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Active Ageing Beyond the Labour Market: Evidence on Work Environment Motivations

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Abstract

“Active Ageing” strategies aim to foster the participation of seniors in the society. Although economic literature has extensively studied the incentives for seniors to increase their labour supply, little is known about the motivations for older people to complement labour with other forms of social participation. Using data from the Survey of Health, Ageing and Retirement in Europe, this article provides empirical evidence of the motivational role of the work environment in the supply of formal and informal productive activities of 50 to 65 year old workers. The results show that intrinsic rewards received at work, such as skill development opportunities and decision latitude, form an incentive for older workers to invest time in social activities outside the labour market. Extrinsic rewards on the other hand, like advancement perspectives, job security and pay, appear independent from non-market outcomes. Therefore, the opportunity for work time arrangements but also intrinsic rewards in the work environment should be developed if one aims to foster participation of older workers in the society.

Keywords: Labour supply, Job quality, Social capital, Informal care.

JEL Codes: J81, J22, J14, C35.

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Résumé

Le vieillissement actif au-delà du marché du travail : le rôle de l'environnement de travail sur la participation sociale des seniors

Les stratégies de « vieillissement actif » visent à promouvoir la participation des seniors dans la société. Alors qu'une littérature économique abondante a été consacrée aux facteurs incitatifs de l'offre de travail des seniors, on connaît mal les motivations qui encouragent les travailleurs à compléter leur activité professionnelle par d'autres activités sociales. En utilisant les données de l'enquête SHARE, cet article apporte des éléments empiriques sur le rôle de l'environnement de travail dans l'offre d'activités productives formelles et informelles des travailleurs âgés de 50 à 65 ans. Les résultats montrent que les récompenses intrinsèques au travail, telles que le développement des compétences et la latitude décisionnelle, constituent une incitation pour les seniors de s'investir dans des activités sociales en dehors du marché du travail. En revanche, les récompenses extrinsèques, telles que les perspectives d'avancement, la sécurité de l'emploi et le salaire, affectent peu les décisions prises en dehors de la sphère marchande. Par conséquent, les motivations intrinsèques dans l'environnement de travail devraient être favorisées si l'on souhaite promouvoir la participation sociale des travailleurs seniors.

Mots-clefs : offