.130		0.125		0.121	
Obs	1041		2897		3855		2781		5663		2971	
Panel B: Region of common support	**[.00533821, .39059288]**		**[.00011095, 0.6635987]**		**[.00180206, .3371419]**		**[.00545477, .41272149]**		**[.00207154, .38485282]**		**[.00586981, .33258437]**	
Estimated propensity score		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest		Percentiles	Smallest
	1%	0.006	0.005	1%	0.002	0.001	1%	0.002	0.002	1%	0.007	0.005	1%	0.003	0.002	1%	0.006	0.006
	5%	0.008	0.005	5%	0.004	0.001	5%	0.004	0.002	5%	0.008	0.005	5%	0.006	0.002	5%	0.007	0.006
	10%	0.011	0.005	10%	0.008	0.001	10%	0.005	0.002	10%	0.010	0.006	10%	0.009	0.002	10%	0.007	0.006
	25%	0.018	0.005	25%	0.020	0.001	25%	0.008	0.002	25%	0.015	0.006	25%	0.017	0.002	25%	0.010	0.006
	50%	0.034		50%	0.058		50%	0.016		50%	0.026		50%	0.035		50%	0.016	
			Largest			Largest			Largest			Largest			Largest			Largest
	75%	0.065	0.343	75%	0.030	0.328	75%	0.030	0.264	75%	0.057	0.335	75%	0.074	0.370	75%	0.027	0.244
	90%	0.128	0.378	90%	0.064	0.347	90%	0.050	0.276	90%	0.126	0.338	90%	0.146	0.371	90%	0.055	0.253
	95%	0.179	0.378	95%	0.104	0.409	95%	0.067	0.294	95%	0.168	0.339	95%	0.187	0.374	95%	0.097	0.283
	99%	0.293	0.391	99%	0.255	0.664	99%	0.123	0.337	99%	0.256	0.413	99%	0.270	0.385	99%	0.161	0.333
	Variance	0.003		Variance	0.001		Variance	0.001		Variance	0.003		Variance	0.004		Variance	0.001	
	Skewness	2.435		Skewness	14.242		Skewness	4.053		Skewness	2.251		Skewness	1.850		Skewness	3.499	
	Kurtosis	10.063		Kurtosis	346.454		Kurtosis	30.507		Kurtosis	8.622		Kurtosis	6.540		Kurtosis	18.893	
Panel C: Inferior of blocks	**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**			**Inferior of block of pscore**		
	Obs = 953	0	1	Obs = 2,709	0	1	Obs = 3,730	0	1	Obs = 2,689	0	1	Obs = 5,646	0	1	Obs = 2,396	0	1
	0.01	602	14	0.001109	1,834	6	0.0018021	2,468	26	0.0054548	1,280	19	0.0021	2,105	36	0.00587	2,099	37
	0.05	188	16	0.025	348	6	0.025	827	36	0.025	609	25	0.025	1,343	41	0.05	137	14
	0.1	86	10	0.05	266	11	0.05	297	17	0.05	342	24	0.05	1,023	78	0.1	89	10
	0.2	25	12	0.1	160	13	0.1	37	7	0.1	269	41	0.1	437	54	0.2	6	4
				0.2	53	6	0.2	11	4	0.2	59	20	0.15	244	56			
				0.4	1	2				0.4	0	1	0.2	169	60			
				0.6	1	2												
	Total	901	52	Total	2,663	46	Total	3,640	90	Total	2,559	130	Total	5,321	325	Total	2,331	65

Table B.8: Mean labour market outcomes and health status across Europe

	ALL SAMPLE			LIMITATION = YES			ALL SAMPLE			LIMITATION = YES			ALL SAMPLE			LIMITATION = YES		
	All	Young	Old	All	Young	Old	All	Young	Old	All	Young	Old	All	Young	Old	All	Young	Old
	AT						**FR**						**NL**					
Full-time	0.767	0.776	0.726	0.718	0.757	0.660	0.807	0.818	0.773	0.709	0.741	0.664	0.583	0.603	0.522	0.435	0.433	0.438
Part-time	0.176	0.179	0.166	0.149	0.155	0.140	0.146	0.150	0.131	0.175	0.175	0.175	0.392	0.383	0.420	0.486	0.512	0.449
Unemployed	0.018	0.019	0.014	0.036	0.034	0.040	0.021	0.022	0.018	0.052	0.047	0.060	0.005	0.005	0.005	0.019	0.008	0.034
Retired	0.016	0.000	0.084	0.060	0.007	0.140	0.017	0.001	0.070	0.024	0.000	0.060	0.008	0.000	0.032	0.005	0.000	0.011
Inactive	0.002	0.002	0.003	0.020	0.027	0.010	0.002	0.001	0.003	0.017	0.016	0.018	0.003	0.001	0.010	0.005	0.000	0.011
hour worked	3.995	4.049	3.759	3.778	4.027	3.410	3.750	3.795	3.604	3.217	3.319	3.066	3.428	3.524	3.129	2.856	2.953	2.719
	BE						**GR**						**NO**					
Full-time	0.753	0.779	0.653	0.609	0.683	0.490	0.886	0.897	0.850	0.776	0.761	0.788	0.883	0.891	0.860	0.674	0.737	0.550
Part-time	0.218	0.204	0.271	0.301	0.244	0.392	0.065	0.063	0.071	0.129	0.134	0.125	0.090	0.082	0.111	0.197	0.161	0.267
Unemployed	0.009	0.009	0.010	0.008	0.000	0.020	0.022	0.025	0.013	0.020	0.030	0.013	0.008	0.011	0.003	0.006	0.008	0.000
Retired	0.011	0.001	0.050	0.015	0.012	0.020	0.014	0.002	0.053	0.034	0.030	0.038	0.006	0.000	0.021	0.028	0.000	0.083
Inactive	0.006	0.005	0.010	0.023	0.024	0.020	0.002	0.002	0.004	0.000	0.000	0.000	0.003	0.004	0.000	0.006	0.008	0.000
hour worked	3.899	3.984	3.572	3.290	3.667	2.680	4.445	4.501	4.263	4.021	3.924	4.103	3.976	4.012	3.882	3.135	3.432	2.550
	BG						**HU**						**PL**					
Full-time	0.898	0.899	0.894	0.826	0.727	0.917	0.909	0.918	0.876	0.801	0.858	0.727	0.904	0.918	0.849	0.814	0.839	0.781
Part-time	0.027	0.028	0.024	0.043	0.091	0.000	0.020	0.020	0.021	0.044	0.047	0.040	0.048	0.043	0.071	0.070	0.058	0.086
Unemployed	0.054	0.059	0.039	0.087	0.091	0.083	0.034	0.040	0.016	0.031	0.047	0.010	0.021	0.022	0.014	0.025	0.022	0.029
Retired	0.011	0.001	0.039	0.000	0.000	0.000	0.017	0.001	0.072	0.053	0.008	0.111	0.012	0.002	0.050	0.021	0.007	0.038
Inactive	0.007	0.009	0.002	0.043	0.091	0.000	0.004	0.004	0.001	0.009	0.008	0.010	0.006	0.006	0.007	0.012	0.015	0.010
hour worked	4.744	4.758	4.704	4.391	3.909	4.833	4.604	4.653	4.435	4.032	4.288	3.701	4.720	4.776	4.501	4.227	4.328	4.095
	CY						**IE**						**PT**					
Full-time	0.908	0.919	0.870	0.740	0.810	0.690	0.753	0.777	0.700	0.563	0.556	0.571	0.889	0.905	0.833	0.709	0.796	0.611
Part-time	0.054	0.050	0.066	0.090	0.048	0.121	0.189	0.172	0.227	0.266	0.361	0.143	0.048	0.041	0.074	0.101	0.063	0.143
Unemployed	0.021	0.021	0.020	0.050	0.095	0.017	0.028	0.030	0.023	0.031	0.028	0.036	0.032	0.032	0.033	0.060	0.063	0.056
Retired	0.005	0.000	0.022	0.040	0.000	0.069	0.010	0.000	0.033	0.031	0.000	0.071	0.013	0.006	0.037	0.071	0.035	0.111
Inactive	0.003	0.002	0.010	0.070	0.024	0.103	0.002	0.003	0.002	0.000	0.000	0.000	0.004	0.004	0.007	0.022	0.021	0.024
hour worked	4.264	4.290	4.172	3.560	3.929	3.293	3.559	3.637	3.386	2.902	2.882	2.926	4.275	4.352	3.994	3.356	3.780	2.862
	CZ						**IS**						**RO**					
Full-time	0.944	0.961	0.902	0.722	0.909	0.566	0.842	0.838	0.853	0.737	0.682	0.813	0.909	0.921	0.864	0.638	0.810	0.500
Part-time	0.014	0.013	0.015	0.052	0.011	0.085	0.100	0.092	0.118	0.184	0.227	0.125	0.061	0.060	0.063	0.106	0.143	0.077
Unemployed	0.011	0.010	0.014	0.052	0.023	0.075	0.012	0.012	0.012	0.000	0.000	0.000	0.008	0.008	0.006	0.000	0.000	0.000
Retired	0.018	0.000	0.063	0.082	0.000	0.151	0.002	0.000	0.006	0.000	0.000	0.000	0.014	0.001	0.061	0.255	0.048	0.423
Inactive	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.003	0.026	0.000	0.063	0.005	0.006	0.002	0.000	0.000	0.000
hour worked	4.833	4.916	4.627	3.727	4.545	3.047	4.636	4.559	4.821	4.125	3.733	4.778	4.837	4.916	4.537	3.432	4.429	2.522
	DK						**IT**						**SE**					
Full-time	0.852	0.874	0.805	0.735	0.764	0.689	0.849	0.851	0.839	0.752	0.760	0.738	0.795	0.809	0.762	0.649	0.671	0.605
Part-time	0.114	0.106	0.131	0.188	0.167	0.222	0.090	0.097	0.065	0.143	0.168	0.100	0.163	0.155	0.182	0.272	0.263	0.289
Unemployed	0.008	0.007	0.009	0.026	0.014	0.044	0.019	0.022	0.009	0.020	0.022	0.017	0.016	0.018	0.012	0.035	0.053	0.000
Retired	0.015	0.000	0.047	0.017	0.000	0.044	0.014	0.001	0.060	0.045	0.005	0.113	0.013	0.000	0.042	0.026	0.000	0.079
Inactive	0.004	0.006	0.001	0.009	0.014	0.000	0.012	0.012	0.015	0.019	0.017	0.021	0.001	0.002	0.001	0.000	0.000	0.000
hour worked	3.933	4.003	3.783	3.410	3.486	3.289	4.146	4.203	3.925	3.767	3.859	3.613	3.839	3.892	3.717	3.495	3.630	3.237
	EE						**LT**						**SI**					
Full-time	0.900	0.905	0.883	0.830	0.863	0.794	0.903	0.914	0.876	0.778	0.746	0.803	0.945	0.961	0.886	0.880	0.908	0.818
Part-time	0.038	0.035	0.051	0.071	0.053	0.091	0.031	0.026	0.042	0.081	0.102	0.066	0.019	0.020	0.017	0.063	0.082	0.023
Unemployed	0.034	0.034	0.032	0.038	0.047	0.029	0.038	0.038	0.038	0.022	0.051	0.000	0.018	0.014	0.029	0.035	0.010	0.091
Retired	0.006	0.000	0.027	0.027	0.000	0.057	0.009	0.002	0.026	0.030	0.000	0.053	0.016	0.002	0.066	0.014	0.000	0.045
Inactive	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.004	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000
hour worked	4.525	4.556	4.421	4.264	4.421	4.092	4.361	4.430	4.193	3.711	3.678	3.737	4.819	4.907	4.502	4.486	4.663	4.091
	ES						**LU**						**SK**					
Full-time	0.866	0.863	0.875	0.764	0.787	0.730	0.809	0.820	0.761	0.684	0.717	0.613	0.936	0.942	0.914	0.860	0.879	0.831
Part-time	0.068	0.073	0.048	0.076	0.090	0.054	0.148	0.147	0.151	0.203	0.189	0.234	0.015	0.012	0.029	0.042	0.037	0.049
Unemployed	0.048	0.052	0.033	0.071	0.076	0.065	0.016	0.018	0.007	0.041	0.057	0.008	0.023	0.024	0.018	0.034	0.037	0.028
Retired	0.007	0.001	0.030	0.030	0.011	0.059	0.012	0.000	0.065	0.026	0.000	0.081	0.009	0.002	0.035	0.025	0.000	0.063
Inactive	0.004	0.004	0.006	0.028	0.011	0.054	0.000	0.000	0.001	0.005	0.004	0.008	0.010	0.012	0.001	0.014	0.019	0.007
hour worked	4.265	4.277	4.224	3.778	3.937	3.526	4.364	4.420	4.114	3.797	3.989	3.387	4.658	4.685	4.547	4.275	4.386	4.106
	FI						**LV**						**UK**					
Full-time	0.881	0.895	0.849	0.797	0.854	0.706	0.871	0.875	0.857	0.793	0.779	0.806	0.741	0.764	0.689	0.591	0.671	0.484
Part-time	0.057	0.045	0.082	0.094	0.073	0.127	0.034	0.031	0.042	0.052	0.063	0.041	0.210	0.194	0.246	0.302	0.247	0.375
Unemployed	0.016	0.015	0.019	0.019	0.018	0.020	0.065	0.071	0.047	0.073	0.105	0.041	0.010	0.010	0.011	0.007	0.000	0.016
Retired	0.010	0.000	0.032	0.019	0.000	0.049	0.011	0.001	0.043	0.036	0.000	0.071	0.012	0.000	0.039	0.013	0.012	0.016
Inactive	0.004	0.004	0.005	0.011	0.006	0.020	0.008	0.009	0.003	0.000	0.000	0.000	0.005	0.004	0.007	0.020	0.012	0.031
hour worked	4.130	4.168	4.050	3.784	3.900	3.596	4.474	4.507	4.370	4.088	4.116	4.061	3.850	3.948	3.629	3.319	3.554	3.000

Note: I define an individual as being old if he/she is 49 years or more, young otherwise. Hours worked per week is a categorical variable. Hour=0 if the number of hours are zero; hour=1 if the number of hours are between 1 and 20; Hour=2 beween 21-30; Hour=3 beween 31-35; Hour=4 beween 36-39; Hour=5 beween 40-45; Hour=6 more than 46.

Table B.9: Kernel ATT - using limitation in daily activities - on the probability of transiting into different labour market statuses

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
-0.033	-0.029	0.021	0.023	**0.016***	0.561	**-0.099****	0.014	**0.039****	-0.013	**0.021***	-0.817	**-0.084*****	0.034	0.011	-0.005	0.002	**-1.401****
(0.032)	(0.031)	(0.015)	(0.015)	(0.009)	(0.641)	(0.048)	(0.035)	(0.019)	(0.011)	(0.012)	(0.993)	(0.031)	(0.032)	(0.009)	(0.006)	(0.004)	(0.641)
BELGIUM						GREECE						NORWAY					
-0.096**	0.041	**-0.008****	0.008	0.016	**-1.803****	0.027	0.005	0.007	**-0.032*****	-0.016	1.408	**-0.202*****	**0.088*****	-0.002	**0.027***	0.004	**-3.826*****
(0.047)	(0.054)	(0.003)	(0.014)	(0.013)	(0.890)	(0.052)	(0.031)	(0.032)	(0.011)	(0.016)	(0.955)	(0.039)	(0.027)	(0.006)	(0.016)	(0.007)	(0.810)
BULGARIA						HUNGARY						POLAND					
0.001	0.023	0.033	**-0.096****	0.039	-0.986	**-0.103*****	0.019	-0.005	**0.034****	0.002	**-1.272***	-0.050	-0.032	0.013	0.015	0.001	-0.268
(0.16)	(0.044)	(0.063)	(0.042)	(0.044)	(4.353)	(0.028)	(0.013)	(0.012)	(0.017)	(0.005)	(0.733)	(0.042)	(0.023)	(0.013)	(0.017)	(0.007)	(0.766)
CYPRUS						IRELAND						PORTUGAL					
-0.151***	0.028	0.041	0.031	**0.048***	**-2.033***	**-0.210****	0.086	0.009	0.029	-0.001	**-3.445***	**-0.166*****	0.029	0.054	0.034	0.038	-0.896
(0.049)	(0.026)	(0.028)	(0.022)	(0.025)	(1.061)	(0.082)	(0.069)	(0.031)	(0.028)	(0.001)	(1.861)	(0.071)	(0.05)	(0.043)	(0.025)	(0.032)	(1.130)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.218***	**0.025***	**0.038****	**0.065*****	0.000	-0.541	-0.017	-0.008	**-0.011***	-0.004	0.032	**-7.875***	**-0.233*****	0.047	**-0.007*****	**0.201*****	**-0.003*****	-1.749
(0.035)	(0.013)	(0.018)	(0.021)	(0.000)	(0.573)	(0.101)	(0.063)	(0.007)	(0.009)	(0.032)	(4.226)	(0.085)	(0.052)	(0.003)	(0.071)	(0.001)	(1.627)
DENMARK						ITALY						SWEDEN					
-0.101***	0.063	0.017	-0.002	0.004	**-1.984*****	**-0.103*****	**0.058*****	0.000	**0.027*****	0.007	**-1.686*****	**-0.146*****	**0.102*****	0.017	0.019	**-0.001****	-0.383
(0.037)	(0.042)	(0.016)	(0.011)	(0.009)	(0.721)	(0.020)	(0.017)	(0.005)	(0.008)	(0.006)	(0.262)	(0.056)	(0.040)	(0.016)	(0.020)	(0.001)	(0.87)
ESTONIA						LITHUANIA						SLOVENIA					
-0.089***	**0.031*****	0.018	0.016	0.000	-0.412	**-0.133*****	**0.039***	-0.013	0.023	**-0.003*****	**-1.466*****	**-0.056****	**0.049****	0.020	-0.010	-0.001	-1.110
(0.022)	(0.012)	(0.013)	(0.013)	(0.000)	(0.365)	(0.042)	(0.021)	(0.014)	(0.016)	(0.001)	(0.649)	(0.026)	(0.022)	(0.016)	(0.008)	(0.001)	(0.574)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.090***	0.004	0.022	**0.025*****	**0.022*****	-0.108	**-0.111*****	**0.041*****	**0.026*****	0.006	0.006	**-1.518*****	**-0.071*****	**0.025****	0.013	0.007	0.006	**-0.633***
(0.023)	(0.013)	(0.014)	(0.009)	(0.007)	(0.458)	(0.027)	(0.016)	(0.011)	(0.007)	(0.005)	(0.626)	(0.021)	(0.012)	(0.012)	(0.010)	(0.007)	(0.335)
FINLAND						LATVIA						UNITED KINGDOM					
-0.043	0.019	-0.012	0.016	0.007	-0.012	-0.056	0.003	0.015	0.018	0.008	-0.320	-0.089	0.014	**-0.009***	0.006	0.027	0.699
(0.03)	(0.021)	(0.009)	(0.012)	(0.009)	(0.667)	(0.035)	(0.028)	(0.027)	(0.017)	(-1.205)	(0.609)	(0.058)	(0.044)	(0.005)	(0.021)	(0.024)	(1.376)

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. For each country it shows number of treated and controls, respectively: AT (175;4209); BE (99;3839); BG (23;507); CY (80;2869); CZ (171;7257); DK (117;3850); EE (262;3776); ES (349;10989); FI (168;2159); FR (139;3661); GR (71;3702); HU (198;5301); IE (49;1936); IS (29;830); IT (475;16869); LT (119;3712); LU (327;7515); LV (133;1995); NL (187;4162); NO (149;6817); PL (138;7712); PO (52;901); RO (46;2663); SE (90;3640); SI (130;2559); SK (325;5321); UK (65;2331)

Table B.10: Kernel ATT - using chronic illness - on the probability of transiting into different labour market statuses

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
-0.012	-0.016	**0.025***	0.017	0.001	**1.172*****	-0.039	0.022	0.006	-0.010	0.002	**-1.405***	-0.024	-0.002	-0.001	-0.005	0.000	-0.116
(0.029)	(0.024)	(0.015)	(0.016)	(0.005)	(0.568)	(0.031)	(0.024)	(0.013)	(0.007)	(0.004)	(0.762)	(0.027)	(0.033)	(0.004)	(0.005)	(0.003)	(0.443)
BELGIUM						GREECE						NORWAY					
-0.028	-0.008	-0.003	0.012	0.005	-1.037	-0.015	0.003	0.039	**-0.028*****	-0.003	0.502	**-0.088*****	**0.049*****	**-0.004***	0.000	0.007	**-1.067****
(0.036)	(0.032)	(0.007)	(0.012)	(0.009)	(0.816)	(0.031)	(0.025)	(0.026)	(0.008)	(0.002)	(0.699)	(0.021)	(0.019)	(0.003)	(0.005)	(0.005)	(0.548)
BULGARIA						HUNGARY						POLAND					
0.027	**-0.021*****	-0.044	0.026	0.013	-0.581	**-0.075*****	0.001	0.005	**0.037*****	0.000	0.354	**-0.058*****	-0.006	0.018	**0.029*****	0.005	-0.239
(0.045)	(0.006)	(0.040)	(0.036)	(0.019)	(1.229)	(0.020)	(0.007)	(0.013)	(0.014)	(0.003)	(0.353)	(0.029)	(0.023)	(0.013)	(0.012)	(0.006)	(0.524)
CYPRUS						IRELAND						PORTUGAL					
-0.017	-0.026	0.007	0.018	0.011	-0.297	**-0.160*****	0.061	0.028	0.029	**-0.002***	-1.321	-0.014	-0.021	-0.017	0.025	0.014	-0.208
(0.029)	(0.018)	(0.014)	(0.013)	(0.008)	(0.768)	(0.059)	(0.062)	(0.025)	(0.024)	(0.001)	(1.836)	(0.051)	(0.030)	(0.036)	(0.019)	(0.013)	(0.861)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.150***	**0.042*****	**0.028***	**0.046*****	0.000	-0.624	0.020	0.004	-0.015	-0.001	0.015	**-7.404*****	**-0.314*****	0.044	0.054	**0.225*****	-0.003	-0.913
(0.026)	(0.016)	(0.015)	(0.012)	(0.000)	(0.524)	(0.058)	(0.065)	(0.023)	(0.000)	(0.014)	(3.377)	(0.100)	(0.052)	(0.036)	(0.067)	(0.003)	(2.244)
DENMARK						ITALY						SWEDEN					
-0.071*	**0.059***	0.011	**-0.015*****	0.003	**-0.934***	**-0.056*****	0.023	0.005	**0.020*****	-0.005	**-1.130*****	**-0.050***	0.020	0.016	0.003	**-0.001*****	-0.237
(0.038)	(0.035)	(0.015)	(0.005)	(0.007)	(0.584)	(0.021)	(0.016)	(0.008)	(0.010)	(0.005)	(0.420)	(0.031)	(0.025)	(0.017)	(0.009)	(0.001)	(0.513)
ESTONIA						LITHUANIA						SLOVENIA					
-0.058***	0.007	0.018	**0.021*****	0.000	0.070	**-0.093*****	**0.040***	-0.005	**0.031*****	**-0.002*****	**-1.379*****	-0.028	0.015	0.004	0.008	0.003	-0.067
(0.021)	(0.010)	(0.013)	(0.009)	'(0.000)	(0.335)	(0.037)	(0.021)	(0.015)	(0.011)	(0.001)	(0.663)	(0.019)	(0.014)	(0.009)	(0.012)	(0.004)	(0.453)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.037***	-0.002	0.015	**0.013*****	**0.012***	-0.086	**-0.050*****	**0.030***	-0.001	0.005	-0.002	**-0.95***	**-0.036*****	0.005	0.009	0.015	**-0.009*****	**-0.824*****
(0.013)	(0.011)	(0.013)	(0.006)	(0.007)	(0.387)	(0.023)	(0.019)	(0.007)	(0.008)	(0.001)	(0.543)	(0.015)	(0.008)	(0.010)	(0.009)	(0.001)	(0.339)
FINLAND						LATVIA						UNITED KINGDOM					
0.000	-0.018	-0.002	0.012	0.001	**1.142****	-0.022	-0.017	0.011	-0.012	-0.005	0.384	-0.007	-0.003	0.002	-0.001	0.015	0.099
(0.026)	(0.021)	(0.015)	(0.011)	(0.005)	(0.590)	(0.043)	(0.029)	(0.025)	(0.012)	(0.006)	(1.031)	(0.038)	(0.037)	(0.009)	(0.010)	(0.012)	(1.138)

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The chronic illness indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. For each country it shows number of treated and controls, respectively: AT(238;3786); BE(164;4481); BG(62;1187); CY(157;2767); CZ(238;7544); DK(149;3358); EE(328;3640); ES(532;10933); FI(178;2257); FR(249;2866); GR(102;4600); HU(316;4780); IE(73;1684); IS(62;1208); IT(367;17274); LT(204;3601); LU(358;7700); LV(119;1916); NL(248;3828); NO(341;5378); PL(280;7090); PO(71;820); RO(34;1107); SE(185;2582); SI(247;2635); SK(268;5500); UK(110;1997)

Table B.11: Nearest-Neighbor ATT - using limitation in daily activities - on the probability of transiting into different labour market statuses

FT-FT	**FT-PT**	**FT-U**	**FT-R**	**FT-I**	**HOURS**	**FT-FT**	**FT-PT**	**FT-U**	**FT-R**	**FT-I**	**HOURS**	**FT-FT**	**FT-PT**	**FT-U**	**FT-R**	**FT-I**	**HOURS**
AUSTRIA						FRANCE						NETHERLAND					
-0.034	-0.040	0.011	0.029	**0.017***	0.198	**-0.101***	0.000	0.036	0.000	**0.022***	-0.344	-0.064	0.005	0.011	-0.005	0.005	-1.021
(0.052)	(0.046)	(0.021)	(0.020)	(0.010)	(1.089)	(0.055)	(0.048)	(0.025)	(0.011)	(0.012)	(1.337)	(0.055)	(0.055)	(0.011)	(0.008)	(0.005)	(1.030)
BELGIUM						GREECE						NORWAY					
-0.071	0.010	-0.010	0.010	0.020	-0.576	0.070	-0.028	-0.014	-0.028	-0.014	0.361	**-0.128****	0.040	-0.007	0.020	0.000	**-2.626****
(0.071)	(0.068)	(0.011)	(0.018)	(0.014)	(1.490)	(0.063)	(0.049)	(0.035)	(0.021)	(0.015)	(1.255)	(0.051)	(0.044)	(0.012)	(0.018)	(0.010)	(1.073)
BULGARIA						HUNGARY						POLAND					
0.000	0.043	0.043	-0.130	0.043	1.168	**-0.081**	0.015	0.015	-0.005	0.005	**-1.272***	-0.043	**-0.043***	0.022	0.007	0.000	0.224
(0.128)	(0.043)	(0.085)	(0.083)	(0.043)	(2.283)	(0.037)	(0.017)	(0.015)	(0.024)	(0.005)	(0.733)	(0.041)	(0.025)	(0.020)	(0.018)	(0.011)	(0.797)
CYPRUS						IRELAND						PORTUGAL					
-0.075	-0.025	**0.050****	0.025	**0.050****	-0.264	**-0.245*****	0.122	0.000	0.041	-0.020	**-5.748*****	**-0.212*****	0.058	0.077	0.038	0.038	-0.896
(0.065)	(0.046)	(0.031)	(0.026)	(0.025)	(1.514)	(0.097)	(0.089)	(0.042)	(0.029)	(0.022)	(2.276)	(0.076)	(0.043)	(0.054)	(0.027)	(0.027)	(0.781)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.199***	0.012	**0.041****	**0.053****	0.000	-0.232	-0.017	-0.008	**-0.011***	-0.004	0.032	**-7.875***	**-0.152***	-0.022	-0.007	**0.174*****	0.000	-1.409
(0.040)	(0.020)	(0.018)	(0.027)	(0.000)	(0.725)	(0.101)	(0.063)	(0.007)	(0.009)	(0.032)	(4.226)	(0.086)	(0.070)	(0.008)	(0.078)	(0.010)	(1.702)
DENMARK						ITALY						SWEDEN					
-0.103**	0.063	0.000	-0.009	0.009	**-2.323*****	**-0.097*****	**0.051****	0.006	0.017	**0.015****	**-1.697*****	**-0.144*****	0.089	0.022	0.011	0.000	-0.197
(0.055)	(0.042)	(0.022)	(-0.020)	(0.009)	(0.915)	(0.027)	(0.022)	(0.008)	(0.012)	(0.007)	(0.523)	(0.069)	(0.064)	(0.022)	(0.025)	(0.000)	(1.168)
ESTONIA						LITHUANIA						SLOVENIA					
-0.107***	0.031	0.027	**0.027****	0.000	-0.480	**-0.134*****	0.017	0.017	0.008	0.000	-1.158	-0.038	0.031	**0.031****	-0.023	0.000	-0.232
(0.031)	(0.020)	(0.017)	(0.012)	(0.000)	(0.635)	(0.048)	(0.032)	(0.017)	(0.021)	(0.000)	(1.062)	(0.036)	(0.028)	(0.015)	(0.017)	(0.000)	(0.815)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.001	**-0.043***	-0.007	**0.023****	**0.020****	**1.153***	-0.052	0.006	0.021	-0.003	0.006	-0.966	**-0.083*****	**0.028****	0.012	0.009	0.009	-0.365
(0.033)	(0.023)	(0.021)	(0.011)	(0.009)	(0.716)	(0.037)	(0.032)	(0.014)	(0.013)	(0.004)	(0.883)	(0.024)	(0.014)	(0.014)	(0.011)	(0.008)	(0.475)
FINLAND						LATVIA						UNITED KINGDOM					
-0.065*	0.018	-0.006	0.006	0.012	-0.390	**-0.083***	0.015	0.030	0.015	0.000	-0.301	-0.047	0.031	**-0.047***	-0.016	0.016	-0.734
(0.039)	(0.029)	(0.014)	(0.017)	(0.008)	(0.808)	(0.048)	(0.026)	(0.034)	(0.019)	(0.000)	(0.802)	(0.083)	(0.073)	(0.023)	(0.028)	(0.027)	(2.316)

ATT estimation using the Nearest-Neighbor Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. For each country it shows number of treated and controls, respectively: AT(175;156); BE(99;92); BG(23;19); CY(80;71); CZ(171;159); DK(117;110); EE(262;226); ES(349;339); FI(168;153); FR(139;125); GR(71;68); HU(198;188); IE(49;47); IS(29;26); IT(475;454); LT(119;111); LU(327;313); LV(113;119); NL(187;168); NO(149;145); PL(138;128); PO(52;48); RO(40;42); SE(90;87); SI(130;118); SK(325;293); UK(65;61)

Table B.12: Nearest-Neighbor ATT - using chronic illness - on the probability of transiting into different labour market statuses

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
0.000	0.004	0.021	-0.004	-0.008	1.293	0.016	-0.008	0.012	**-0.036*** **	-0.004	-0.706	0.012	0.000	0.000	**-0.028*** **	-0.008	0.720
(0.044)	(0.039)	(0.018)	(0.019)	(0.008)	(0.918)	(0.041)	(0.037)	(0.015)	(0.014)	(0.006)	(0.974)	(0.048)	(0.047)	(0.006)	(0.012)	(0.008)	(0.824)
BELGIUM						GREECE						NORWAY					
-0.012	-0.037	0.006	0.006	0.012	-1.260	0.010	0.000	0.029	**-0.039** **	0.000	0.180	**-0.076*** **	0.038	-0.006	0.000	0.003	-0.709
(0.051)	(0.049)	(0.006)	(0.017)	(0.009)	(1.235)	(0.050)	(0.034)	(0.033)	(0.018)	(0.000)	(1.194)	(0.030)	(0.026)	(0.006)	(0.006)	(0.007)	(0.715)
BULGARIA						HUNGARY						POLAND					
0.000	-0.032	-0.016	0.032	0.016	-0.076	**-0.054***	-0.013	0.003	0.025	0.000	0.589	-0.021	-0.014	0.014	0.004	0.004	0.552
(0.057)	(0.028)	(0.036)	(0.034)	(0.016)	(1.257)	(0.028)	(0.012)	(0.017)	(0.016)	(0.005)	(0.480)	(0.031)	(0.020)	(0.016)	(0.017)	(0.009)	(0.67)
CYPRUS						IRELAND						PORTUGAL					
-0.025	-0.025	**0.025** **	0.006	0.006	0.630	-0.110	-0.014	0.027	**0.041***	0.000	-0.856	0.000	-0.056	0.014	0.014	0.014	0.959
(0.034)	(0.023)	(0.013)	(0.016)	(0.011)	(1.021)	(0.086)	(0.081)	(0.036)	(0.023)	(0.000)	(2.397)	(0.059)	(0.040)	(0.033)	(0.026)	(0.014)	(1.168)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.105* **	**0.042*** **	0.017	0.004	0.000	-0.867	**0.177** **	-0.113	0.000	0.000	0.000	**-6.450*** **	**-0.235*** **	-0.059	0.059	**0.265*** **	-0.029	3.400
(0.035)	(0.017)	(0.017)	(0.025)	(0.000)	(0.621)	(0.099)	(0.087)	(0.000)	(0.000)	(0.033)	(3.592)	(0.116)	(0.091)	(0.041)	(0.077)	(0.035)	(2.329)
DENMARK						ITALY						SWEDEN					
-0.027	0.034	0.013	**-0.027*** **	0.000	-0.768	-0.022	-0.008	0.014	0.003	-0.003	-0.529	-0.059	0.022	0.022	0.011	0.000	-0.747
(0.048)	(0.044)	(0.014)	(0.014)	(0.010)	(0.997)	(0.030)	(0.024)	(0.010)	(0.013)	(0.007)	(0.595)	(0.046)	(0.042)	(0.017)	(0.011)	(0.000)	(0.793)
ESTONIA						LITHUANIA						SLOVENIA					
-0.076* **	0.012	**0.034*** **	0.009	0.000	0.082	**-0.123*** **	**0.059*** **	0.000	**0.034*** **	0.000	**-1.414** **	-0.036	0.016	-0.008	0.024	0.004	-0.043
(0.025)	(0.015)	(0.015)	(0.013)	(0.000)	(0.404)	(0.034)	(0.019)	(0.019)	(0.016)	(0.000)	(0.762)	(0.023)	(0.014)	(0.014)	(0.012)	(0.004)	(0.553)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.041*	0.004	0.015	**0.017*** **	0.009	0.118	**-0.067*** **	0.042	0.011	-0.014	0.000	-1.220	**-0.060*** **	0.000	**0.022** **	0.015	0.000	-0.349
(0.023)	(0.016)	(0.015)	(0.006)	(0.007)	(0.539)	(0.033)	(0.030)	(0.008)	(0.012)	(0.000)	(0.757)	(0.023)	(0.013)	(0.012)	(0.012)	(0.000)	(0.488)
FINLAND						LATVIA						UNITED KINGDOM					
0.028	-0.022	**-0.034***	0.006	0.000	**1.575** **	0.042	0.000	0.008	**-0.092*** **	0.000	-0.025	0.035	-0.043	0.009	-0.010	0.018	0.577
(0.039)	(0.025)	(0.020)	(0.015)	(0.009)	(0.718)	(0.055)	(0.024)	(0.038)	(0.030)	(0.000)	(0.870)	(0.061)	(0.058)	(0.009)	(0.017)	(0.013)	(1.682)

ATT estimation using the Nearest-Neighbor Matching Method with Bootstrapped Standard Errors. The chronic illness indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. For each country it shows number of treated and controls, respectively: AT(238;217); BE(164;155); BG(62;54); CY(157;145); CZ(238;222); DK(149;144); EE(328;293); ES(532;500); FI(178;161); FR(249;225); GR(102;98); HU(316;293); IE(73;64); IS(62;45); IT(367;360); LT(204;188); LU(358;330); LV(119;100); NL(248;221); NO(341;312); PL(280;258); PO(71;66); RO(34;30); SE(185;172); SI(247;224); SK(268;242); UK(110;101)

Table B.13: Kernel ATT - using limitation in daily activities - on the probability of transiting into different labour market statuses - Male sample

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
-0.104**	0.033	0.013	0.038	0.019	0.069	**-0.145****	0.056	0.031	-0.013	0.028	-1.300	**-0.104****	0.026	0.033	-0.010	-0.003	**-1.489*****
(0.046)	(0.031)	(0.017)	(0.025)	(0.013)	(0.66)	(0.066)	(0.047)	(0.038)	(0.023)	(0.023)	(1.032)	(0.050)	(0.049)	(0.021)	(0.013)	(0.003)	(0.64)
BELGIUM						GREECE						NORWAY					
-0.123*	0.035	-0.008	0.023	**-0.004*****	-1.463	0.030	-0.010	0.003	-0.046	-0.003	0.633	**-0.106*****	**0.051***	**-0.008***	0.022	0.016	**-3.605******
(0.064)	(0.053)	(0.011)	(0.029)	(0.002)	(1.349)	(0.055)	(0.042)	(0.035)	(0.031)	(0.026)	(1.394)	(0.046)	(0.028)	(0.005)	(0.021)	(0.018)	(1.117)
BULGARIA						HUNGARY						POLAND					
-0.200***	0.100	0.100	0.000	0.000	-4.321	**-0.117*****	0.011	0.011	0.024	0.008	**-1.088****	-0.045	-0.026	-0.017	0.001	**-0.003*****	0.568
(0.061)	(0.157)	(0.092)	(0.000)	(0.000)	(7.881)	(0.042)	(0.018)	(0.018)	(0.017)	(0.012)	(0.504)	(0.046)	(0.036)	(0.009)	(0.014)	(0.001)	(0.871)
CYPRUS						IRELAND						PORTUGAL					
-0.155***	**0.079****	**-0.019*****	0.056	0.041	**-3.550****	-0.150	0.059	**-0.048****	0.021	-0.001	-2.050	-0.138	-0.024	-0.017	0.040	**0.095***	-0.994
(0.057)	(0.039)	(0.006)	(0.038)	(0.03)	(1.655)	(0.098)	(0.06)	(0.022)	(0.042)	(0.001)	(1.638)	(0.137)	(0.025)	(0.061)	(0.049)	(0.057)	(1.132)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.206***	0.021	0.037	**0.040***	0.000	-0.060	-0.061	-0.005	-0.024	0.000	0.091	-6.433	**-0.418*****	**0.131***	-0.012	**0.301*****	-0.002	-2.311
(0.044)	(0.019)	(0.028)	(0.023)	(0.000)	(0.812)	(0.086)	(0.012)	(0.126)	(0.000)	(0.081)	(9.373)	(0.111)	(0.073)	(0.007)	(0.104)	(0.001)	-2.391
DENMARK						ITALY						SWEDEN					
-0.182***	**0.175*****	-0.004	0.017	0.000	-2.768	**-0.076*****	**0.032****	-0.010	**0.024****	0.003	**-1.254*****	**-0.114****	0.019	0.049	0.034	0.000	0.630
(0.068)	-0.070	(0.005)	(0.025)	(0.000)	(1.641)	(0.023)	(0.015)	(0.007)	(0.011)	(0.006)	(0.421)	(0.055)	(0.034)	(0.040)	(0.026)	(0.000)	(1.065)
ESTONIA						LITHUANIA						SLOVENIA					
-0.102***	0.007	**0.036***	0.014	0.000	0.280	**-0.104***	-0.002	-0.007	0.005	-0.001	0.642	**-0.101****	0.055	0.051	-0.002	-0.001	**-1.957*****
(0.033)	(0.014)	(0.019)	(0.017)	(0.000)	(0.63)	(0.061)	(0.016)	(0.027)	(0.017)	(0.001)	(1.198)	(0.048)	(0.036)	(0.032)	(0.015)	(0.001)	(0.779)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.102***	0.004	0.025	**0.023****	**0.020***	0.199	**-0.077*****	-0.006	**0.032****	0.016	0.005	-0.524	**-0.071*****	0.016	0.018	0.004	0.007	-0.204
(0.029)	(0.008)	(0.022)	(0.011)	(0.011)	(0.676)	(0.026)	(0.015)	(0.017)	(0.017)	(0.007)	(0.462)	(0.029)	(0.011)	(0.017)	(0.012)	(0.007)	(0.566)
FINLAND						LATVIA						UNITED KINGDOM					
-0.074*	0.031	-0.011	0.008	0.014	-0.288	**-0.181*****	0.047	0.054	0.031	-0.014	-1.051	-0.083	-0.007	**-0.050*****	0.033	0.035	1.497
(0.042)	(0.026)	(0.015)	(0.017)	(0.015)	(1.172)	(0.059)	(0.033)	(0.056)	(0.027)	(0.021)	(0.881)	(0.130)	(0.04)	(0.017)	(0.039)	(0.035)	(1.771)

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. For each country it shows number of treated and controls, respectively: AT(96;2344); BE(51;1591); BG(10;20); CY(46;1433); CZ(83;3641); DK(35;1725); EE(136;1779); ES(187;6405); FI(69;951); FR(70;1740); GR(39;1725); HU(93;2842); IE(25;948); IS(11;111); IT(235;10019); LT(56;1666); LU(173;4398); LV(62;981); NL(83;2352); NO(62;3600); PL(76;2692); PO(21;179); RO(25;1180); SE(46;1710); SI(67;1098); SK(141;2689); UK(27;747)

Table B.14: Kernel ATT - using limitation in daily activities - on the probability of transiting into different labour market statuses - Female sample

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
0.030	-0.084	0.032	0.003	0.011	0.825	-0.046	-0.044	0.051	-0.011	0.013	-0.313	-0.025	0.000	-0.007	**-0.003****	0.006	-0.631
(0.068)	(0.055)	(0.031)	(0.028)	(0.014)	(1.087)	(0.068)	(0.063)	(0.033)	(0.015)	(0.012)	(1.245)	(0.045)	(0.042)	(0.005)	(0.001)	(0.008)	(1.061)
BELGIUM						GREECE						NORWAY					
-0.109	0.091	**-0.006*****	-0.011	0.036	-1.803	0.006	0.021	0.002	-0.019	-0.001	1.611	**-0.238*****	**0.083***	0.003	**0.030***	**-0.005*****	**-3.079****
(0.083)	(0.105)	(0.002)	(0.008)	(0.029)	(1.512)	(0.076)	(0.063)	(0.038)	(0.012)	(0.002)	(2.364)	(0.053)	(0.051)	(0.015)	(0.016)	(0.001)	(1.377)
BULGARIA						HUNGARY						POLAND					
0.156	-0.017	0.041	-0.262	0.082	2.598	**-0.088****	0.024	0.000	**0.038***	**-0.003*****	0.098	-0.059	-0.026	0.054	0.029	-0.007	-1.192
(0.208)	(0.052)	(0.111)	(0.156)	(0.092)	(2.843)	(0.038)	(0.026)	(0.019)	(0.020)	(0.001)	(0.838)	(0.046)	(0.020)	(0.034)	(0.021)	(0.023)	(0.954)
CYPRUS						IRELAND						PORTUGAL					
-0.116	-0.049	0.093	-0.004	0.061	-0.517	**-0.256****	0.099	0.065	0.028	-0.001	-4.205	-0.148	0.021	0.114	0.028	0.000	0.363
(0.078)	(0.057)	(0.069)	(0.005)	(0.039)	(1.820)	(0.117)	(0.104)	(0.053)	(0.037)	(0.001)	(4.36)	(0.127)	(0.111)	(0.084)	(0.041)	(0.001)	(1.918)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.218***	0.016	0.039	**0.082*****	0.000	-0.781	0.009	0.014	-0.005	-0.005	-0.005	-5.110	0.013	**-0.067*****	0.000	0.071	-0.002	-1.117
(0.056)	(0.030)	(0.027)	(0.034)	(0.000)	(0.955)	(0.171)	(0.106)	(0.005)	(0.008)	(0.007)	(5.100)	(0.088)	(0.024)	(0.002)	(0.082)	(0.003)	(2.913)
DENMARK						ITALY						SWEDEN					
-0.030	-0.014	0.025	-0.012	0.002	-0.790	**-0.105*****	**0.063*****	0.010	**0.030*****	0.010	**-1.388*****	**-0.175*****	**0.184****	**-0.013*****	0.001	**-0.003****	-1.746
(0.048)	(0.045)	(0.023)	(0.014)	(0.011)	(0.822)	(0.034)	(0.025)	(0.012)	(0.013)	(0.010)	(0.517)	(0.076)	(0.081)	(0.005)	(0.028)	(0.001)	(1.102)
ESTONIA						LITHUANIA						SLOVENIA					
-0.083**	**0.063***	0.000	0.011	0.000	**-1.327***	**-0.156*****	**0.075****	-0.015	0.034	**-0.004*****	**-3.228*****	-0.004	0.041	**-0.015***	-0.022	-0.001	-0.120
(0.039)	(0.034)	(0.017)	(0.026)	(0.000)	(0.714)	(0.047)	(0.037)	(0.015)	(0.029)	(0.002)	(1.335)	(0.03)	(0.037)	(0.008)	(0.017)	(0.001)	(0.929)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.054	-0.022	0.024	**0.026****	**0.024***	0.443	**-0.116*****	0.057	0.019	-0.004	0.006	**-1.797****	**-0.065****	0.028	0.008	0.007	0.003	-0.704
(0.036)	(0.026)	(0.022)	(0.013)	(0.013)	(0.725)	(0.039)	(0.038)	(0.016)	(0.007)	(0.007)	(0.82)	(0.029)	(0.018)	(0.013)	(0.012)	(0.012)	(0.433)
FINLAND						LATVIA						UNITED KINGDOM					
-0.017	0.003	-0.012	0.023	0.002	0.669	0.020	-0.011	-0.018	0.012	**-0.004***	0.224	-0.068	0.028	**-0.010****	**-0.007***	0.023	0.233
(0.041)	(0.028)	(0.012)	(0.017)	(0.011)	(0.749)	(0.039)	(0.033)	(0.020)	(0.025)	(0.002)	(1.377)	(0.074)	(0.075)	(0.004)	(0.004)	(0.023)	(2.537)

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. For each country it shows number of treated and controls, respectively: AT(79;1491); BE(48;1411); BG(11;58); CY(33;413); CZ(88;2918); DK(82;1743); EE(126;1651); ES(162;4118); FI(99;1079); FR(69;1535); GR(31;1310); HU(105;2422); IE(24;536); IS(18;269); IT(240;7489); LT(63;1830); LU(154;3028); LV(71;916); NL(104;2142); NO(87;2838); PL(62;2930); PO(31;274); RO(19;360); SE(44;1314); SI(63;1302); SK(184;2246); UK(38;909)

Table B.15: Kernel ATT - using limitation in daily activities - on the probability of transiting into different labour market statuses - Young sample

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
-0.020	-0.023	0.024	0.000	**0.020***	0.587	**-0.099***	0.028	0.037	0.000	-0.001	-1.020	**-0.104***	0.061	0.002	0.000	-0.001	-0.920
(0.042)	(0.042)	(0.022)	(0.000)	(0.011)	(0.726)	(0.053)	(0.049)	(0.033)	(0.000)	(0.001)	(1.377)	(0.053)	(0.051)	(0.012)	(0.000)	(0.001)	(0.877)
BELGIUM						GREECE						NORWAY					
-0.072	0.028	**-0.008****	0.000	0.014	-0.443	-0.072	0.036	0.020	-0.003	-0.002	1.041	**-0.124*****	0.049	0.000	0.000	0.008	**-1.882****
(0.073)	(0.069)	(0.003)	(0.000)	(0.020)	(1.810)	(0.064)	(0.063)	(0.049)	(0.002)	(0.001)	(1.197)	(0.042)	(0.034)	(0.013)	(0.000)	(0.009)	(0.929)
BULGARIA						HUNGARY						POLAND					
-0.221	0.112	**0.109***	0.000	0.000	-3.518	-0.030	0.004	0.015	0.010	**-0.004*****	-0.281	-0.061	-0.006	0.004	**-0.002*****	0.010	-1.370
(0.172)	(0.086)	(0.057)	(0.000)	(0.000)	(3.489)	(0.033)	(0.014)	(0.022)	(0.013)	(0.001)	(0.983)	(0.041)	(0.022)	(0.021)	(0.001)	(0.015)	(1.044)
CYPRUS						IRELAND						PORTUGAL					
-0.091	-0.020	0.083	0.000	-0.001	0.061	-0.211***	0.181**	0.007	0.000	-0.002	-2.675	-0.152	0.068	0.058	-0.007	0.034	-0.278
(0.093)	(0.042)	(0.060)	(0.000)	(0.001)	(1.209)	(0.087)	(0.092)	(0.040)	(0.000)	(0.002)	(2.042)	(0.096)	(0.067)	(0.059)	(0.030)	(0.031)	(1.401)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.038	0.000	0.004	0.000	0.000	-0.676	-0.109	0.122	-0.019	0.000	0.000	-11.056	-0.086	0.098	-0.007	0.000	-0.005	-3.691
(0.037)	(0.015)	(0.014)	(0.000)	(0.000)	(0.747)	(0.217)	(0.180)	(0.025)	(0.000)	(0.000)	(6.895)	(0.108)	(0.104)	(0.041)	(0.000)	(0.007)	(2.194)
DENMARK						ITALY						SWEDEN					
-0.120**	0.064	0.006	0.000	0.008	**-2.090*****	**-0.093*****	**-0.071*****	0.007	**-0.001*****	0.007	**-2.087*****	-0.129	0.089	0.040	0.000	-0.001	-0.122
(0.055)	(0.043)	(0.017)	(0.000)	(0.015)	(0.848)	(0.026)	(0.021)	(0.011)	(0.001)	(0.008)	(0.61)	(0.067)	(0.069)	(0.026)	(0.000)	(0.001)	(0.991)
ESTONIA						LITHUANIA						SLOVENIA					
-0.075**	0.016	0.026	0.000	0.000	0.040	**-0.192*****	0.102	0.003	0.000	**-0.006*****	**-3.370*****	**-0.068***	**0.067****	0.003	-0.001	0.000	-1.238
(0.037)	(0.019)	(0.021)	(0.000)	(0.000)	(0.543)	(0.059)	(0.047)	(0.032)	(0.000)	(0.002)	(1.409)	(0.034)	(0.029)	(0.012)	(0.001)	(0.000)	(0.838)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.072**	0.029	0.013	0.009	0.001	0.106	**-0.121*****	0.046	**0.039****	0.000	0.005	**-1.082***	**-0.070*****	0.012	0.025	0.000	0.016	-0.442
(0.032)	(0.021)	(0.017)	(0.006)	(0.004)	(0.728)	(0.031)	(0.027)	(0.018)	(0.000)	(0.005)	(0.624)	(0.024)	(0.010)	(0.018)	(0.000)	(0.013)	(0.453)
FINLAND						LATVIA						UNITED KINGDOM					
-0.003	-0.006	0.000	0.000	**-0.006***	0.276	-0.051	0.019	0.020	-0.001	**-0.007*****	-0.015	-0.056	0.011	**-0.007***	0.000	0.023	-0.012
(0.041)	(0.019)	(0.022)	(0.000)	(0.003)	(0.71)	(0.053)	(0.032)	(0.032)	(0.002)	(0.003)	(0.822)	(0.077)	(0.067)	(0.004)	(0.000)	(0.031)	(1.516)

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. I define an individual as being young if he/she aged less than 49 years. For each country it shows number of treated and controls, respectively: AT(963042); BE(532143); BG(843); CY(301539); CZ(654429); DK(632255); EE(1182606); ES(2128274); FI(951356); FR(742491); GR(372280); HU(933539); IE(251135); IS(13257); IT(27412900); LT(461258); LU(2045793); LV(631451); NL(1002863); NO(884425); PL(655863); PO(28566); RO(16602); SE(561574); SI(801655); SK(1704034); UK(401303)

Table B.16: Kernel ATT - using limitation in daily activities - on the probability of transiting into different labour market statuses - Old sample

FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS	FT-FT	FT-PT	FT-U	FT-R	FT-I	HOURS
AUSTRIA						FRANCE						NETHERLAND					
-0.024	-0.041	0.025	0.023	0.008	0.865	-0.071	-0.003	0.024	**-0.038***	**0.046***	-1.754	-0.086	0.031	0.020	-0.013	0.005	**-2.016****
(0.079)	(0.048)	(0.026)	(0.036)	(0.010)	(1.330)	(0.075)	(0.063)	(0.036)	(0.020)	(0.024)	(1.686)	(0.063)	(0.058)	(0.018)	(0.012)	(0.012)	(0.960)
BELGIUM						GREECE						NORWAY					
-0.097	0.050	**-0.009*****	0.000	0.013	-2.683	0.092	-0.013	0.008	**-0.083***	-0.003	0.763	**-0.209*****	0.107	-0.001	0.057	0.000	**-5.876*****
(0.093)	(0.065)	(0.004)	(0.029)	(0.042)	(1.833)	(0.081)	(0.036)	(0.030)	(0.049)	(0.005)	(2.32)	(0.087)	(0.072)	(0.001)	(0.04)	(0.000)	(1.540)
BULGARIA						HUNGARY						POLAND					
0.142	-0.056	0.037	-0.190	0.067	3.483	**-0.149*****	0.032	-0.014	0.026	0.007	-0.653	-0.026	-0.057	0.024	0.014	**-0.007*****	0.645
(0.178)	(0.052)	(0.055)	(0.135)	(0.071)	(5.953)	(0.038)	(0.021)	(0.012)	(0.028)	(0.010)	(0.575)	(0.054)	(0.042)	(0.021)	(0.028)	(0.002)	(0.995)
CYPRUS						IRELAND						PORTUGAL					
-0.188***	0.062	0.016	0.044	0.077	**-3.286****	-0.174	-0.032	0.001	0.044	0.000	-2.989	-0.198	0.001	0.088	0.083	0.042	-0.442
(0.064)	(0.052)	(0.034)	(0.031)	(0.040)	(1.621)	(0.152)	(0.130)	(0.053)	(0.079)	(0.001)	(4.265)	(0.171)	(0.126)	(0.091)	(0.061)	(0.039)	(2.502)
CZECH REPUBLIC						ICELAND						ROMANIA					
-0.299***	**0.038***	0.047	**0.084*****	0.000	-0.439	0.049	-0.075	-0.016	-0.014	0.057	1.158	**-0.344*****	0.001	-0.005	**0.354*****	-0.002	0.959
(0.056)	(0.023)	(0.029)	(0.030)	(0.000)	(0.947)	(0.185)	(0.148)	(0.101)	(0.028)	(0.048)	(4.559)	(0.097)	(0.075)	(0.004)	(0.090)	(0.002)	(2.901)
DENMARK						ITALY						SWEDEN					
-0.039	0.035	0.029	-0.017	-0.001	-1.211	**-0.111*****	**0.049****	-0.007	**0.050*****	0.007	-0.710	-0.146	0.083	-0.015	0.050	-0.001	-0.726
(0.063)	(0.059)	(0.032)	(0.039)	(0.000)	(1.114)	(0.037)	(0.024)	(0.005)	(0.022)	(0.009)	(0.515)	(0.097)	(0.080)	(0.015)	(0.047)	(0.001)	(1.482)
ESTONIA						LITHUANIA						SLOVENIA					
-0.099***	0.041	0.012	0.026	0.000	-0.703	**-0.087***	-0.006	**-0.023***	0.025	0.000	0.073	-0.021	0.016	0.050	-0.044	-0.002	-0.571
(0.033)	(0.024)	(0.018)	(0.022)	(0.000)	(0.761)	(0.046)	(0.019)	(0.013)	(0.032)	(0.000)	(0.902)	(0.057)	(0.031)	(0.031)	(0.037)	(0.002)	(0.813)
SPAIN						LUXEMBOURG						SLOVAKIA					
-0.131***	-0.022	**0.040*****	**0.041***	**0.056*****	-0.699	**-0.079***	0.042	0.011	-0.010	0.008	**-2.630****	-0.042	0.028	0.001	-0.013	0.000	-0.424
(0.041)	(0.026)	(0.018)	(0.022)	(0.020)	(0.669)	(0.044)	(0.036)	(0.012)	(0.023)	(0.009)	(1.382)	(0.032)	(0.023)	(0.013)	(0.018)	(0.000)	(0.695)
FINLAND						LATVIA						UNITED KINGDOM					
-0.089	0.047	**-0.029****	0.031	0.021	-0.217	-0.084	0.004	0.018	0.041	-0.018	-0.855	-0.161	0.039	-0.007	0.015	0.037	1.538
(0.057)	(0.036)	(0.014)	(0.027)	(0.022)	(1.096)	(0.070)	(0.045)	(0.037)	(0.030)	(0.029)	(1.247)	(0.149)	(0.102)	(0.007)	(0.056)	(0.036)	(3.402)

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to other different activity statuses: part-time (PT), unemployed (U), retired (R), inactive (I) and numebers of hour worked per week. I define an individual as being old if he/she is 49 years or more. For each country it shows number of treated and controls, respectively: AT(79;876); BE(45;743); BG(15;30); CY(50;753); CZ(106;2676); DK(54;1458); EE(144;1080); ES(137;2624); FI(73;626); FR(65;722); GR(34;881); HU(105;1261); IE(23;21); IS(16;108); IT(201;4168); LT(73;1289); LU(123;1462); LV(70;561); NL(87;1304); NO(61;2063); PL(73;2017); PO(24;65); RO(30;531); SE(34;1065); SI(50;613); SK(155;1136); UK(25;845)

Table B.17: Kernel ATT - using limitation in daily activities - on the probability of staying in full-time job - Education sample

With education: more than tertiary													
AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH REPUBLIC	DENMARK	ESTONIA	SPAIN	FINLAND	FRANCE	GREECE	HUNGARY	IRELAND	ICELAND
-0.133	0.003	no obs.	-0.056	**-0.151***	-0.026	-0.036	0.006	-0.008	0.069	0.005	**-0.094***	**-0.419*****	0.052
(0.104)	(0.070)		(0.096)	(0.091)	(0.074)	(0.047)	(0.03)	(0.045)	(0.078)	(0.077)	(0.051)	(0.145)	(0.103)
[(41;1076)]	[(36;1778)]		[(11;391)]	[(20;708)]	[(42;1356)]	[(89;1029)]	[(94;3871)]	[(58;826)]	[(26;1184)]	[(19;821)]	[(43;1223)]	[(13;390)]	[(5;13)]
ITALY	LITHUANIA	LUXEMBOURG	LATVIA	NETHERLAND	NORWAY	POLAND	PORTUGAL	ROMANIA	SWEDEN	SLOVENIA	SLOVAKIA	UNITED KINGDOM	
-0.093	**-0.155*****	**-0.095***	-0.084	-0.045	**-0.308*****	0.018	no obs.	**-0.500*****	-0.140	0.028	-0.051	-0.103	
(0.059)	(0.055)	(0.050)	(0.066)	(0.055)	(0.057)	(0.072)		(0.167)	(0.095)	(0.024)	(0.040)	(0.076)	
[(90;3820)]	[(73;2161)]	[(71;2387)]	[(33;568)]	[(70;1808)]	[(65;2948)]	[(28;1025)]		[(2;2)]	[(27;1048)]	[(25;461)]	[(58;880)]	[(31;775)]	
No education: less than tertiary													
AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH REPUBLIC	DENMARK	ESTONIA	SPAIN	FINLAND	FRANCE	GREECE	HUNGARY	IRELAND	ICELAND
-0.018	-0.115	-0.026	**-0.162*****	**-0.229*****	**-0.142*****	**-0.105*****	**-0.122*****	-0.05	**-0.127***	0.041	**-0.102*****	-0.110	-0.041
(0.029)	(0.082)	(0.166)	(0.055)	(0.034)	(0.058)	(0.033)	(0.028)	(0.032)	(0.040)	(0.064)	(0.031)	(0.093)	(0.122)
[(134;2692)]	[(63;1664)]	[(20;315)]	[(69;1768)]	[(151;6127)]	[(75;2529)]	[(173;2147)]	[(255;6732)]	[(110;996)]	[(113;2260)]	[(51;1790)]	[(155;3929)]	[(36;715)]	[(24;549)]
ITALY	LITHUANIA	LUXEMBOURG	LATVIA	NETHERLAND	NORWAY	POLAND	PORTUGAL	ROMANIA	SWEDEN	SLOVENIA	SLOVAKIA	UNITED KINGDOM	
-0.103***	-0.086	**-0.104*****	-0.049	**-0.093*****	**-0.115*****	-0.066	**-0.158*****	**-0.247*****	**-0.144*****	**-0.079*****	**-0.076*****	-0.075	
(0.027)	(0.072)	(0.027)	(0.051)	(0.041)	(0.045)	(0.041)	(0.100)	(0.079)	(0.055)	(0.027)	(0.021)	(0.093)	
[(385;13018)]	[(46;1065)]	[(256;4913)]	[(100;1346)]	[(117;2288)]	[(84;3660)]	[(110;5736)]	[(48;756)]	[(44;1568)]	[(63;2059)]	[(104;1743)]	[(267;4214)]	[(34;1093)]	

ATT estimation using the Kernel Matching Method with Bootstrapped Standard Errors. The limitation in daily activities indicator is used as the measure of a health shock. The transitions are from full-time (FT) to full-time (PT) by education degree. The standard errors are in parentheses. In square brackets, number of treated and controls.

Table B.18: Sensitivity analysis for Nearest-Neighbor matching estimates

Country	**ATT**	**Old**	**Male**
AT	-0.034	0.003	-0.017
BE	-0.071	-0.051	-0.066
BG	0.000	-0.033	-0.005
CY	-0.075	-0.116	-0.133
CZ	-0.199	-0.164	-0.175
DK	-0.103	-0.064	-0.023
EE	-0.107	-0.088	-0.093
ES	-0.001	-0.07	-0.058
FI	-0.065	-0.04	-0.035
FR	-0.101	-0.089	-0.077
GR	0.070	0.030	0.034
HU	-0.081	-0.069	-0.073
IE	-0.245	-0.183	-0.202
IS	-0.034	-0.014	-0.023
IT	-0.097	-0.083	-0.07
LT	-0.134	-0.103	-0.124
LU	-0.052	-0.07	-0.063
LV	-0.083	-0.05	-0.048
NL	-0.064	-0.046	-0.06
NO	-0.128	-0.147	-0.139
PL	-0.043	-0.012	-0.026
PO	-0.212	-0.125	-0.158
RO	-0.152	-0.132	-0.181
SE	-0.144	-0.129	-0.136
SI	-0.038	-0.048	-0.046
SK	-0.083	-0.049	-0.053
UK	-0.047	-0.057	-0.081

Notes: This table displays results of the sensitivity analysis developed by Ichino et al. (2008) using the SENSATT command in Stata.

Chapter 3

Do ut des is not enough: intergenerational transfers and exchange in informal care

3.1 Introduction

Private monetary transfers from parents to adult children, living in a separate household, have been identified as an important share of aggregate net worth in the developed economies such as the United States or Germany (Villanueva, 2005). Moreover, recent evidence from Europe suggests that unpaid elderly care from adult children can be at least partly explained by exchange.[1] In this analysis I combine these two different branches of the literature in order to explain the effect of having received the monetary transfer on the intergenerational exchange of informal care later in life. Some authors argue that competition between siblings for the access to bequests or monetary intervivos transfer may induce them to increase the contacts with their parents (Bernheim et al., 1985; Angelini, 2007). Several studies on parent-to-child financial assistance show that a large fraction of parents help their adult offspring with housing, either in the form of cohabitation, downpayments, real-estate donations or other kinds of monetary support (Pollak, 1988; Guiso and Jappelli, 2002; Cox and Stark, 2005; Manacorda and Moretti,

[1] Jimenez-Martin and Prieto (2013) use the first two waves of the Survey of Health and Retirement in Europe (SHARE) to estimate a double-hurdle model for a parental decision to provide financial support for adult children and the amount involved, taking into account the potential endogeneity of informal caregiving.

2006). Other economists focus on intervivos and intergenerational transfers, which have received particular attention in the literature because of their tied nature (Norton and Houtven, 2006; Alessie et al., 2011; Norton and Huang, 2013).

I aim to contribute to this last area of research by empirically investigating the causal effect of tied monetary transfers on both unpaid elderly care and grandchildren care later on in life. To the extent of my knowledge, this is one of the few empirical analyses which look both at transfer and caring decisions in a extended family.[2] I extensively study which covariates influence the exchange of future services including the monetary transfer received in the past which represent the main regressor. Empirically addressing the relationship between intervivos transfers and exchange of services later on in life is complex, due to different factors which may influence this association and confound the causal effect. I synthetically summarize them as follows: (i) differences across cohorts, areas and individuals with different observable characteristics which may determine this relationship; (ii) smaller current geographical distance associated with the monetary help. The exchange of informal care may be partially induced by the geographical distance; (iii) unobservable characteristics associated with a greater propensity for transfers determined by "family taste". This study exploits data from two waves (1998 and 2003) of the Italian Multipurpose Survey on Families. This data contains a rich set of retrospective information on (financial) help received by adult children, together with information on the current individual socioeconomic conditions and the family network.[3]

In this analysis I consider these three issues above mentioned. I take advantage of the extremely rich information available in the dataset and, in particular, in order to tackle the endogeneity issue driven by family taste, I exploit the variation in the job occupations of parents and in-laws when their (adult) children were 14 years old. I check the sensitivity of the estimates using different estimators. An ideal instrument should be relevant and exogenous with respect to the main outcomes. On the one hand, the specific job occupations of the parents should be correlated with the affordability of the financial transfer, which can be tested in the first-stage regression (sub-section 3.5.1). On the other hand, the probability of receveing transfer must not directly im-

[2] I consider the interactions in terms of monetary and care exchange between generations.

[3] Although recent data from SHARELIFE contain similar information, that dataset has the limit of being focused on individuals aged 50 or more. Differently, here I am able to select younger individuals as well, for which childcare is likely to be more valuable.

pact the future exchange of informal care, which seems plausible. Nevertheless I check the sensitivity in sub-section 3.5.6 where I can compare different results under different econometric assumptions. I study the set of instruments in Section 3.5.5. In all the specifications I control for a large number of individual and household covariates both for parents and adult children. I find the job occupations within the family of origin highly correlated with the likelihood to obtain a money transfer (from parents). The underlying mechanism principally relies on the interaction between mother and father work positions (and in-laws) which should capture the heterogeneity in wealth of household of origin. The likelihood of receiving a monetary transfer from parents depends on the specific combination of the occupation of the parents during the childhood of their offspring. Basically, when parents or in-laws are both employed I should observe a higher probability to receive the monetary transfer to adult children. The results hold using both different specifications and estimators. I therefore define an IV strategy by estimating a two-equation model in which I exploit the variability in job occupations within the family of origin, when the offspring was 14 years old, to explain the propensity to obtain a monetary transfer later in life conditioning on a rich set of covariates for the parents, the adult couple and the children. My findings suggest that the adult children who have received the monetary help from parents are 8 percentage points more likely to provide informal care to their parents (0.16 in the IV specification). In addition, those parents, who have helped their adult children during some periods of economic hardship, are the ones who provide more grandchildren care.

Several ideas have been advanced to explain the positive correlation between tied transfers and exchange in services. Cox and Stark (2005) formalize four possible reasons which explain its relevance. One reason is related to the paternalistic preferences in the sense that donors care about the composition of the recipient's consumption. Second, the parents want to avoid their children overconsuming early in life and demanding again financial help later on. The third one relates to the idea that this assistance is particularly relevant when children have liquidity constraints, for instance when they need to borrow a durable good (e.g. a house) or when they suffer from economic hardship. The fourth and last explanation reconnects these transfers with unpaid care. Elderly parents invest in their adult children in order to increase the "production of grandchildren", through a transfer. The reason is that in the presence of offsprings

the adult children are more willing to provide care, because grandchildren are likely to imitate their behaviour and help them when they will be old themselves (Cox and Stark, 1996). By way of explanation, it may be the case that parents transfer the money to their adult children increasing, *defacto*, the likelihood to "produce" granchildren. Then, the adult children could make visible the provision of elderly care so that, when the time comes, the grandchildren will, in turn, feel committed to behave accordingly with their own parents. This is called demonstration effect. Taking into consideration these theoretical reasons, I should expect to empirically observe a positive relationship between intergenerational transfers and exchange in services.

The remainder of the analysis is organized as follows: Section 3.2 briefly describes the theoretical models. Section 3.3 provides some stylized facts. Section 3.4 describes the data and provides some descriptive statistics. Section 3.5 presents the empirical method, it explains the identification strategy, it discusses the empirical findings on the effect of monetary transfer on the exchange of informal care later on in life and finally discusses the IV approach. Conclusions are in Section 3.6, where I briefly discuss some policy implications.

3.2 Theoretical background

The intergenerational transfers between families are heterogeneous because they differ both in types (monetary, in-kind, time) and in motives. Arrondel and Masson (2006) demonstrate that, in developed countries, upstream transfers are generally in form of caregiving (so basically the time spent) from adult children to their elderly parents (Arrondel and Masson, 2006). The financial and in-kind transfers normally take place at an earlier stage of the life-cycle, when young individuals are investing in their human capital, or later on, when they acquire their own house or if they experience a period of economic instability. In fact, financial transfers from parents to adult children are also used as an informal insurance towards income shocks, in particular in the case of economic harship caused by, for instance, unemployment Becker et al. (2010). Other branches of the literature about downstream transfers describe the provision of grandchildren care from grandparents so that the parents are able to work and/or reduce expenditure on paid child-care (Arpino et al., 2010). Evidently, this brings about self-evident policy implications for the society.

Taken to the extreme, the majority of the models of family transfers considers only two generations and focuses on two motives: "altruism" and "exchange". Unfortunately, despite the potential importance of understanding family behaviors, a consensus has not yet been reached on the most appropriate model of behavior as none of the hypothesized models appears to be consistent with observed patterns of giving. In fact, the empirical evidence has sometimes been inconsistent with any of the standard models McGarry (2012). Laferrere and Wolff (2006) and Arrondel and Masson (2006) provide a comprehensive review of the relevant theoretical literature and summarize the available empirical evidence, respectively. In the case of altruism, the individual maximizes his utility considering as part of his own objective function someone else's utility. Cox (1987) points out the fact that altruism motive does not rule out the possibility that children provide services to their parents. At the same time, the adult children are over-compensated, therefore the parents do not "obtain" the whole surplus from their relationship. In a similar framework, the altruism model allows for heterogeneity in the parents' behaviour, and this is the case in which, for example, the parents care about a specific components of the other's utility.

On the far side of altruism, the exchange may induce individuals to interact with other members in their extended family. The timing of this *reciprocity* can take place either contemporaneously or at different moments in time. This study focuses on the second case which involves adult children who reward their parents with elderly care once they have received from them money help during a period of downturn. For example, Norton and Houtven (2006); Norton and Huang (2013), empirically analysed the fact that caregivers are more likely to have received (or receive) money from their parents (although there are no difference in terms of amounts). The second alternative is that parents use strategically their bequeatable wealth. Assuming that they are indifferent between siblings, they can make threats of disinheriting and increase the amount of caregiving or attention they can receive Bernheim et al. (1985). Looking at the more complex set of possible intervivos transfers, there are several reasons why financial help may be part of an inter-temporal exchange with services provided by adult children later on. First of all, when intergenerational transfers act as a substitute for the credit market (Guiso and Jappelli, 2002), it is not difficult to believe that caregiving services are used to pay back part of the sum. This can be part of a "family constitution" (Cigno et al., 2006) that leads to an equilibrium across generations, where each individual voluntarily chooses whether to take part in it or not. Secondly, Cox and Stark (2005) suggest that elderly parents may invest in their adult children's housing in order to increase the "production of grandchildren", hoping that their presence will induce the middle generation to set a good example by providing elder care ("demonstration effect").

From the policy prospective, households responding to altruism feelings will completely neutralize the effects of a government redistribution by perfectly adjusting the level of their family assistance, at least when it exists an interior solution for such private transfer (Barro, 1974). Under exchange motives, public income redistribution is not necessarily neutralized by modifications of family transfer. For instance, the US flows between parents and their non-coresident children is of 65 billion in 2010 dollars (Gale and Scholz, 1994). Such transfers are likely to have a substantial impact on the well-being of both donors and recipients and will have consequences for the distribution of wealth and not only. As large as these transfers are, more likely the individual will possibly alter his/her behavior in response to incentives, as theory predicts. In addition, family transfers may interact with public ones, and in doing so, they could alter the ef-

fectiveness and eventual beneficiaries of government transfer programs. In the following Section I show some stylized facts which motivate this study.

3.3 Stylized facts and motivation of this study

On the one hand, informal care is the largest source of long-term care for elderly, surpassing home health care and nursing home care. By definition, informal care is unpaid. It remains a puzzle why so many adult children give away their time for free. On the other hand, intergenerational transfers between family members are a crucial economic phenomenon, particularly those transfers from parents to children. Family transfers matter for the effectiveness of public safety nets, since the effects of public income redistribution depend in part on private responses to them and especially on family assistance decisions. Different outcomes for public policies that redistribute income are expected under "altruism" and under "exchange". Understanding this relationship is relevant because it involves two of the most important forms of support between members of the extended family network: informal care exchange and monetary transfers.

Table 3.1: Transfer from parents and informal care in Europe

Country	(1) % Financial transfers to children	(2) Amount financial transfers to children (per donor)	(3) % of households' with members aged 50+ who receive help from their adult children	(4) % of households' with members aged 50+ who help their children with grandchildrencare
France	22	3362	5.3	41.6
Germany	27	2203	8.2	37.2
Spain	9	3493	8.7	42.2
Italy	16	3436	6.4	45.4

Source: SHARE (2004), Pittini (2012), Brugiavini et al. (2013), Albertini et al. (2007).

First, the frequency of the monetary transfers from parents to children is not only a peculiarity of the Italy as people might think. It appears as a strong and common phenomenon across Europe which involves a large fraction of households as it is shown in Table 3.1. This should help to believe on the external validity of this study. In column (1) the percentage of households that receive a financial transfer from parents ranges between 9% in Spain (with a confidence interval between 7% to 10%) and 27% in Germany (Albertini et al., 2007). The authors give a brief descriptive overview of the frequency and intensity of money and time transfers between parents and children across 10 European countries covered by SHARE. Their results confirm the existence of a common transfer pattern at the European level. There is a net downward flow from the older to the younger generations, both by intervivos financial transfers and

by social support. Transfers from the elderly parents to their children are much more frequent and also usually much more intense than those in the opposite direction. These numbers are coherent with the ones I find in my sample, where I slightly underestimate this effect. I observe that around 11% of the married couples received a financial transfer from their parents while Albertini et al. (2007) estimate around 16 %. In column (2) I report the financial amount of the transfer per donor. In Germany the yearly mean value is the lowest (about 2200 euros) while in France, Spain and Italy, as expected, the financial transfer to children is higher than Northern countries (about 3500 euros).

Second, informal care involves a large fraction of the population and it has relevant economic implications. Despite the growth of professional services, unpaid help from adult children still represents an important form of assistance for the elderly in need of care. Only less than 3% of the sample buys formal care on the market. Data from the SHARE survey show that in Italy the proportion of households with members aged 50+ receiving help from adult children is around 6.4 per cent, coherently with figures from other European countries. Similarly, grandparents play a crucial role in looking after young children, with around 40 per cent of them providing this kind of help in France, Germany, Spain and Italy, according to the SHARE survey (Table 3.1). Furthermore, as highlighted by Brugiavini et al. (2013), there is evidence of reciprocity between the provision of grandchildren care and the receipt of informal care later on.

I aim at providing additional evidence regarding the relation between monetary transfers during a period of hardship and exchange of informal care later in time, for which the available empirical literature is rather limited. First of all, I want to understand whether there is support for the claim by Arrondel and Masson (2006) that there is limited empirical evidence for intertemporal exchange between family transfers. This yields the estimation of the effect of monetary transfer on the exchange of services. Secondly, I check whether this relation is simply driven by other important factors such as socio-economic variables or geographical proximity, which implies that parents choose strategically in order to keep their children close to them. Then I implement an instrumental variable approach in order to address the issue of the potential endogeneity of monetary transfers. Furthermore, I give robust evidence of the relation between monetary transfer and granchildren care. Parents who have helped their offsprings during a period of economic downturn are those who also provide more granchildren care later

in life. Moreover, I corroborate the hypothesis of possible "demonstration effect" introduced by Cox and Stark (2005). In fact, I observe a positive correlation between having received the monetary help from the parents and the adult child fertility. I show that tied transfers, elderly care and help with grandchildren are part of a complex network of exchange. I find evidence of reciprocity between members of the extended family and pure altruism in the case of grandchildren care.

As it shown in Table 3.1, the intergenerational exchange within a family has relevant consequences for many countries in Europe and among these Italy represents an interesting case study. In the first place, the provision of care services both to the elderly in need and the kids are mainly left to families. Secondly, debt restrictions and credit markets to the young are more severe than in other countries, so individuals may need to ask for help to their parents. The main findings indicate that only a small part of the association between these different forms of intergenerational assistance can be explained by geographical proximity, which, in principle, should induce the exchange. Furthermore, the IV estimates limit the endogeneity concerns suggesting that the results are not driven by unobserved heterogeneity in the strength of family ties. To the best of my knowledge, there are only a few studies that are closely related to this one, although they only focus on housing transfers. Tomassini et al. (2003) explored data from the first wave of the Multipurpose Survey. They find that tied housing transfers from parents induce smaller geographical distance of adult children after their marriage, and that this proximity is quite persistent over time. Differently from them, I focus on monetary transfers during a period of economic hardship and the relation with elderly and grandchildren care. Coda Moscarola et al. (2010) investigate a similar question to mine, but using data from the Bank of Italy's Survey on Household Income and Wealth. Similarly to Tomassini et al. (2003), they find that children who receive larger financial transfers tend to live closer to their parents. They interpret this result in a model where the old generation increases the proximity to their adult children because this raises the likelihood of receiving care. Therefore, they only focus on geographical distance *as a proxy* for caregiving, but in fact they are only able to provide evidence similar to Tomassini et al. (2003). Furthermore, their dataset does not contain direct information on unpaid care, which are instead among my main dependent variables.[4]

[4]Other studies on this area of research, which are not very recent are: Schoeni (1997) and Altonji et al. (2000). They both use tobit models to estimate the relation between care and intervivos transfers

3.4 Data and descriptives

3.4.1 Data and sample selection

I use data from the first two consecutive waves of *Multiscopo sulle Famiglie, soggetti sociali e condizione dell'infanzia* (Multipurpose Survey on Family and Childhood Conditions), a survey carried by ISTAT every five years starting from 1998 on the private household population of Italy. The survey sampled around 30,000 households to collect information on household structure, family network, unpaid assistance, important life cycle events and labour market conditions. The total sample size is 108,591 respondents and the selection procedure is reported in Table 3.2.[5]

There are no missing values, because ISTAT traditionally provides data where all values have been imputed using multivariate methods.[6] Clearly, this is a drawback for the analysis, but unfortunately ISTAT does not provide indicators for whether or not a single variable has been subject to imputation or correction. Only for some discrete explanatory variables, such as health or retrospective questions, missing values are explicitly allowed to account for cases where the respondent does not want to answer or does not remember. Instead of dropping them, I add the respective category along with the other dummies. The dataset is a stratified sample where strata are defined by region and dimension of the town/city of residence.[7] To guarantee anonymity, the dataset is released in two versions that cannot be merged: in the first one, the region of residence is provided, but not the dimension of the town; in the other one, the dimension is provided but only broader geographical areas are available. I prefer to use the former although results do not change if the other dimension is chosen.[8]

I focus on the household dimension and the consequences of a monetary transfer between generations so I restrict the analysis to married cohabiting couples. To maintain consistency throughout the paper, I refer to the first generation as *parents* (or *in-laws*),

on the one hand and donor and recipient income on the other.

[5] I also have the data for the wave 2009 but were no questions about money transfers, which is one of the main variable of interest. This is the main reason why I do not consider this wave.

[6] In the original responses there are missing values but they have been recoded by ISTAT.

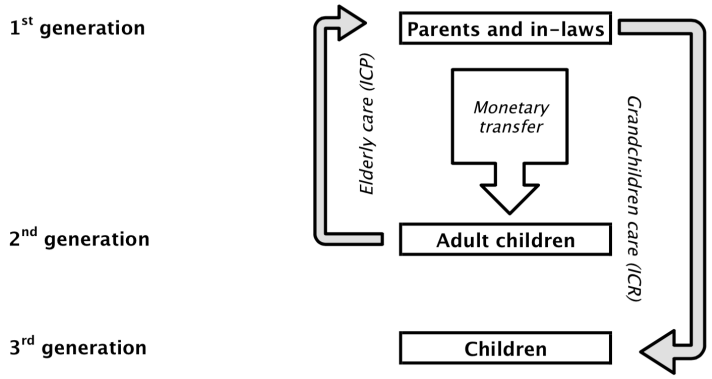
[7] I do not include sample weights, both because I pool two cross-sections and because I focus on modelling the relationships among different variables. Nevertheless, as Solon et al. (2013) claim, in the case of mis-specification, it is not clear whether unweighted estimates produce a good approximation. Given that this is not guaranteed even when using weights, I follow the quite standard approach of including the stratification variables (area of residence and regions) among the covariates

[8] The results are the same if I cluster the standard errors by Italian regions. I use robust option to control for heteroskedasticity in the errors.

the second one as *adults* both wife and her partner and the third generation as *children*.

Figure 3.1 sketches the intergenarational exchange pattern under this analysis. Parents and in-laws may help their adult children through a financial transfer. In turn, adult children may provide elderly care to their parents. In addition, in the presence of offspring, adults may also benefit from their parents' assistance (grandchildren care). In this analysis I study all these relationships in place.[9]

Figure 3.1: Monetary transfer and informal care exchange



In order to correctly identify the adult children, I keep only cases where one of the partners is the reference person of the interview, which are the large majority of the cases (around 98%).

Table 3.2: Sample selection

	1998		2003		Total
	Obs	%	Obs	%	Obs
Original sample	59050		49541		108591
Only married couple	29750	-49.6	24138	-51.3	53888
Only if reference person or partner	29038	-2.4	23574	-2.3	52612
Only one observation per couple (wife)	14519	-50.0	11787	-50.0	26306
Only if both partners aged between 20 and 70	12993	-10.5	9990	-15.2	22983
With at least one parent alive on BOTH sides	7466	-42.5	5247	-47.5	12713
Not cohabiting with parents or in-laws	7143	-4.3	5065	-3.5	12208
Excluding those with parents or in-laws abroad	6966	-2.5	4863	-4.0	11829

Source: Multipurpose Survey on Family and Childhood Conditions Dataset.

Given that I am interested in the exchange of informal care between parents and adult children, I decide to select couples aged between 20 and 70 years old. According to the National Statistical Office, almost 80% of the population under the age of 70 has the mother still alive, while the father is alive in 61.4% of the cases (Battistin et al., 2013). I estimate a number of specifications using different age groups to test the sensitivity of the results in Section 3.5. The information on marriage is collected

[9]The second generation, adult children in Figure 3.1, is the observation unit in this study.

with respect to the first wedding in 1998, and to the last one in 2003, and therefore I exclude cases of previous divorce or widowhood. These were still a minority in 1998, and slightly increased in 2003 (Table 3.2). I restrict the sample to couples where there is at least one parent alive, because the main interest lies on the intervivos exchange of family services. I also exclude those cases where the couple cohabits with parents at the time of the interview, because the survey does not allow me to identify elderly care in such cases. This involves only around 4% of the couples. Lastly, I exclude the few cases with parents or in-laws residing abroad, because these are likely to be driven by sensibly different migratory processes. At the end of the selection process I end up with 11,829 observations.

In all the waves, adults are asked whether they provide any help to non-coresident individuals. They then have to specify the most important kind of help they provide, and who receives it, with possible multiple recipients. The question in the Multipurpose Survey on Family and Childhood Conditions states:

> *In the last four weeks, have you provided free services (medical assistance, adult care, domestic work, company, or paper work) to your parents?*
> *Possible answer: Yes or No*

Around 85.29% of those who report that their most important help is directed towards their parents say that it consists of informal care. I define the dummy *ICP* (Informal Care Provided) equal to one for those who report that this help is directed to their parents and that it consists of either medical assistance, adult care, domestic work, company, or paper work. The fact that I observe elderly care only when it is the most important help provided to non-coresident individuals can lead to an underestimation of the total amount of caregivers.

Furthermore, respondents are asked to identify the person who currently entrusts with their child or teenager when she is not with her parents or at school. I define the dummy *ICR* (Informal Care Received) equal to one for those who report that this task is carried out by their grandparents, without distinguishing the wife's parents from her in-laws. I select the first category and around 43% of the individuals in the sample report that they receive this kind of help from their parents. The corresponding question is:

> *Which of the following adults is entrusted for child care when the offsprings*

are not with their parents or school?

Possible answer: 1. grandparents 2. Uncle/Aunt 3. Brothers/sisters 4. Other relatives 5. Friends 6. Baby-sitter.

Individuals are also asked about the distance between their residence and that of their parents at the time of the interview. The distance should have a strong impact on the informal care provision because it may induce the exchange. The information is reported as a categorical variable: cohabiting; in another flat in the same building; in the same town, within 1 km; in the same town, more than 1 km away; in another town, within 16 kms; in another town between 16 and 50 kms away; more than 50 kms away. I define the variable *DIST* (distance to parents or in-laws) as the minimum distance from either the mother or the father, in case they live apart. This is available for both adults.[10]

The main explanatory variable, *Parents' transfer*, is a dummy for monetary help received during a period of economic hardship and difficulties. This covariate is equal to one for those who report that they received monetary help from parents (or in-laws), and to zero otherwise. Around 11% of sample reports that they have received a transfer from the family of origin. The statement in the questionnaire is:[11]

During your life, starting from the time you moved out of your parents' house, have you ever been in financial difficulties?

Possible answer: Yes or No

As briefly described in the Introduction, I address the endogeneity issue, coming from potential family taste between generations, using the job variability of parents and in-laws when the adult child was 14 years old. The ideal instruments should be correlated with *Parents' transfer* and they should not directly impact the informal care later on in life. In this context, the set of instruments can be considered as a proxy for the wealth of the family of origin and, once I control for all the other possible covariates which may influence the transmission mechanism, I use the variation across families as a source of shock in wealth. Among the most relevant variables which may influence the likelihood of receveing the transfer, I include a large set of socio-demographic controls such as

[10]In the cases where parents or in-laws live apart, this is defined as the distance from either the mother or the father, whichever is the smallest. This information is available for both adults.

[11]The couple has received the trasfers in the past with respect to the year of the interviews.

number of siblings, number of children, job position, etc. Despite the absence of direct information on income and wealth, I have information on education, employment status and sources of income of the individuals at the time of interview (1998 and 2003), which are good proxies for them. Moreover, I control for parents' characteristics such as age, health condition and education.[12] In Panel A of Table D.2, I show the statistics on the parents' occupation during the childhood of their offspring. In Panel B I do the same exercise for the parents in-law. The most common occupation is blue collar employee (44%) and housework (65%) for both parents' side.

3.4.2 Descriptive statistics

Table 3.3 shows the incidence of earmarked transfers is substantial: about 12% of the married couples in the sample received financial support from parents or in-laws in 1998 and this figure marginally shrinks to 8% in 2003.

Table 3.3: Monetary transfer from parents and in-laws

Money Help	Year		
	1998	2003	Total
No	87.91	91.90	89.55
[*Obs.*]	[6,124]	[4,469]	[10,593]
Yes	12.09	8.10	10.45
[*Obs.*]	[842]	[394]	[1,236]
Total	6966	4863	11829

Source: Multipurpose Survey on Family and Childhood Conditions Dataset (1998 and 2003). In squared brackets I show the numbers of observed adult couples.

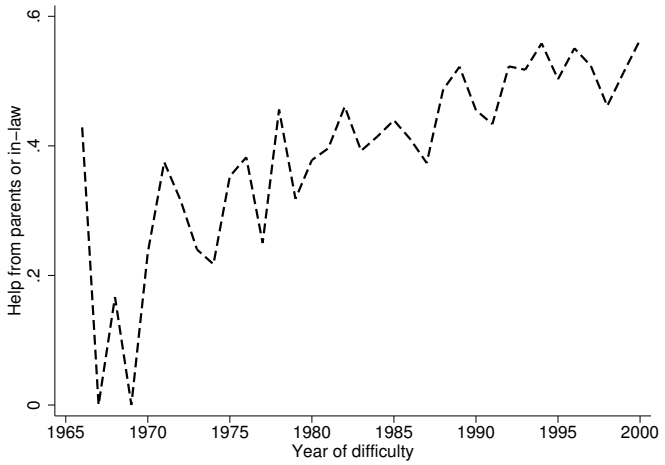
Then, I analyse the trend of the intergenerational transfer from parents to adult children over time. Figure 3.2 shows the percentage of couples who received transfer from parents during the period 1965-2000. The variable of interest evolves following an increasing trend and it reaches the local pick after each period of economic downturn (such as OPEC oil price shock in the early 70s and it grows again during the 90s when Italy decided to devalue Italian Lira by 7%).[13] Several authors have recognized the role of the family as an insurance mechanism against different risks or misadventures (Altonji et al., 1997). Better knowledge of the criteria used by families, and especially parents, to provide financial support for their adult children would improve decision-

[12] I provide all set of covariates in Table D.1.

[13] In the empirical Section, I statistically test the presence of possible cohort effect. I set age groups every ten years from 1930 to 1980 and I test the joint significance of the parameters. In all the specifications, I could not reject H_0 (all the parameters equal to zero) with a F-test with prob(0.62). Similar results in case in which I select groups of five years. Then, once I account for all the set of covariates, the cohort effects are not statistically different from zero.

makers' ability to design effective social programs that improve the quality of life of more vulnerable individuals.

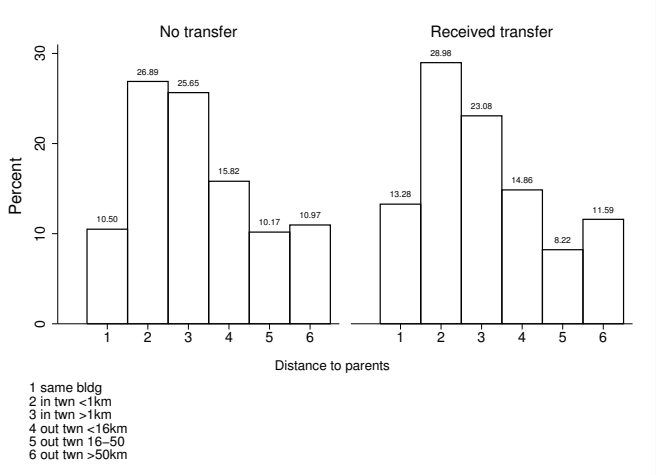
Figure 3.2: Percentage of adult children who have received a transfer from parents, Multipurpose 1998/2003



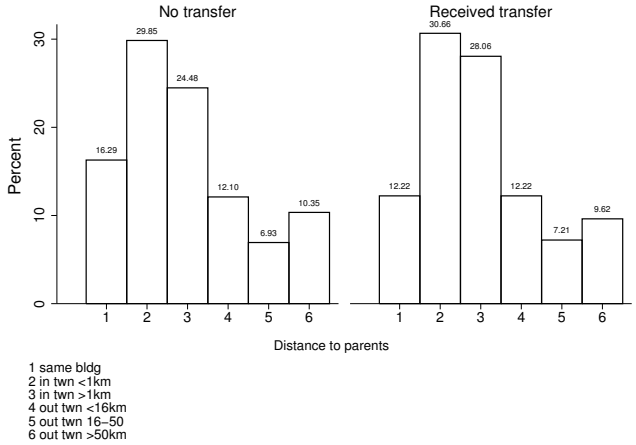
The data show an increasing trend of the percentage of people who receive a tied transfer from parents or in-laws till the mid-1980s and then it stabilizes in the last 15 years. Then I focus on the relationship between geographical location between parents and adult children because the distance itself may be one of the most important driving forces. Geographical proximity between generations is one of the possible links between tied transfer and the reproduction of the familistic welfare system. Figure 3.3 describes the current distance between wife and husband and their corrispondent parents by help received ("No transfer" and "Received transfer"). As I explained in the previous Section, the information is reported as a categorical variable and I define the distance as the minimum value between the adult residence and their parents or in-laws. In Figure 3.3. I describe two cases: adult children who did not receive any transfer from parents and adult children who did.

Panel A describes the current distance of the wives with respect to her parents, while Panel B refers to the husbands, in order to control for parents and in-laws geographical proximity. In Panel A, I observe that the wives who receive monetary help from their parents are more likely to live closer to them compared to their counterparts. In fact, around 13% of the adult children who receive a transfer live in the same building as their parents and only 10% do so when they do not receive any transfer. In Panel B, I observe a different pattern in the first geographical category. Considering individuals

Figure 3.3: Current geographical distance to parents or in-laws by help received, Multiscopo 1998/2003



(a) Panel A: wife distance from parents



(b) Panel B: husband distance from parents

in the same parents building those who did not receive any financial help slightly tends to locate closer to their parents, around 16% and 12% respectively. It appears indeed consistent with Panel A once the distance becomes greater than the "same bldg".

Next, I determine whether residential proximity between generations - in the case of help received from parents during economic hardship - is related to the future exchange in services both the elderly and the grandchildren care. Figure 3.4 shows large differences between the two groups ("No transfer" and "Received transfer"): in fact, the percentage providing elderly care to parents is always higher no matter the distance (to parents or in-laws). When distance is equal to the first category "same building", individuals who receive the trasfer from their parents seem to provide about 11% more informal care than

their counterparts who did not receive any transfers.[14] For any other category, the adult children provide, on average, 5-6% more elderly care than couples who do not receive the transfer. Those who received the monetary help provide more elderly care and this effect decreases when the distance become greater than 16 Km (10 percentage points less). As for the individuals who did not receive the money help, I do not observe a persistent trend between distance and elderly care. This picture suggests that the distance is not strongly (negatively) correlated with elderly care for the subgroup of individuals who have not been helped by their parents. The effect seems almost constant across distance categories. In other words, evidence suggests that (i) no matter the distance, those who receive the money from parents also provide more elderly care later on in life; (ii) the distance seems negatively correlated with the provision of elderly care only in the case of adult children who have received the financial help from parents.

Figure 3.4: Percentage providing informal care to parents or in-laws (ICP), by current distance to them and by help received, Multiscopo 1998/2003

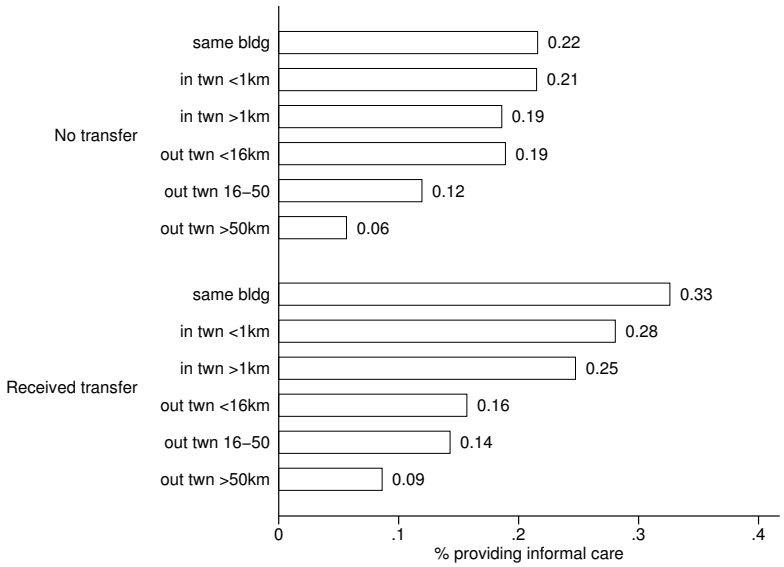
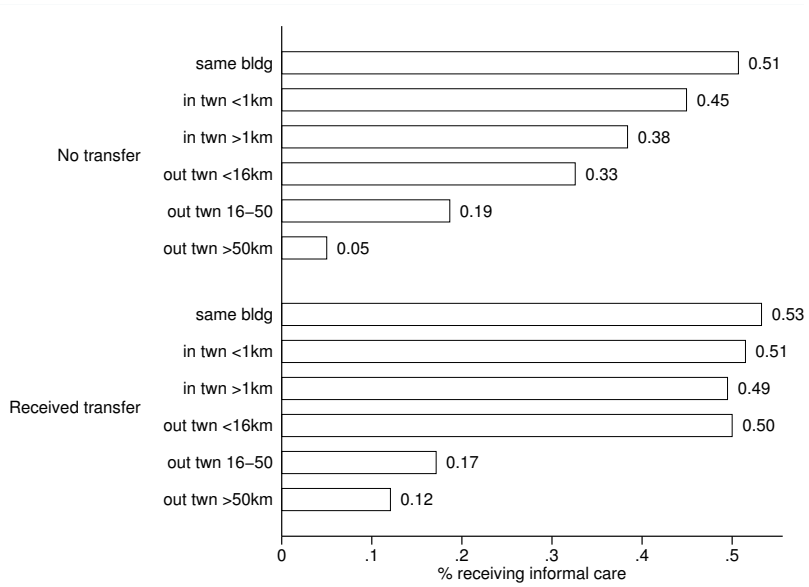


Figure 3.5 shows the percentage of people receiving help with child-care from parents or in-laws distinguishing between adult children who received and those who did not. For any geographical location, those who received monetary transfer experience a higher percentage of grandchildren care from parents or in-laws with respect to the couples who did not. This picture leads to believe that (i) no matter the distance, who received the transfer are those who also currently receive more grandchildren care; (ii) the distance

[14]This is difference between 0.33 and 0.22.

seems more relevant in explaining the relationship in case of "No transfer" received than the counterpart. For instance, considering only the first distance ("same bldg"), I observe a 2 percentage points difference between the two categories and this divergence increases when distance from parents becomes greater. In Figure 3.5 the *No transfer* couples show a strong and negative correlation between the distance to parents and the probability of grandchildren care received while who *Received transfer* increases the exchange in informal care from parents than the other group, no matter the geographical distance I account for. All these figures show that, on average, the adult child who receives the monetary transfer from parents or in-laws will exchange more informal care later on in life while the proximity to parents does not entirely explain the exchange itself.

Figure 3.5: Percentage receiving informal care from parents or in-laws (ICR), by help received, Multiscopo 1998/2003



3.5 Econometric analysis

3.5.1 Empirical strategy

As discussed in the previous Sections, I focus on the relationship between monetary help and exchange of informal care considering three generations. I estimate a model in which elderly care (ICP) and grandchildren care (ICR) depends on whether the adult children receive any type of monetary help from their parents (*Parents' transfer*) controlling for a rich set of observable exogenous covariates (X), and where ϵ and ν are the unobservable parameters. The married couple, identified by a wife and her partner, is the unit of observation i. I define a dummy for *Parents' transfer* which is the main regressor of interest. As follows the main equations of interest both for elderly care (3.1) and for grandchildren care (3.2).[15]

$$ICP_i = \beta_0 + \beta_1 Parents' \, transfer_{i,past} + X^{'}\delta + \varepsilon_i \tag{3.1}$$

$$ICR_i = \gamma_0 + \gamma_1 Parents' \, transfer_{i,past} + X^{'}\theta + \nu_i \tag{3.2}$$

where equation (3.1) and (3.2) are the outcome regressions, $X^{'}$ is a vector of observables which include dummies for wave, area and region of residence. I have access to a rather large set of demographic covariates for the couple such as age, education, health status, number of brothers and sisters. I also have good information for the job occupation, income and wealth at the time of the interviews (1998-2003). Among family characteristics, I have information on the kind of dwelling and tenure, the possession of a long list of housing equipment, cars and motorbikes, the presence of other buildings owned by the family (which are another good proxy for wealth). I include all of them as covariates, together with the presence and the number of children and the age of the youngest child which are relevant characteristics to control for in a informal care provision.[16] At the individual level, I know the employment status and the kind

[15] For a matter of clarity, the subscript *past* in the main regressor indicates the fact that the monetary transfer occurs in the past with respect to the time of the interviews (1998 and 2003). The set of instruments are measured when the adult children were 14 years old, this is the reason for the subscript $14yr$ in the equation (3.3).

[16] When I estimate the equation 3.2, I do not include any covariates about children. In principle, I have a downward bias in the estimate because when the couple do not have any child the grandchildren effect goes to zero, trivially. In the next Section I show the estimates considering different specifications. The results are fairly robust.

of occupation, the main source of income (labour, pensions, wealth) and the highest educational attainment of both partners. I also take into account the presence and number of siblings, the presence of health-related limitations in the daily activities, and an indicator for foreign citizens. For both of the partners' parents I include a set of variables accounting for their health conditions and for their socio-economic status: binary indicators for the presence of both or either parents, a set of indicators for them having health-related limitations (interacted with the wave dummy because of a minor change in the question wording), their age and their highest educational achievement.[17] The full set of results is reported in the Appendix, while here I discuss only the covariates of interest.[18]

For the identification stategy, I need to assume that Z is uncorrelated with both ε_i and ν_i. The parameters of interest are both β_1 and γ_1, which indicate the impact of having received the monetary transfer from parents on informal care later on in life. As discussed in more detail below, the IV estimates have a Local Average Treatment Effect (LATE) interpretation (Imbens and Angrist, 1994). The corresponding first-stage regression for both 3.1 and 3.2 is:

$$Parents' \, transfer_{i,past} = \alpha_0 + \alpha_1 Z_{i,14yr} + X^{'} \sigma + \mu_i \tag{3.3}$$

Although the outcome variables are binary, in order to estimate the effect of *Parents' transfer* I implement a linear probability model, as it is quite standard in the IV framework. I firstly model the equations (3.1) and (3.2) as linear and then I estimate the standard 2SLS estimator with the parents' job occupation in the past and their interactions as the instruments for the monetary transfer from parents. Secondly, since the main regressor in both equations (3.1) and (3.2) are also binary, I use the two-step estimation strategy with binary endogenous regressor as discussed in Windmeijer and Santos Silva (1997) and then described by Wooldridge (2001). Wooldridge's procedure

[17] I control for year of the interview, geographical area and regions. Specifically, the demographic covariates include: age, health limitations, number of sisters and brothers, education, number of children and their age. All these controls are for parents and in-laws, married couple and children. The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics.

[18] Furthermore, I also exploit the information (i) on the number of phone calls and (ii) on the number of visits to parents in order to capture possible observable family ties. These variables are highly correlated with the geographical distance to parents so I choose not to include them. The results, not shown here, are identical to the main ones.

is a useful implementation in the case of a binary endogenous regressor X, for which standard 2SLS may be woefully inefficient. Improved efficiency can be obtained by first regressing X on the instrument via probit (or logit), predicting the probability and using this one as a single instrument for *Parents' transfer*.[19] The robustness of this estimator, which I refer to as 2SIV, does not depend on the correct specification of the equation for endogenous dummy variable, i.e., the estimator is robust to misspecification of such equation as probit (Wooldridge, 2001).

In the following sub-sections I discuss the results from the empirical analysis which may be sensitive to differences across cohorts, living areas, individuals with different observable characteristics and smaller current geographical distance. The first part is dedicated to exploit all the information using a linear probability model where the outcome variables are *ICP* and *ICR* while the main regressor is help received during a period of economic hardship - *Parents' transfer*. Then I implement the IV strategy using different estimators.[20]

3.5.2 Main results

Table 3.4 shows the extensive margin results for *ICP*. In column (1) the adult children who received the monetary transfer in the past are 7.2 percentage points more likely to currently provide elderly care to their parents considering all set of demographic characteristics. This effect is not negligible, given that the proportion of informal carers in the overall sample is 20%.[21]

When I add wealth related covariates, column (2), the estimated coefficient of interest remains substantially stable to 7.2. Adding distance from parents and in-laws (column 3), the probability of elderly care provision associated with past transfer gets slightly bigger and still statistically significant at 1% level. Obviously, the estimates in columns (2) and (3) are not statistically independent, so I cannot test their difference by using their confidence intervals. The point estimate is similar between column (2)

[19]This procedure has been recently exploited also by Finlay and Neumark (2010) to estimate the causal effect of never-married motherhood on child educational outcomes.

[20]In Appendix I show the results for the full set of covariates (Table D.7). In column (1) and (2) the estimates for for *ICP* and *ICR*, respectively. I also consider the non-linear models (probit) and Table D.3 and D.4 present very similar results in terms of average partial effects with respect to the previous one.

[21]In Table D.5 and D.6 I also analyzed the relationship divided by gender so only for the wife and for the husband side, respectively. As expected, the female tends to provide the most of the care. Furthermore, help with childcare has been recently investigated as a key determinant of their labour supply. For any futher details see Compton and Pollak (2011).

Table 3.4: Linear probability model for ICP (informal care provided to parents or in-laws)

	(1) ICP	(2) ICP	(3) ICP
Parents' transfer	0.072***	0.072***	0.075***
	(0.013)	(0.013)	(0.013)
Parents: in twn <1km			0.011
			(0.014)
Parents: in twn >1km			-0.035**
			(0.014)
Parents: out twn <16km			-0.021
			(0.015)
Parents: out twn 16-50			-0.057***
			(0.016)
Parents: out twn >50km			-0.094***
			(0.016)
In-laws: in twn <1km			-0.020*
			(0.012)
In-laws: in twn >1km			-0.007
			(0.013)
In-laws: out twn <16km			-0.029*
			(0.015)
In-laws: out twn 16-50			-0.038**
			(0.017)
In-laws: out twn >50km			-0.086***
			(0.015)
Observations	11829	11829	11829
R^2	0.085	0.091	0.101
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates with robust standard error in brackets.

and (3) but, using an appropriate Wald test, I conclude that the difference between the coefficient - even if it is not large in magnitude - is statistically significant at the 5% level. It is interesting to note that, although geographical distance is generally associated with less parental care, the negative effect of distance becomes substantially large only when adult children are located further than 16 km away which confirms the prediction in the descriptive Section.[22] This might explain why the positive association between proximity and *Parents' transfer* does not result in a stronger association between the latter and elderly care. Indeed, comparing those who receive help with those who do not, approximately half of the increased proportion of couples living in the same building of the wife's parents (Figure 3.3) comes from a reduction in those living within a 16 km distance, who still tend to provide a substantial amount of care.

[22]For any detail, see Figure 3.4 and 3.5.

This casts some doubts about the possibility of inferring a strong correlation between tied transfer and parental assistance from the simple correlation with proximity, as in Coda Moscarola et al. (2010).

The most important determinants of *ICP* are shown in Table D.7, column (1). The coeffients estimated are in line with the previous studies. For instance, the age and the general health of the adult children are generally negatively correlated with the provision of elderly care, as expected. People more educated provide more elderly care while I find, predictably, opposite sign both for number of brothers (-0.7 percentage points) and having at least a child (-5.5 percentage points). As one would expect both the parents' age and health condition positively relate to the elderly care.

Table 3.5: Poisson model for hours of ICP (informal care provided to parents or in-laws)

	(1) ICP Hours	(2) ICP Hours	(3) ICP Hours	(4) ICP Hours
Parents' transfer	2.558***	2.675***	2.765***	2.640***
	(0.839)	(0.842)	(0.840)	(0.842)
Observations	11829	11829	11829	11829
Pseudo R^2	0.20	0.22	0.24	0.26
Wave, region, area	X	X	X	X
Demographic characteristics		X	X	X
Wealth characteristics			X	X
Distance to parents				X

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age; all these controls are valid for parents and in laws, adult and children. The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. I show the average partial effect in all the columns, robust standard error in brackets.

Then, I focus on the number of hours of elderly care provision in the last 4 weeks (intensive margins) and Table 3.5 shows the results.[23] The variable *hours* measures the intensity of elderly care in the last month and, because of its count nature, I cannot estimate the model using OLS as discussed by Wooldridge (1997). There are at least two reasons why linear models are not suitable for analyzing count data. First, it does not ensure that predicted values of the outcome are nonnegative. Second, a linear model for $E(y|x)$ rules out theoretically and empirically important functional forms, such as constant elasticity. For all these reasons I estimate a count model regression.[24]

Interestingly, the correlation in Table 3.5 hardly changes when enlarging the set of controls (columns 1 to 4). Having received monetary transfer in the past will increase

[23] In the case of *ICR*, due to data limitation, I cannot compute the intensive margins.

[24] I use the STATA command `poisson` in order to handle the mass of zeros in the variable *hours* (around 82%).

the hours of elderly care provided to the parents. In all specifications, the effect is very stable and is around 3 hours more with respect to couple who did not receive any transfer, keeping all the variables at their means. Specifically, the couples who have been helped by their parents through a transfer provide almost 50% more elderly care than the counterpart, which is a considerable increase.[25]

Table 3.6: Linear probability model for ICR (informal care received from parents or in-laws)

	(1) ICR	(2) ICR	(3) ICR
Parents' transfer	0.045***	0.053***	0.059***
	(0.014)	(0.014)	(0.014)
Parents: in twn <1km			-0.061***
			(0.015)
Parents: in twn >1km			-0.077***
			(0.015)
Parents: out twn <16km			-0.113***
			(0.017)
Parents: out twn 16-50			-0.145***
			(0.018)
Parents: out twn >50km			-0.209***
			(0.018)
In-laws: in twn <1km			-0.009
			(0.013)
In-laws: in twn >1km			-0.052***
			(0.014)
In-laws: out twn <16km			-0.033**
			(0.016)
In-laws: out twn 16-50			-0.104***
			(0.018)
In-laws: out twn >50km			-0.150***
			(0.017)
Observations	11829	11829	11829
R^2	0.164	0.224	0.245
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. ICR is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates with robust standard error in brackets.

Next I start investigating the relation of between *ICR* and *Parents' transfer* and I show the results in Table 3.6. At the beginning, I study the regression without conditioning on the presence of children because I further investigate the potential existence of fertility effect in act induced by the monetary transfer. By positing an indirect exchange motive, Stark (1991) provides something of a bridge between the economic literature on altruism and exchange and the literature on reciprocity using the so called

[25]The variable *hours* has mean equal to 5.58 and standard error of 28.04.

"demonstration effect". Also according to Cox and Stark (2005), elderly parents may invest in their adult children in order to increase the "production of grandchildren". In this case, the adult children are more willing to provide care to their parents, because grandchildren are likely to imitate their behaviour and help them when they will be old themselves, hence the definition of demonstration effect. This is the theoretical reason why, in presence of offspring, I should expect to empirically observe a positive relationship between intergenerational transfers and exchange in services.[26]

Table 3.6 shows the results for grandchildren care. In column (1) I find that adult children who have received the financial help from parents have 4.5 more percentage points in terms of grandchildren care later in life. In column (2) I introduce wealth covariates and, also in this case, the effect is positive and statistically significant at the 1% level. The individuals who receive the transfer are 5.3 percentage points more likely to receive grandchildren care from parents or in-laws. This effect is quite large, given that the proportion of informal carers in the overall sample is 40%.

When I add dummies for distance from parents and in-laws, which are strongly negatively correlated with *ICR*, the coefficients on help received from parents slightly increases to 5.9 percentage points and is still statistically significant at the conventional 1% level. Using the Wald test, the difference between the coefficient in columns (2) and (3) is statistically significant at the 5% level.[27] The evidence appears to be quite strong and stable in any specifications.[28] Concerning the other covariates shown in column (2) Table D.7, column (2), shows the effects of all the other controls which are generally coherent with the ones found in the previous (scarce) literature.

The finding indicates that tied transfers are tightly related to the exchange of services in the family network.[29] On the one hand, those adult children who receive the money transfer are also more likely to currently provide elderly care. The financial costs to the informal carers can be substantial, especially if the caregivers are forced to interrupt their careers or retire early in order to facilitate the provision of informal

[26]The full set of variables is included.

[27]In both ICP and ICR I introduce family contacts characteristics and the results, not shown here, do not change. I generally not include these controls in the specifications because they are correlated with the distance from parents.

[28]One may argue that using two waves I could compare individuals under different health care system. In order to capture this kind of heterogeneity I also add an interaction term between regional dummies and wave. This interaction never appears statistically significant. The results, not shown here, are in fact identical to the main ones.

[29]Only 0.36% and less than 3% of the sample buy formal care, both elderly and grandchildren, on the market. Both controls never appear to be statistically significant in the regression analysis.

elderly (Viitanen, 2007). On the other hand, they are also more likely to receive help with child-care.[30]

3.5.3 Sensitivity of the main results

In this Section, I consider some sensitivity checks on the main specification, clearly focusing on the differential effects across age groups. This analysis may help to understand which age category drives the results. Firstly, I re-estimate the linear probability model for *ICP* (informal care provided to parents or in-laws) considering the parents' age 65+ (Upper panel) and if at least one parent is with health-related limitations or aged 85+ (Lower panel) - Table 3.7 reports the results. Secondly I focus on the linear probability model for *ICR* (informal care received to parents or in-laws) considering only couple with at least a child (Upper panel) and if at least one them aged less than 14 years old (Lower panel) - I show the results in Table 3.8.

Table 3.7: Linear probability model for ICP (informal care provided to parents or in-laws) considering parents' age 65+ (Upper panel) and if at least one parent with health-related limitations or aged 85+ (Lower panel)

Upper panel	(1)	(2)	(3)
	ICP	ICP	ICP
Parents' transfer	0.080***	0.079***	0.081****
	(0.014)	(0.014)	(0.014)
Observations	10226	10226	10226
R^2	0.084	0.091	0.102
Lower panel	(1)	(2)	(3)
	ICP	ICP	ICP
Parents' transfer	0.066***	0.066***	0.068***
	(0.024)	(0.025)	(0.024)
Observations	3774	3774	3774
R^2	0.086	0.098	0.116
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X
Distance parents and in-laws			X

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age; all these controls are valid for parents and in laws, adult and children. The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates, robust standard error in brackets.

In Table 3.7 (Upper panel) I observe an increase in the point estimate with respect to the results in Table 3.4. In details, the individuals who receive the monetary transfer from their parents are 8 percentage points more likely to provide elderly care later on in

[30]I do not find any effect of the monetary duration of parents' help on both *ICP* and *ICR* later on in life. It seems only relevant for the future exchange in services the fact that the adult children receive the trasfer from parents and not the duration itself.

life in the case in which at least one of the parents is 65 years old or more. The results are stable when controlling for demographic and wealth characteristics - columns (1) and (2). This result is consistent with the fact that this group of people is the one in real need of care. With the introduction of distance covariates (column 3) the coefficient on past help from parents marginally rises to 8.1 percentage points and still economically and statistically significant at the 1% level.[31] In Table 3.7 (Lower panel) I consider a more stringent case in which one of the parents or in-laws suffers from health-related limitation or is aged more than 85. Also in this case the estimates are stable through the different specifications. The adult child who receives the finalcial help from parents in the past is around 7 percentage points more likely to currently provide elderly care to them. Some authors argue that formal care expenditure does not significantly affect informal care-giving in intergenerational households (Viitanen, 2007), nevertheless I suspect that this slightly decrease in magnitude are is to the substitution effect between formal and informal care, in the case of specific medical assistance which possibly cannot be delivered by the adult children. In fact, in this sample I select parents aged 85+ or suffer from health related problems so in greater need of care and medical help.[32]

Before turning to IV estimates, I examine the relationship between money transfer and grandchildren care considering different age sub-samples. Table 3.8 shows the result for married couples with at least one child (Upper panel) and with at least a child aged less than 14 (Lower panel), which are more likely to demand help with childcare. In the first case, the correlation between *ICR* and monetary help from parents appear strong and statistically significant at 1% level, column (2), once I control for demographics and wealth covariates. When I introduce, in column (3), geographical distance I do not observe any relevant change in the results. In the second case, I isolate couples with at least a child aged less than 14, because they are expected to demand more care. Table 3.8 presents the results (Lower panel). Controlling for demographic and wealth characteristics, the adult child who receives the monetary transfer is 5 percentage points more likely to also obtain grandchildren care from parents or in-laws. When I add the geographical distance from parents, consistently with previous findings, the coefficient of

[31] The results are robust also in the case in which I do include only young parents (less than 55 years old). The estimated effect of help on the informal care provided is around 0.56 with standard error of 0.02 so strongly statistically significant.

[32] I cannot directly test this hypothesis but only the 3% of this sample uses formal care provision and, as previously explained, the informal care is mainly left to the family.

Table 3.8: Linear probability model for ICR (informal care received to parents or in-laws) considering only couple with at least a child (Upper panel) and if at least one them aged less than 14 (Lower panel)

Upper panel	(1) ICR	(2) ICR	(3) ICR
Parents' transfer	0.022	0.036***	0.042***
	(0.014)	(0.014)	(0.014)
Observations	10179	10179	10179
R^2	0.280	0.319	0.344
Lower panel	(1) ICR	(2) ICR	(3) ICR
Parents' transfer	0.039**	0.053***	0.063***
	(0.016)	(0.016)	(0.016)
Observations	7479	7479	7479
R^2	0.097	0.139	0.195
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X
Distance parents and in-laws			X

* p<.10 ** p<.05 *** p<.01. ICR is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age; all these controls are valid for parents and in laws, adult and children. The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates, robust standard error in brackets.

interest remains stable and still economically and statistically significant at 1%, column (3).[33]

Overall, the sensitivity analysis suggests that, conditional on different sample selections, the probability to provide and receive informal care is still positively correlated with the fact that the parents helped their offspring with a monetary transfer. As expected, this effect is marginally bigger for some specific age group in which I select individuals in greater demand of care, both the parents and the children.

3.5.4 Possible fertility effects

Although norms are likely to play a key role in driving intergenerational relationships, an alternative explanation that has its roots in biology has recently begun to receive attention. As Cox and Stark (2005) argued, much human behavior may be motivated by a desire to ensure the survival of one's genes. With respect to intergenerational transfers, this evolutionary perspective hypothesizes that the older generation invests in the younger generation to pass on their own genetic line rather than out of concern for the happiness or well-being of their offspring. In particular, parents will care for

[33]The results are stable also in the case in which I do include only adult children with offspring younger than 6 years old. The estimated effect of monetary help on the grandchildren care is 0.054 with standard error of 0.020, it is so strongly and statistically significant at 1%.

their children to ensure that they are healthy and survive to reproductive age and, in more modern times, invest in their schooling so that they will be successful and have children of their own. This investment by parents in the survival of their genes need not stop with the next generation, but ought to carry on to later generations as well.

Cox and Stark (2005) argue that parents provide help to their children because this monetary transfer may be complementary with the production of grandchildren. They theoretically focus on the possibility that a child's conduct is conditioned by the parents' example. Parents may want to take advantage of the child's learning potential by engaging in care provision for their own parents when children are present and can observe their parents' behavior. Parents who expect to require attention, care, and old-age support have an incentive to behave in a distinct exemplary manner. Such behavior gives rise to a derived demand for grandchildren, because potential grandparents know that they will be treated better by their own children if conditioning of grandchildren is at work (Cox and Stark, 2005, p. 1666). This is called demonstration effect. Therefore, I expect to empirically observe a positive relationship between intergenerational transfers and exchange in services. I find evidence of fertility effect for the adult children. If adults are delaying childbearing until they can afford all the expenses, for example, a parent might hasten the process by providing funds for their offspring (Bianchi et al., 2006).

Table 3.9 shows the fertility effect results for the couple. Interestingly, the relation hardly changes when enlarging the set of controls (columns 1 to 4). In particular, it is worth emphasizing how coefficients remain strongly stable around 0.03 so the adult who receive monetary help from the parents or in-laws is 3 percentage point more likely than the counterpart to have a child. This is crucial in order to understand and interpret the effect of monetary transfer on the outcomes. In fact, I should interpret the effect of monetary help on future grandchildren care as combined with possible fertility effect. In principle, the effect of *Parents' transfer* on *ICR* is the combination between the probability that the couple has a kid (or more) times the effect of grandchildren care.[34]

Geographical proximity can be interpreted as a proxy for grandchildren care but as I explained in the previous Section, it cannot *per se* explain the whole story of exchange in

[34]The fertility results is confirmed in Table D.9 where the adult child who receives the monetary transfer from parents or in-laws is about 5 percentage points more likely to interrupt the work career. Table 3.9 and D.9 show OLS estimates but I find same results in terms of average partial effect using probit.

Table 3.9: Linear probability model for the probability of having children

	(1) Have a child	(2) Have a child	(3) Have a child
Parents' transfer	0.033***	0.028***	0.029***
	(0.009)	(0.009)	(0.009)
Parents: in twn <1km			-0.011
			(0.011)
Parents: in twn >1km			-0.015
			(0.011)
Parents: out twn <16km			-0.024**
			(0.012)
Parents: out twn 16-50			-0.018
			(0.013)
Parents: out twn >50km			-0.012
			(0.014)
In-laws: in twn <1km			-0.008
			(0.009)
In-laws: in twn >1km			-0.020**
			(0.010)
In-laws: out twn <16km			-0.016
			(0.012)
In-laws: out twn 16-50			-0.032**
			(0.014)
In-laws: out twn >50km			-0.006
			(0.013)
Observations	11829	11829	11829
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. Having at least a child is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates with robust standard error in brackets.

services. The results explain why families with children are also more motivated to live closer to their parents or in-laws so as to receive informal care to their children, as also argued by Coda Moscarola et al. (2010). In this case the demonstration effect approach gives an active role to parents-to-be. There is an ever growing body of evidence that in traditional societies as in modern societies, grandparents make substantial contributions to the production and the rearing of grandchildren (Cox and Stark, 2005). Kaplan (1994) analysed three traditional societies and find that the increased demands for food generated by the arrival of children were not met solely by members of the parents' generation but the grandparents provided help as well. In this paper the parents not only economically help their adult children but provide grandchildren care to them later on in life. Cardia and Ng (1997), using the dataset from the Health and Retirement Survey in the United States, report relevant contributions of time related transfers from

grandparents in the form of childcare as I find in this study. Such behavior parallels the tied transfers to which I have referred.

3.5.5 Main IV results

I then turn to discuss IV estimations which are reported in Table 3.11. An approach is to estimate a linear probability model using 2SLS IV, which is advocated by Angrist and Pischke (2009) and supported by much real-world experience comparing partial effects from more plausibly correct models to the partial effects from a linear probability model (Wooldridge, 2008). This procedure has the advantage of easily interpretable coefficients when measuring effects in the probability metric, but for those who are used to effect sizes measured in terms of log odds, it may be a less appealing option. In cases where response to treatment varies across individuals, Imbens and Angrist (1994) point out that using linear IV gives an estimate of the average effect of treatment on the treated for "compliers" (those induced to get treatment by assignment to the treatment group).[35]

The results of the IV strategy are shown in Table 3.11 which describe the second stage where the help from parents, the endogenous variable, is instrumented by the parents (and in-laws) work occupation of the when the offspring was 14 years old. The first-stage results in Table 3.10 suggest that the instruments are associated with the potential endogenous variable, *Parents' transfer*.[36]

Table 3.11 (Panel B) shows the F-statistic which is in all the specification at least larger than the 10, which is considered the rule-of-thumb threshold to measure the relevance of the instruments (Staiger and Stock, 1997). The Wooldridge's robust score test is significant so, the variables have to be treated as endogenous. The test for overidentifying restrictions fails to reject the null hypothesis which indicates that the instruments are jointly relevant. The economic intuition behind the first-stage in Table 3.10 relies on the fact that parents work occupations in the past directly affect the probability to transfer money to their offspring later on in life without a direct effect on the outcome variables, future informal care provision. In the first-stage regression I control for a large set of covariates both for parents and couple which should rule out other possible confounding channels. Among the most relevant I mention the job occupations, the

[35] See also Abadie (2003) and Nichols (2011).

[36] As a matter of clarification the instruments are both (i) the parents' job occupation when the adult child was 14 years old and (ii) the interaction between them.

Table 3.10: First Stage regression

First-stage	**(1) LPM**	**(2) Probit**
Father jobs (Parents)		
Baseline: Employed - Clerical worker		
Employed - White Collar	0.084**	0.469**
	(0.042)	(0.195)
Retired	0.252**	1.030**
	(0.118)	(0.455)
Unemployed	-0.022*	-0.068*
	(0.010)	(0.033)
Deceased	-0.128**	-0.535**
	-0.050	(0.257)
Mother jobs (Parents in Law)		
Baseline: Employed - Clerical worker		
Employed - White Collar	0.071*	0.372*
	(0.042)	(0.202)
Employed - Occasional	-0.083***	-0.651**
	(0.029)	(0.256)
Deceased	-0.091**	-0.232*
	(0.042)	(0.094)
Interaction parents job		
Father * Mother job		
Employed - Blue Collar * Employed - Blue Collar	-0.131**	-0.703***
	(0.058)	(0.266)
Employed - Blue Collar * Employed - Occasional	-0.109**	-0.531**
	(0.050)	(0.251)
Employed - Blue Collar * Housework	-0.077*	-0.417**
	(0.043)	(0.202)
Employed - White Collar * Employed - Blue Collar	-0.113**	-0.616**
	(0.056)	(0.302)
Retired * Employed - Blue Collar	-0.346**	-1.551***
	(0.168)	(0.549)
Retired * Housework	-0.243*	-0.988**
	(0.113)	(0.470)
Retired * Unemployed	-0.362*	-0.552*
	(0.189)	(0.249)
Deceased * Employed - Occasional	-0.128*	-1.021*
	(0.069)	(0.447)
Unemployed * Deceased	-0.113*	-0.703*
	(0.067)	(0.352)
Father jobs (Parents in Law)		
Baseline: Employed - clerical worker		
Employed - Occasional	-0.751***	-0.137**
	(0.038)	(0.058)
Unemployed	-0.075*	-0.492*
	(0.045)	(0.240)
Deceased	-0.132***	-0.397**
	(0.031)	(0.149)
Interaction parents in-laws job		
Father * Mother job		
Employed - Occasional * Employed - Blue Collar	-0.684***	0.442**
	(0.177)	(0.210)
Employed - Occasional * Employed - White Collar	-0.811***	0.452**
	(0.058)	(0.190)
Employed - Occasional * Employed - Occasional	-0.727***	-0.853**
	(0.111)	(0.348)
Employed - Occasional * Housework	-0.758***	-0.166**
	(0.047)	(0.076)
Employed - Occasional * Retired	-0.926***	-0.167**
	(0.108)	(0.057)
Employed - Occasional * Deceased	-0.704***	-0.645***
	(0.262)	-0.239
Retired * Retired	0.421*	0.750**
	(0.222)	(0.315)
Deceased * Employed - White Collar	0.664***	0.654*
	(0.118)	(0.312)
Deceased * Employed - Occasional	-0.221***	-0.750**
	(0.062)	(0.315)
Demographic characteristics	X	X
Wealth characteristics	X	X
Distance parents and in-laws	X	X
Wald tests for joint significance of the instruments	p-value (0.000)	p-value (0.004)
Observations	11,829	11,829
R-squared	0.058	
Pseudo R-squared		0.078

* p<.10 ** p<.05 *** p<.01. Parents' transfer is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: year of the interview, geographical area, region, age, health limitations, number of sisters and brothers, education, number of children and their age; all these controls are valid for parents and in-laws, adult and children. The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates in column (1), Probit in column (2) where I show only the coefficient statistically significant. Robust standard error in brackets.

level of education and the health condition of the individuals. Moreover, I control for a specific variable which takes into consideration the possibility that the income of the parents may currently be the main source of wealth for the adult couple.[37] Potentially, the monetary help from parents depends positively on "good" job occupations (such as white collar) while it may be more difficult to help their offspring in the case of "bad" job occupations (for example blue collar) or, even worse, in case of unemployment periods. Moreover, the tranfer is not only determined by the work positions of the father and mother themselves but also induced by the interactions between them. This produces a proxy for the wealth of the family of origin.[38]

Table 3.11 shows the second-stage both for ICP and ICR outcomes. I observe that β_1 and γ_1 are statistically significant at the 1% level regardless of the estimator used: 2SLS, 2SIV and IVGMM.[39] In columns (1) and (3) I implement the standard 2SLS in order to estimate the impact of the transfer on the elderly and granchildren care later in life, respectively. In this case the large standard errors suggest imprecision in the estimates due to the fact that the independent and dependent variables are binary. Nevertheless both coefficient appear strongly statistically significant. In columns (2) and (4) I implement the two-step model strategy with binary endogenous regressor - 2SIV - as discussed in Windmeijer and Santos Silva (1997) and Wooldridge (2001). This procedure is a useful implementation in the case of a binary endogenous regressor, which causes woefully inefficient estimates. Also in this case, the results from the first-stage confirm the strong predictive power of the instrument, which now reflects the predicted value obtained from a probit model of *Parents' transfer* on both the instruments and the whole set of covariates.[40]

Differently from the results in column (1) and (3), the 2SIV regressions increase the precision of the estimates and they are still strongly statistically significant at the 1% level, column (2) and (4) in Table 3.11. Smaller standard errors indicate an increase in precision due to the fact that I treat the endogenous dichotomous variable as binary

[37]The results are robust also when I drop all the parents (mother) who were "housework" - when the adult child was 14 years old - which may be correlated with "family" taste. In the restrict sample I get an F-statistic around 15 so it seems relevant also in this subsample. Nevertheless, I choose not to drop them because I would have reduced the sample size by 50%.

[38]In Table 3.10 I only show the instruments which are statistically significant while the whole firststage is in Table D.8.

[39]2SLS, 2SIV and IVGMM stand for Two Stage Least Square, Two Stage IV and IV Poisson using GMM, respectively. I run the models using the STATA command `ivregress` and `ivpoisson`.

[40]Table 3.10 shows the first-stage results.

in the first-stage regression shown in Table 3.10 column (2). Once again it is important to clarify what the estimated model identifies and how the IV estimates should be interpreted. Following Imbens and Angrist (1994)'s LATE interpretation, they would reveal the causal marginal effect of parents' transfer for the adult child whose likelihood of getting the *Parents' transfer* is affected by changes in parents or in-laws job occupations. This interpretation would also reasonably motivate why the IV results are particularly larger, in magnitude, than OLS ones. Regarding the *ICP* intensive margins (number of hours in the provision of elderly care), I show that a couple who received the monetary help from parents provide them about 7 more hours in the last 4 weeks than the counterpart who did not have any help, column (3b) in Table 3.11.[41] In the presence of heterogeneous effects, the IV results may well exceed OLS one; they would pin down the effect on the marginal person which can be greater than the average effect, though this requires a suitable monotonicity assumption (Imbens and Angrist, 1994). In this framework, this hypothesis would mean that even if the instrument may have no effect on the likelihood of receiving the trasfer for some couple, all those one whose likelihood is influenced by changes in the instruments are influenced in the same manner. Roughly speaking, while changes in the instrument may affect only couple with economic difficulties (though not dramatic), all these couple are affected in the same way.

The standard IV estimator is a special case of a Generalized Method of Moments (GMM) estimator. The advantages of GMM over IV is that, if heteroskedasticity is present, the GMM estimator is more efficient than the simple IV estimator, whereas if heteroskedasticity is not present, the GMM estimator is no worse asymptotically than the IV estimator (Angrist and Krueger, 2001). Nevertheless, the use of GMM does come with a price. The problem, as Hayashi (2000, p.215) points out, is that the optimal weighting matrix at the core of efficient GMM is a function of fourth moments,

[41] Even in the case in which the point estimates in columns (1) and (4) may not be informative about the magnitude of the effect of *Parents' transfer*, looking at the confidence intervals helps getting an idea of how significant is the main regressor to explain the increase in informal care both provided and received among the sample. The 95% CI for the estimate in columns (1) and (4) in the upper panel, for instance, ranges from 0.15 to 0.60 and 0.01 to 0.46 for elderly and grandchildren care, respectively. This proves that the effect of *Parents' transfer* on the main outcomes is positive and statistically different from zero. Again where I consider the lower bound estimates (0.15 and 0.01, respectively), the true coefficient of *Parents' transfer* would still have a positive effect on the main outcome variables. In particular, having received the transfer from parents would increase the probability of future informal elderly care by at least 15 percentage points more than the counterpart who did not have any money transfer (1 in the case of grandchildren care).

and obtaining reasonable estimates of fourth moments may require very large sample sizes. The consequence is that the efficient GMM estimator can have poor small sample properties but this is not the case for this study. In particular, Wald tests tend to over-reject the null - this is a good news for the unscrupulous investigator in search of large t-statistics, perhaps, but not for the rest of the econometricians.

It is crucial to distinguish the concept of 2SLS estimation with robust standard errors from the concept of estimating the same equation with IVGMM, allowing for arbitrary heteroskedasticity. I compare an overidentified regression model estimated (a) with IV and classical standard errors and (b) with robust standard errors. Model (b) will produce the same point estimates, but different standard errors in the presence of heteroskedastic errors. However, if I re-estimate the overidentified model using the GMM two-step estimator, I will get different point estimates because I am solving an other optimization problem: one in the space of the instruments (and moment conditions) rather than the space of the regressors. I will also get different standard errors, and in general smaller standard errors as the IVGMM estimator is more efficient so it would be preferable to implement IVGMM (Baum et al., 2002).

Interestingly, the IV estimates prove that *Parents' transfer* significantly positively affects the elderly care provided and grandchildren care later on in life. Particularly, having received the monetary transfer from parents would increase the probability of future informal care and this effect ranges between by 16 (2SIV) to 46 (IVGMM) percentage points, while, in the case of grandchildren care, it varies between 23 (2SLS) to 32 (2SIV) percentage points.[42]

3.5.6 Sensitivity of the main IV results

Lastly, I investigate whether the results are sensitive to other estimators. I firstly estimate the model with different specifications and secondly I propose some placebo tests which may help to explain that the instruments are not picking other economic trends within region. There are two common approaches to estimate the causal effects in the binary models. One approach disregards the binary structure of the outcome and treatment variables and presents linear instrumental variables estimates of the

[42] A prudent practice would include clustering standard errors at the regional level. However, the number of clusters is too small to get unbiased estimates. Therefore I estimate the model with robust standard errors in all the specification for completeness. The results are anyway very similar even in the case of clustering.

Table 3.11: Transfer from parents and informal care: IV estimates

	ICP: elderly care				ICR: granchildren care		
	(1)	(2)	(3)	(3b)	(4)	(5)	(6)
Panel A: 2nd stage	2SLS	2SIV	IVGMM	IVGMM	2SLS	2SIV	IVGMM
Parents' transfer	0.376***	0.167**	0.465***	6.702***	0.231**	0.323***	0.247***
	(0.113)	(0.089)	(0.096)	(1.350)	(0.116)	(0.105)	(0.046)
Wave, region, area	X	X	X	X	X	X	X
Demographic characteristics	X	X	X	X	X	X	X
Wealth characteristics	X	X	X	X	X	X	X
Distance parents and in-laws	X	X	X	X	X	X	X
Observations	11829	11829	11829	11829	11829	11829	11829
Panel B: 1st stage statistics							
F-test statistics	19	120	19	16	17	118	22
Robust score test (Wooldridge 1995)	Reject 1%		Reject 1%		Reject 1%		Reject 1%
Overidentification statistic (p-value)	0.23	0.28	0.23	0.51	0.85	0.21	0.82

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable in column (1)-(3). In column (3b) I show the results where the dependent variable is hours of ICP in the last 4 weeks. ICR is the dependent variable for column (4)-(6). Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics.

treatment effect - as I shown in the previous Section; the second computes maximum-likelihood estimates of a bivariate probit (BP) model, which assumes that the outcome and treatment are each determined by latent linear index models with jointly normal error terms. Sometimes the two approaches can produce markedly different results (Altonji et al., 2005). It is necessary to distinguishing carefully between the Local Average Treatment Effect estimated under the linear IV with the Average Treatment Effect estimated under the BP model. Angrist and Pischke (2009, p. 201) typify one form of received wisdom on bivariate probit and IV regression: "bivariate probit probably qualifies as harmless in the sense that it is not very complicated and easy to get right." Again Angrist and Pischke (2009): "bivariate probit and other models of this sort can be used to estimate unconditional average causal effects and/or effects on the treated. In contrast, 2SLS does not promise an average causal effects, only local average causal effects" (p. 202). The biprobit approach, given its parametric assumptions, also allows the calculation of various probabilities using the bivariate normal distribution, for various average partial effects. However, note that one of its assumptions is a constant treatment effect so that average treatment effects for any subpopulation are assumed to be the same as for any other subpopulation or the population.

Table 3.12 shows in column (1) and (4) the maximum-likelihood bivariate probit (Heckman, 1978). The model are completed by assuming that the latent errors have a bivariate standard normal joint distribution with correlation ρ. If $\rho = 0$, separate estimation of the first structural equation by a simple probit model identifies the structural treatment effect. If $\rho \neq 0$, the treatment is said to be "endogenous" and joint estimation

is required. In both estimates, the ρs, which measure the correlation coefficient between the residuals of each of the two probits, are not significant at 5% level then you could also stick to estimating two separate probits.[43] In (2) and (5) the estimates using GMM that allows for heteroskedasticity and nonnormality in the errors. Lastly, in columns (3) and (6) I re-estimate the previous models using the LIML estimator to control for potential weak-instruments problems (Staiger and Stock, 1997). Also in this case, the results certify a significant and positive effect of the transfer on the future informal care exchange and I do not find any evidence in favour of a weak instrument issue. The estimates demonstrate the positive causal effect of having received the monetary transfer on the exchange in informal care later on in life which is the stable findings in all the specifications.[44]

Table 3.12: Robustness checks: IV estimates

	ICP: elderly care			**ICR: granchildren care**		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: 2nd stage	BP	GMM	IVLIML	BP	GMM	IVLIML
Parents' transfer	0.013***	0.151***	0.480***	0.018***	0.317***	0.495***
	(0.003)	(0.030)	(0.173)	(0.005)	(0.051)	(0.131)
Wave, region, area	X	X	X	X	X	X
Demographic characteristics	X	X	X	X	X	X
Wealth characteristics	X	X	X	X	X	X
Distance parents and in-laws	X	X	X	X	X	X
Observations	11829	11829	11829	11829	11829	11829
Panel B: 1st stage statistics						
F-test statistics			19			22
Overidentification statistic (p-value)			0.77			0.82

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable in column (1)-(3). ICR is the dependent variable for column (4)-(6). Bivariate probit in column (1) and (4). GMM estimates in column (2) and (5). IV LIML in column (3) and (6). GMM estimates in column (2) and (5). Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics.

Finally, I implement some falsification exercises to demostrate that the set of instruments is only capturing the specific heterogeneity across households of origin and not any other regional/macro economic trend which may confound the principal mechanism. Even in this case it would not be problematic issue assuming no direct effect of the confounding on the outcomes variables. Nevertheless, to banish all doubts away, I check whether there is any correlation between the regional economic conditions, at the time in which the adult child was 14 years old, and the future informal care provision.[45] In order to prove that this is not the case, I use the regional GDP per capita (when the

[43] I use the STATA command `biprobit`.

[44] I estimate the model in column (3b) of Table 3.12 using IV Poisson in order to take into account the mass of zeros of *ICP* hours provided.

[45] I choose exactly this particular age because the set of instruments are defined when the adult children were 14 years old.

adult child was 14) as a first instrument (Z_1) for monetary help. This in theory should capture any economic fluctuations during the period analysed. The column (1) and (3) in Table 3.13 show the results for ICP and ICR, respectively and they provide no evidence of any kind of relationship between the potential confounding and the outcomes. I do not detect any statistical significance of Z_1 on the endogenous variable. Then, I replicate the same exercise exploiting a second instrument, namely home consumption per capita (Z_2). In column (2) and (4) I do not observe, again, any relationship in place.[46] This gives some evidence on the fact that the set of instruments are not related with the mechanism I exploited.[47]

Table 3.13: Placebo: IV estimates with different instruments

	ICP: elderly care		**ICR: granchildren care**	
Panel A: 2nd stage			**2SLS**	
	(1)	(2)	(3)	(4)
Parents' transfer	-58765.7	-74245.6	-8.1	3.8
	(61001.3)	(98025.4)	(12.3)	(4.5)
Wave, region, area	X	X	X	X
Demographic characteristics	X	X	X	X
Wealth characteristics	X	X	X	X
Distance parents and in-laws	X	X	X	X
Observations	11829	11829	11829	11829
Panel B: 1st stage				
Z^1: GDP per capita	-2.30		-1.56	
	(2.40)		(2.33)	
Z^2: Home consumption per capita		-3.24e-07		-3.58e-07
		(4.30e-07)		(4.01e-07)
F-test statistics	0.92	0.57	0.45	0.80
Robust score test (Wooldridge 1995)	Reject 1%	Reject 1%	Reject 1%	Reject 1%

* p<.10 ** p<.05 *** p<.01. The instrument is gdp per capita in column (1) and (3). The other instrument is home consumption per capita in column (2) and (4). Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates in column (1), Probit estimates in column (2). All the estimations use robust standard error which are in brackets.

[46] Data collected from G. Tagliacarne and ISTAT.

[47] I also repeat the main IV analysis with further checks. I focus on the differential effects mainly considering two age groups. In the first case, I restrict the sample of parents aged 65+ and I still find the same relationship in place. Second, I select adult couples with at least one child under 14 years old and also in this case the findings are similar. I do not show here the Table but the effect varies between 0.197(s.e. 0.100) and 0.266(s.e. 0.115) for the ICP and ICR equation, respectively.

3.6 Conclusions

In this paper I contribute to the debate about the economic reasons behind monetary transfer and unpaid assistance to aging parents and grandchildren. Using the Italian Multipurpose Survey on Families, I investigate the causal effect of tied transfers on both unpaid elderly care and grandchildren care later in life. To the extent of my knowledge, this is one of the few empirical papers which looks both at the transfers and caring decisions.

Empirically estimating the relationship between intervivos transfers and exchange of services later on in life is complex, due to different factors which may influence this association: differences across cohorts, areas and individuals with different observable characteristics; smaller current geographical distance associated with the monetary help; and unobservable characteristics associated with a greater propensity for transfers induced by family taste. Controlling for a rich set of covariates and implementing an IV approach, I find that married couples who receive monetary help from their parents are more likely to help them later in life. On the other hand, I observe a strong correlation between tied transfer and grandchildren care later in the life cycle. The results show not only the existence of reciprocity between parents and adult children in terms of exchange (money for future elderly care provided), but also a higher likelihood of receiving grandchildren care, a sort of pure altruism. I investigate whether this correlation is entirely due to smaller geographical distance between the generations. Interestingly, the increased geographical proximity between the families partially accounts for this relationship. Finally, I implement IV estimates of the effect of receiving a transfer from the parents or in-laws on the likelihood of exchange informal care later on in life. The identification strategy exploits the variation in the parents job occupation when the adult child was 14 years old. Results uncover a significant and positive impact of monetary help on future informal care.

Understanding the dynamics of reciprocity in the provision of informal care among families represents a timely and highly relevant policy issue. On the one hand, active informal care provision by parents might reduce the cost of raising grandchildren. Previous transfer by active parents seems to result later in a reciprocated provision of informal elderly care by their adult children, especially once older parents experience

the onset of care needs. Such an informal delayed transfer of in-kind services is likely to reduce the burden on welfare state budgets. On the other hand, I show that this exchange is not only induced by increased geographical proximity, which may affect adult children's mobility and, through this channel, also their labour market outcomes.

Appendix C

Figure C.1: Percentage providing help with care to parents or in-laws, by monetary transfer, Multiscopo 1998/2003/2009, only for parents or in-laws aged 65+.

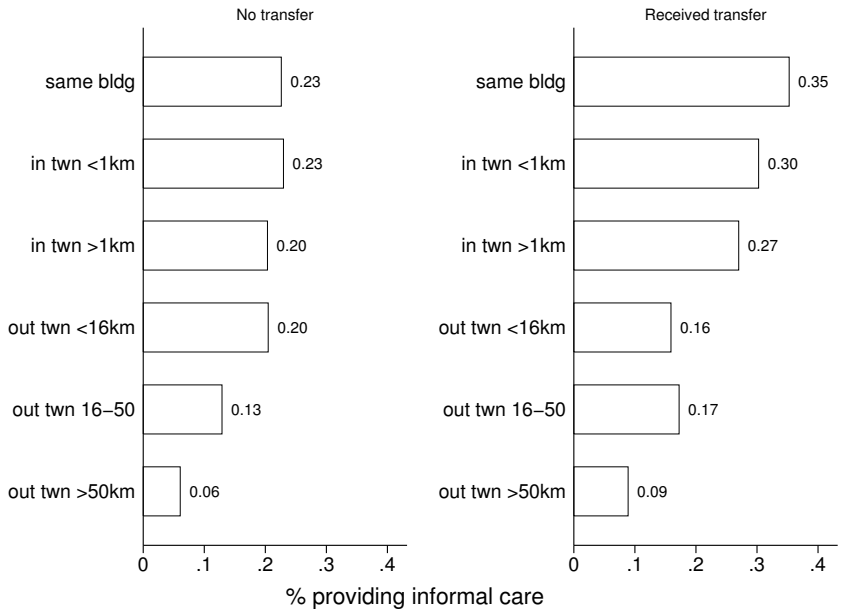
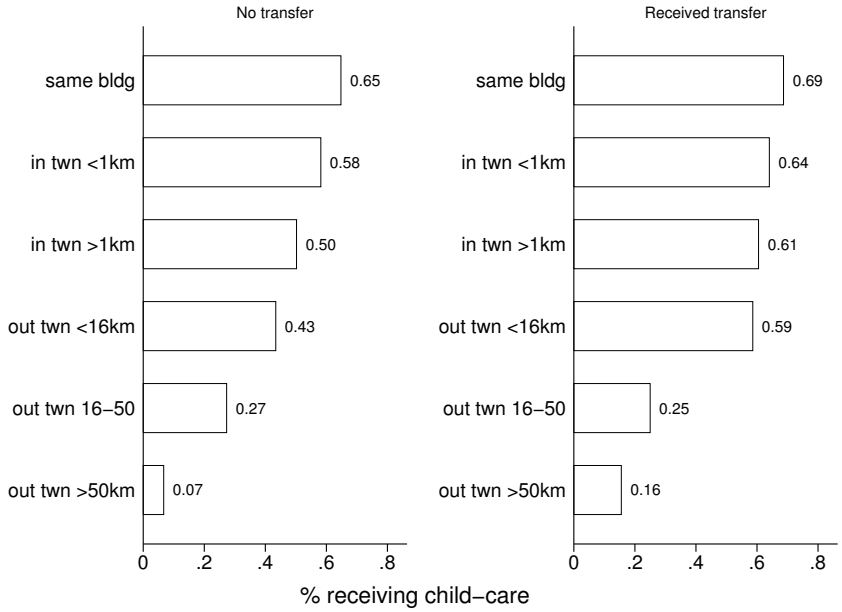


Figure C.2: Percentage receiving help with child-care from parents or in-laws, by monetary transfer, Multiscopo 1998/2003/2009, only for couple with children aged 0-14.



Appendix D

Table D.1: Summary statistics, ISTAT

Elderly care	Obs	Mean	Std. Dev.	Min	Max	Grandchildren care	Obs	Mean	Std. Dev.	Min	Max
ICP	11829	0.204	0.403	0	1	ICR	11829	0.424	0.494	0	1
Geographical and wave variables						**Household characteristics**					
		Percent	**Cum.**					**Percent**	**Cum.**		
Year						**Type of contract**					
1998		58.89	58.89			Rent		17.47	17.47		
2003		41.11	100			Own Property		69.58	87.05		
						Usufruct		12.95	100.00		
Area						**Type of home**					
Northwest		20.52	20.52			1. Cottage		8.91	8.91		
Northeast		19.17	39.69			2. Large house		9.14	18.05		
Center		17.33	57.02			3. Civil		64.93	82.98		
South		30.95	87.97			4. Popular		12.50	95.48		
Insular		12.03	100			5. Rural		2.31	97.79		
Regions						6. Improper home		0.31	98.10		
Piedmont		8.99	8.99			7. Don't know		1.90	100.00		
Lombardy		8.89	17.88				**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
South Tyrol - Trentino		4.82	22.71			**Electronic devices**					
Veneto		6.08	28.79			yes	11829	0.37	0.48	0	1
Friuli V. G.		3.16	31.95			no	11829	0.10	0.30	0	1
Liguria		2.64	34.58			**Number Pc**					
Emilia Romagna		5.11	39.69			yes	11829	44.80		0	1
Tuscany		5.39	45.09			no	11829	55.20		0	1
Umbria		3.2	48.28								
Marche		4.29	52.57			**Number mobile**	11829	1.66	1.30	0	9
Lazio		4.45	57.02			**Number TV**	11829	1.83	0.88	0	9
Abruzzo		4.37	61.39			**Number bike**	11829	1.80	1.42	0	9
Molise		3.18	64.58			**Number Vespa**	11829	0.36	0.59	0	8
Campania		6.52	71.1			**Number motorcycle**	11829	0.11	0.37	0	7
Apulia		7.67	78.77			**Number cars**	11829	1.63	0.67	0	8
Basilicata		3.27	82.04			**Number rooms**	11829	4.81	1.61	1	30
Calabria		5.93	87.97			**Dishwasher**	11829	0.50	0.50	0	1
Sicily		7.82	95.79			**Video recorder**	11829	0.85	0.36	0	1
Sardinia		4.21	100			**Video camera**	11829	0.41	0.49	0	1
						Stereo	11829	0.72	0.45	0	1
Wife controls						**Partner controls**					
	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**		**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Age	11829	39.00	8.03	20	68	**Age**	11829	42.24	8.30	20	69
Education						**Education**					
None or primary school		9.98		0	1	primary school		10.16		0	1
Middle school		35.34		0	1	middle school		39.02		0	1
School of vocational		8.88		0	1	school of vocational		8.83		0	1
High school		34.14		0	1	high school		31.45		0	1
Bachelor or more		11.65		0	1	bachelor or more		10.55		0	1
Health Problems						**Health Problems**					
No		96.73		0	1	No		96.52		0	1
Yes - sometimes		3.02		0	1	Yes - sometimes		3.12		0	1
Yes - most of the time		0.24		0	1	Yes - most of the time		0.36		0	1
Brother/Sister		0.89		0	1	**Brother/Sister**		0.90	0.31	0	1
Number of Brothers	11829	2.09	1.75	0	20	**Number of Brothers**		2.19	1.82	0	20
Have a child	11829	0.86		0	1						
Number of Children	11829	1.54	0.92	0	9						
Age - Children	11829	8.05	7.74	0	39						
Occupation						**Occupation**					
Employed - White Collar		28.88		0	1	Employed - White Collar		31.84		0	1
Employed - Blue Collar		12.97		0	1	Employed - Blue Collar		30.43		0	1
Employed - Clerical worker		10.04		0	1	Employed - Clerical worker		31.09		0	1
Unemployed		3.76		0	1	Housework		4.86		0	1
Housework		39.86		0	1	Retired		1.78		0	1
Retired		1.59		0	1						
Students or other		2.89		0	1						
Main source of income						**Main source of income**					
Employee		41.76		0	1	Employee		62.06		0	1
Self-employee		10.01		0	1	Self-employee		27.40		0	1
Retirement		2.48		0	1	Retirement		5.49		0	1
Benefits		0.92		0	1	Benefits		1.36		0	1
Estate income		0.63		0	1	Estate income		0.29		0	1
From origin family		44.20		0	1	From origin family		3.41		0	1
Visits to parents						**Visits to parents**					
Every day		43.95		0	1	Every day		42.46		0	1
Often		29.23		0	1	Often		28.67		0	1
Once a week		10.32		0	1	Once a week		11.32		0	1
Less than 4 in a month		8.73		0	1	Less than 4 in a month		8.82		0	1
Couple of time in a year		7.24		0	1	Couple of time in a year		8.12		0	1
Never		0.52		0	1	Never		0.61		0	1
Calls - parents						**Calls - parents**					
Every day		43.97		0	1	Every day		25.27		0	1
More than once a week		31.81		0	1	More than once a week		35.21		0	1
Once a week		6.38		0	1	Once a week		8.80		0	1
Less than 4 in a month		4.78		0	1	Less than 4 in a month		8.55		0	1
Few times per year		1.97		0	1	Few times per year		4.14		0	1
Never		11.08		0	1	Never		18.03		0	1
Parents controls						**Parents in-laws controls**					
	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**		**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Mother Age	11829	65.85	9.42	36	99	**Mother Age**	11829	69.02	9.44	41	101
Father Age	11829	67.58	8.78	40	102	**Father Age**	11829	70.04	8.66	41	101
Mother Education						**Mother Education**					
None or primary school		68.35		0	1	None or primary school		71.05		0	1
Middle school		16.1		0	1	Middle school		14.41		0	1
School of vocational		3.42		0	1	School of vocational		2.95		0	1
High school		6.9		0	1	High school		6.17		0	1
Bachelor or more		2.57		0	1	Bachelor or more		2.13		0	1
Father Education						**Father Education**					
None or primary school		74.71		0	1	None or primary school		76.19		0	1
Middle school		14.55		0	1	Middle school		13.39		0	1
School of vocational		2.44		0	1	School of vocational		2.37		0	1
High school		5.19		0	1	High school		4.42		0	1
Bachelor or more		1.13		0	1	Bachelor or more		0.88		0	1
Mother Health Problems						**Mother Health Problems**					
No		89.68		0	1	No		87.44		0	1
Yes - sometimes		6.31		0	1	Yes - sometimes		7.03		0	1
Yes - most of the time		4.01		0	1	Yes - most of the time		5.54		0	1
Father Health Problems						**Father Health Problems**					
No		92.21		0	1	No		91.94		0	1
Yes - sometimes		4.58		0	1	Yes - sometimes		4.64		0	1
Yes - most of the time		3.21		0	1	Yes - most of the time		3.42		0	1

Table D.2: Parents' and in-laws' job when the adult child was 14 years old

Panel A.	father of the wife		father of the husband	
Type of jobs	Freq.	Percent	Freq.	Percent
Employed - Clerical worker	2,054	17.36	1,882	15.91
Employed - Blue Collar	5,425	45.86	5,309	44.88
Employed - White Collar	3,227	27.28	3,493	29.53
Employed - Occasional	208	1.76	230	1.94
Retired	353	2.98	347	2.93
Unemployed	343	2.90	344	2.91
Deceased	219	1.85	224	1.89
Panel B.	mother of the wife		mother of the husband	
Type of jobs	Freq.	Percent	Freq.	Percent
Employed - Clerical worker	661	5.59	537	4.54
Employed - Blue Collar	1,666	14.08	1,497	12.66
Employed - White Collar	1,489	12.59	1,549	13.09
Employed - Occasional	141	1.19	146	1.23
Housewife	7,536	63.71	7,716	65.23
Retired	135	1.14	145	1.23
Unemployed	54	0.46	56	0.47
Deceased	147	1.24	183	1.55

Source: Multipurpose Survey on Family and Childhood Conditions Dataset.

Table D.3: Average marginal effects from PROBIT model for ICP (informal care provided to parents)

	(1)	(2)	(3)
Parents' transfer	0.069***	0.069***	0.071***
	(0.011)	(0.011)	(0.011)
Parents: in twn <1km			0.010
			(0.013)
Parents: in twn >1km			-0.033**
			(0.013)
Parents: out twn <16km			-0.020
			(0.014)
Parents: out twn 16-50			-0.056***
			(0.016)
Parents: out twn >50km			-0.104***
			(0.017)
In-laws: in twn <1km			-0.019*
			(0.011)
In-laws: in twn >1km			-0.008
			(0.012)
In-laws: out twn <16km			-0.025*
			(0.014)
In-laws: out twn 16-50			-0.038**
			(0.016)
In-laws: out twn >50km			-0.094***
			(0.017)
Observations	11829	11829	11829
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. Probit estimates with robust standard error in brackets.

Table D.4: Average marginal effects from PROBIT model for ICR (informal care received from parents)

	(1)	(2)	(3)
Parents' transfer	0.046***	0.052***	0.060***
	(0.013)	(0.013)	(0.013)
Parents: in twn <1km			-0.058***
			(0.014)
Parents: in twn >1km			-0.077***
			(0.015)
Parents: out twn <16km			-0.111***
			(0.016)
Parents: out twn 16-50			-0.140***
			(0.017)
Parents: out twn >50km			-0.217***
			(0.018)
In-laws: in twn <1km			-0.011
			(0.012)
In-laws: in twn >1km			-0.052***
			(0.013)
In-laws: out twn <16km			-0.031**
			(0.015)
In-laws: out twn 16-50			-0.105***
			(0.018)
In-laws: out twn >50km			-0.156***
			(0.018)
Observations	11829	11829	11829
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. ICR is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. Probit estimates with robust standard error in brackets.

Table D.5: Linear probability model for ICP (informal care provided to parents): only for wife

	(1) ICP wife	(2) ICP wife	(3) ICP wife
Parents' transfer	0.064***	0.063***	0.063***
	(0.012)	(0.012)	(0.012)
Parents: in twn <1km			0.009
			(0.011)
Parents: in twn >1km			-0.029***
			(0.011)
Parents: out twn <16km			-0.025**
			(0.012)
Parents: out twn 16-50			-0.079***
			(0.012)
Parents: out twn >50km			-0.114***
			(0.011)
Observations	11829	11829	11829
R^2	0.086	0.091	0.104
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates with robust standard error in brackets.

Table D.6: Linear probability model for ICP (informal care provided to parents): only husband

	(1)	(2)	(3)
	ICP husband	ICP husband	ICP husband
Parents' transfer	0.019*	0.021**	0.021**
	(0.010)	(0.010)	(0.010)
In-laws: in twn <1km			0.004
			(0.009)
In-laws: in twn >1km			0.001
			(0.009)
In-laws: out twn <16km			-0.006
			(0.011)
In-laws: out twn 16-50			-0.030**
			(0.012)
In-laws: out twn >50km			-0.072***
			(0.010)
Observations	11829	11829	11829
R^2	0.077	0.081	0.087
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. ICP is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates with robust standard error in brackets.

Table D.7: Linear probability model for ICP and ICR, full set of covariates

Variables	(1)	(2)
	ICP	ICR
Parents' transfer	0.075***	0.059***
	(0.013)	(0.014)
Distance		
Parents: in twn <1km	0.011	-0.061***
	(0.014)	(0.015)
Parents: in twn >1km	-0.035**	-0.078***
	(0.014)	(0.015)
Parents: out twn <16km	-0.021	-0.113***
	(0.015)	(0.017)
Parents: out twn 16-50 km	-0.057***	-0.145***
	(0.016)	(0.018)
Parents: out twn >50km	-0.094***	-0.209***
	(0.016)	(0.018)
In-laws in twn <1km	-0.020*	-0.009
	(0.012)	(0.013)
In-laws in twn >1km	-0.007	-0.052***
	(0.012)	(0.014)
In-laws out twn <16km	-0.029*	-0.033**
	(0.015)	(0.016)
In-laws out twn 16-50 km	-0.038**	-0.104***
	(0.017)	(0.018)
In-laws out twn >50km	-0.086***	-0.150***
	(0.015)	(0.017)
Year: 2003	0.023**	-0.014
	(0.011)	(0.012)
Area		
Northwest	0.016	-0.029
	(0.020)	(0.022)
Northeast	-0.071***	0.044*
	(0.020)	(0.024)
Center	-0.066***	0.078***
	(0.020)	(0.023)
South	-0.032	0.033
	(0.022)	(0.025)

Continued on next page

Regions		
South Tyrol - Trentino	-0.021	-0.042**
	(0.017)	(0.019)
Veneto	-0.001	0.015
	(0.024)	(0.026)
Friuli V. G.	-0.007	-0.023
	(0.023)	(0.024)
Liguria	0.014	-0.006
	(0.027)	(0.028)
Emilia Romagna	-0.028	0.041
	(0.024)	(0.028)
Umbria	0.059***	-0.014
	(0.022)	(0.026)
Marche	0.059**	-0.066**
	(0.026)	(0.029)
Lazio	0.027	0.025
	(0.023)	(0.027)
Molise	0.030	-0.055**
	(0.022)	(0.026)
Campania	0.053**	-0.017
	(0.025)	(0.028)
Apulia	0.031	-0.058**
	(0.020)	(0.023)
Basilicata	0.049***	-0.071***
	(0.019)	(0.023)
Calabria	0.008	-0.079***
	(0.024)	(0.029)
Sicily	-0.009	0.023
	(0.022)	(0.025)
Wife		
Age	-0.002*	-0.013***
	(0.001)	(0.001)
Education		
Middle school	0.021	0.046***
	(0.014)	(0.014)
School of vocational	0.017	0.076***
	(0.019)	(0.019)
High school	0.030*	0.069***
	(0.016)	(0.017)
Bachelor or more	0.039*	0.069***
	(0.022)	(0.023)

Continued on next page

Limitation		
Limitation: Yes - sometimes	0.029	0.002
	(0.037)	(0.037)
Limitation: Yes - most of the time	-0.116**	0.057
	(0.057)	(0.067)
Brother	0.023*	0.007
	(0.012)	(0.014)
Number of brother	0.001	-0.003
	(0.002)	(0.003)
Husband		
Age	0.002*	-0.007***
	(0.001)	(0.001)
Education		
Middle school	0.016	0.038***
	(0.014)	(0.014)
School of vocational	0.055***	0.044**
	(0.018)	(0.019)
High school	0.057***	0.053***
	(0.016)	(0.017)
Bachelor or more	0.076***	0.090***
	(0.021)	(0.022)
Limitation		
Limitation: Yes - sometimes	-0.038	0.033
	(0.043)	(0.038)
Limitation: Yes - most of the time	-0.078	-0.034
	(0.051)	(0.053)
Brother	0.005	0.033**
	(0.013)	(0.014)
Number of brother	-0.007***	-0.007***
	(0.002)	(0.003)
At least a child	-0.055***	-
	(0.016)	
Number of children	0.001	-
	(0.005)	
Age of youngest child	0.001	-
	(0.001)	
Only at least one father alive	0.039**	-0.029
	(0.017)	(0.020)
Only at least one mother alive	0.011	0.014
	(0.009)	(0.019)
Mother age	0.002**	-0.002***
	(0.001)	(0.001)
Father age	0.002**	0.002***
	(0.001)	(0.001)

Continued on next page

In-laws: mother age	0.002***	-0.001
	(0.001)	(0.001)
In-laws: father age	0.001*	0.002**
	(0.001)	(0.001)
Wife: father		
primary school	-0.021*	-0.017
	(0.012)	(0.014)
middle school	0.008	-0.017
	(0.022)	(0.025)
school of vocational	0.003	-0.056***
	(0.019)	(0.021)
high school	-0.034	-0.008
	(0.028)	(0.034)
bachelor or more	0.012	-0.068*
	(0.036)	(0.039)
Wife: mother		
primary school	0.001	-0.013
	(0.012)	(0.015)
middle school	0.029	-0.047
	(0.026)	(0.030)
school of vocational	-0.000	-0.019
	(0.021)	(0.024)
high school	-0.014	0.020
	(0.037)	(0.045)
bachelor or more	-0.045	0.102**
	(0.041)	(0.045)
Limitation for parents		
Limitation:parents mother (1998)	0.085***	-0.009
	(0.024)	(0.021)
Limitation:parents mother (2003)	0.089***	-0.001
	(0.030)	(0.026)
Limitation:parents father (1998)	0.191***	-0.058**
	(0.030)	(0.025)
Limitation:parents father (2003)	0.235***	0.053*
	(0.035)	(0.029)

Continued on next page

Husband: father		
primary school	-0.010	-0.034**
	(0.013)	(0.015)
middle school	0.019	-0.038
	(0.024)	(0.026)
school of vocational	0.035*	0.011
	(0.020)	(0.023)
high school	-0.012	0.0120
	(0.030)	(0.034)
bachelor or more	-0.013	-0.022
	(0.031)	(0.039)
		Continued on next page
Husband: mother		
primary school	-0.003	-0.023
	(0.014)	(0.016)
middle school	-0.029	-0.039
	(0.025)	(0.031)
school of vocational	-0.037*	0.003
	(0.0220)	(0.0261)
high school	0.060	0.050
	(0.047)	(0.050)
bachelor or more	0.013	0.019
	(0.034)	(0.042)
Limitation for in-laws		
Limitation: in-laws mother (1998)	0.062**	-0.020
	(0.025)	(0.026)
Limitation: in-laws mother (2003)	0.104***	-0.051*
	(0.033)	(0.030)
Limitation: in-laws father (1998)	0.186***	-0.003
	(0.031)	(0.029)
Limitation: in-laws father (2003)	0.120***	-0.062**
	(0.038)	(0.031)
Wife and husband		
Own Property	0.010	0.046***
	(0.010)	(0.011)
Usufruct	0.025*	0.071***
	(0.013)	(0.016)
Large house	-0.028	0.005
	(0.017)	(0.019)
		Continued on next page

Civil	-0.009	0.012
	(0.014)	(0.015)
Popular	-0.013	-0.007
	(0.017)	(0.019)
Rural	-0.035	0.006
	(0.025)	(0.028)
Improper home	-0.035	-0.002
	(0.054)	(0.079)
Don't know	-0.024	-0.069**
	(0.027)	(0.030)
Number of rooms	0.002	0.008***
	(0.002)	(0.002)
Dish washer	-0.020**	0.024***
	(0.008)	(0.009)
TV recorder	0.008	-0.005
	(0.012)	(0.013)
Camera	-0.008	0.067***
	(0.008)	(0.009)
Stereo	0.005	-0.045***
	(0.009)	(0.010)
General device	-0.009	0.045***
	(0.009)	(0.010)
Pc	0.007	-0.013
	(0.009)	(0.010)
Mobiles	0.003	-0.037***
	(0.005)	(0.005)
TVs	0.011**	-0.005
	(0.005)	(0.005)
Bikes	0.007**	0.068***
	(0.003)	(0.003)
Vespas	-0.007	-0.066***
	(0.006)	(0.007)
Motorbike	-0.002	-0.03***
	(0.011)	(0.011)
Cars	0.008	-0.014**
	(0.007)	(0.007)

Continued on next page

Wife		
Employed - Blue Collar	-0.020	-0.052***
	(0.013)	(0.015)
Employed - Clerical worker	0.048	0.033
	(0.045)	(0.0541)
Unemployed	0.016	0.015
	(0.085)	(0.091)
Housework	-0.030	0.008
	(0.083)	(0.088)
Retired	-0.035	0.021
	(0.092)	(0.092)
Students or other	-0.037	-0.052
	(0.083)	(0.090)
Husband		
Employed - Blue Collar	0.000	0.020*
	(0.010)	(0.012)
Employed - Clerical worker	-0.074	0.006
	(0.057)	(0.053)
Retired	-0.114	0.018
	(0.074)	(0.063)
Students or other	-0.133**	0.017
	(0.063)	(0.063)
Wife		
Self-employee	-0.061	-0.075
	(0.044)	(0.053)
Retirement	0.012	-0.082
	(0.091)	(0.093)
Benefits	0.047	-0.016
	(0.079)	(0.084)
Estate income	-0.017	-0.049
	(0.082)	(0.093)
From origin family	0.026	-0.050
	(0.083)	(0.088)
Husband		
Self-employee	0.051	0.030
	(0.057)	(0.054)
Retirement	0.134*	-0.016
	(0.0723)	(0.0627)
Benefits	0.145**	-0.042
	(0.065)	(0.064)
Estate income	-0.002	-0.056
	(0.071)	(0.091)
From origin family	0.088	0.004
	(0.060)	(0.058)

Continued on next page

Constant	0.146**	0.131***
	(0.062)	(0.063)
Observations	11,829	11,829
R-squared	0.101	0.245

* p<.10 ** p<.05 *** p<.01. OLS estimates in column (1) and (2) for ICP and ICR, respectively. Parents' transfer is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building For area: islands. For regions: Piedmont; Tuscany, Abruzzo, Calabria and Sardinia are omitted because of collinearity. For education: elementary. For Limitation: none. For occupations: white collar. All the estimations use robust standard error which are in brackets.

Table D.8: All First-stage regression

First-stage	**(1)**	**(2)**
	LPM	**Probit**
Father jobs (Parents)		
Baseline: Employed - Clerical worker		
Employed - Blue Collar	0.028	0.181
	(0.032)	(0.183)
Employed - White Collar	0.084**	0.469**
	(0.042)	(0.195)
Employed - Occasional	0.245	1.014
	(0.263)	(0.733)
Retired	0.252**	1.030**
	(0.118)	(0.455)
Unemployed	-0.022*	-0.068*
	(0.010)	(0.033)
Deceased	-0.128**	-0.535**
	-0.050	(0.257)
Mother jobs (Parents in Law)		
Baseline: Employed - Clerical worker		
Employed - Blue Collar	0.023	0.144
	(0.042)	(0.236)
Employed - White Collar	0.071*	0.372*
	(0.042)	(0.202)
Employed - Occasional	-0.083***	-0.651**
	(0.029)	(0.256)
Housework	0.006	0.040
	(0.017)	(0.112)
Retired	-0.054	-0.396
	(0.048)	(0.510)
Unemployed	0.015	0.201
	(0.103)	(0.580)
Deceased	-0.091**	-0.232*
	(0.042)	(0.094)

Continued on next page

Interaction parents job		
Father * Mother job		
Employed - Blue Collar * Employed - Blue Collar	-0.131**	-0.703***
	(0.058)	(0.266)
Employed - Blue Collar * Employed - White Collar	-0.070	-0.396
	(0.062)	(0.310)
Employed - Blue Collar * Employed - Occasional	-0.109**	-0.531**
	(0.050)	(0.251)
Employed - Blue Collar * Housework	-0.077*	-0.417**
	(0.043)	(0.202)
Employed - Blue Collar * Retired	-0.086	-0.456
	(0.072)	(0.643)
Employed - Blue Collar * Unemployed	-0.112	-0.739
	(0.117)	(0.690)
Employed - Blue Collar * Deceased	-0.003	-0.249
	(0.133)	(0.643)
Employed - White Collar * Employed - Blue Collar	-0.113**	-0.616**
	(0.056)	(0.302)
Employed - White Collar * Employed - White Collar	-0.052	-0.323
	(0.051)	(0.282)
Employed - White Collar * Employed - Occasional	-0.026	0.044
	(0.044)	(0.120)
Employed - White Collar * Housework	-0.041	-0.248
	(0.034)	(0.193)
Employed - White Collar * Retired	-0.009	0.101
	(0.086)	(0.760)
Employed - White Collar * Unemployed	0.034	0.065
	(0.150)	(0.752)
Employed - White Collar * Deceased	-0.063	-0.036
	(0.067)	(0.063)
Employed - Occasional * Employed - Blue Collar	-0.417	-0.456
	(0.270)	(0.643)
Employed - Occasional * Employed - White Collar	-0.366	-0.055
	(0.268)	(0.120)
Employed - Occasional * Employed - Occasional	-0.127	-0.165
	(0.268)	(1.071)
Employed - Occasional * Housework	-0.243	-1.041
	(0.264)	(0.747)
Employed - Occasional * Retired	-0.338	-0.239
	(0.292)	(0.267)
Employed - Occasional * Deceased	0.070	0.052
	(0.366)	(1.071)

Continued on next page

Retired * Employed - Blue Collar	-0.346**	-1.551***
	(0.168)	(0.549)
Retired * Employed - White Collar	0.265	1.152*
	(0.131)	(0.674)
Retired * Employed - Occasional	-0.092	0.105
	(0.237)	(0.760)
Retired * Housework	-0.243*	-0.988**
	(0.113)	(0.470)
Retired * Retired	-0.186	-0.555
	(0.175)	(0.728)
Retired * Unemployed	-0.362*	-0.552*
	(0.189)	(0.249)
Retired * Deceased	-0.244	-1.021
	(0.167)	(0.747)
Unemployed * Employed - Blue Collar	-0.049	-0.288
	(0.069)	(0.411)
Unemployed * Employed - White Collar	-0.051	-0.530
	(0.072)	(0.606)
Unemployed * Employed - Occasional	0.047	(0.447)
	(0.059)	-0.388
Unemployed * Housework	0.035	0.179
	(0.057)	(0.364)
Unemployed * Retired	-0.031	-0.234
	(0.071)	(0.423)
Unemployed * Unemployed	-0.114	-0.554
	(0.117)	(0.628)
Unemployed * Deceased	0.001	-0.004
	(0.067)	(0.063)
Deceased * Employed - Blue Collar	-0.024	-0.429
	(0.083)	(0.578)
Deceased * Employed - White Collar	-0.144	-0.535
	(0.123)	(0.643)
Deceased * Employed - Occasional	-0.128*	-1.021*
	(0.069)	(0.447)
Deceased * Housework	0.034	-0.349
	(0.060)	(0.678)
Unemployed * Deceased	-0.113*	-0.703*
	(0.067)	(0.352)

Continued on next page

Father jobs (Parents in Law)		
Baseline: Employed - clerical worker		
Employed - Blue Collar	-0.018	-0.143
	(0.035)	(0.233)
Employed - White Collar	0.003	0.004
	(0.033)	(0.203)
Employed - Occasional	-0.751***	-0.137**
	(0.038)	(0.058)
Retired	0.174	0.665
	(0.176)	(0.539)
Unemployed	-0.075*	-0.492*
	(0.045)	(0.240)
Deceased	-0.132***	-0.397**
	(0.031)	(0.149)
Mother jobs (Parents in Law)		
Baseline: Employed - clerical worker		
Employed - Blue Collar	0.0038	0.046
	(0.038)	(0.220)
Employed - White Collar	0.002	0.005
	(0.042)	(0.263)
Employed - Occasional	-0.027	-0.057
	(0.099)	(0.587)
Housework	0.003	0.012
	(0.019)	(0.121)
Retired	0.105	0.457
	(0.099)	(0.353)
Unemployed	0.134	0.581
	(0.131)	(0.459)
Deceased	-0.08	-0.426
	(0.188)	(0.677)

Continued on next page

Interaction parents in-laws job		
Father * Mother job		
Employed - Blue Collar * Employed - Blue Collar	0.007	0.053
	(0.050)	(0.304)
Employed - Blue Collar * Employed - White Collar	0.003	0.003
	(0.056)	(0.361)
Employed - Blue Collar * Employed - Occasional	0.009	-0.041
	(0.113)	(0.715)
Employed - Blue Collar * Housework	-0.003	0.004
	(0.036)	(0.238)
Employed - Blue Collar * Retired	-0.090	-0.353
	(0.115)	(0.485)
Employed - Blue Collar * Unemployed	-0.095	-0.400
	(0.150)	(0.582)
Employed - Blue Collar * Deceased	0.050	0.246
	(0.220)	(0.801)
Employed - White Collar * Employed - Blue Collar	-0.062	-0.471
	(0.051)	(0.332)
Employed - White Collar * Employed - White Collar	-0.030	-0.189
	(0.051)	(0.318)
Employed - White Collar * Employed - Occasional	-0.026	-0.198
	(0.116)	(0.804)
Employed - White Collar * Housework	-0.031	-0.162
	(0.035)	(0.211)
Employed - White Collar * Retired	-0.152	-0.678
	(0.120)	(0.652)
Employed - White Collar * Unemployed	-0.101	-0.381
	(0.169)	(0.655)
Employed - White Collar * Deceased	-0.114	-0.638
	(0.219)	(0.936)
Employed - Occasional * Employed - Blue Collar	-0.684***	0.442**
	(0.177)	(0.210)
Employed - Occasional * Employed - White Collar	-0.811***	0.452**
	(0.058)	(0.190)
Employed - Occasional * Employed - Occasional	-0.727***	-0.853**
	(0.111)	(0.348)
Employed - Occasional * Housework	-0.758***	-0.166**
	(0.047)	(0.076)
Employed - Occasional * Retired	-0.926***	-0.167**
	(0.108)	(0.057)
Employed - Occasional * Deceased	-0.704***	-0.645***
	(0.262)	-0.239

Continued on next page

Retired * Employed - Clerical worker	-0.109	-0.423
	(0.188)	(0.611)
Retired * Employed - Blue Collar	-0.119	-0.406
	(0.209)	(0.730)
Retired * Employed - White Collar	0.067	0.279
	(0.287)	(1.011)
Retired * Employed - Occasional	-0.197	-0.814
	(0.177)	(0.551)
Retired * Housework	-0.244	-1.005
	(0.210)	(0.681)
Retired * Retired	0.421*	0.750**
	(0.222)	(0.315)
Retired * Unemployed	-0.390	-0.591
	(0.259)	(0.259)
Unemployed * Employed - Clerical worker	0.109	0.605
	(0.067)	(0.435)
Unemployed * Employed - Blue Collar	0.0627	0.341
	(0.072)	(0.524)
Unemployed * Employed - White Collar	0.174	0.922
	(0.188)	(0.922)
Unemployed * Employed - Occasional	0.086	0.547
	(0.053)	(0.388)
Unemployed * Housework	0.107	0.530
	(0.157)	(0.600)
Unemployed * Retired	-0.159	-0.459
	(0.140)	(0.340)
Unemployed * Unemployed	-0.103	-0.303
	(0.197)	(0.397)
Deceased * Employed - Clerical worker	0.182	0.550
	(0.168)	(0.890)
Deceased * Employed - Blue Collar	0.034	0.542
	(0.059)	(0.590)
Deceased * Employed - White Collar	0.664***	0.654*
	(0.118)	(0.312)
Deceased * Employed - Occasional	-0.221***	-0.750**
	(0.062)	(0.315)
Deceased * Housework	-0.032	-0.423
	(0.106)	(0.406)
Deceased * Retired	-0.107	-0.124
	(0.137)	-0.157
Deceased * Unemployed	0.057	0.007
	(0.191)	(0.161)
Deceased * Deceased	0.004	0.034
	(0.010)	(0.061)

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Wave, region, area	X	X
Demographic characteristics	X	X
Wealth characteristics	X	X
Distance parents and in-laws	X	X
Wald tests for joint significance of the instruments	p-value (0.000)	p-value (0.004)
Observations	11,829	11,829
R-squared	0.058	
Pseudo R-squared		0.078

* p<.10 ** p<.05 *** p<.01. Parents' transfer is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates in column (1), Probit estimates in column (2). All the estimations use robust standard error which are in brackets.

Table D.9: Linear probability model for work interruptions

	(1) interruzioni	(2) interruzioni	(3) interruzioni
Parents' transfer	0.053***	0.044***	0.045***
	(0.013)	(0.013)	(0.013)
Parents: in twn <1km			-0.001
			(0.014)
Parents: in twn >1km			0.022
			(0.014)
Parents: out twn <16km			0.006
			(0.016)
Parents: out twn 16-50			0.029*
			(0.018)
Parents: out twn >50km			0.004
			(0.018)
In-laws: in twn <1km			0.007
			(0.012)
In-laws: in twn >1km			-0.013
			(0.013)
In-laws: out twn <16km			0.012
			(0.016)
In-laws: out twn 16-50			-0.015
			(0.018)
In-laws: out twn >50km			-0.010
			(0.017)
Observations	11829	11829	11829
Wave, region, area	X	X	X
Demographic characteristics	X	X	X
Wealth characteristics		X	X

* p<.10 ** p<.05 *** p<.01. Number of work interruptions is the dependent variable. Reference category for distance to parents: no-help, parents and in-laws in the same building. The demographic characteristics include: age, health limitations, number of sisters and brothers, education, number of children and their age (these controls are for parents and in laws, married couple and their children). The wealth characteristics are: house ownership, various durable goods and assets, which are good proxy for the economic stability of the family and their job characteristics. OLS estimates with robust standard error in brackets.

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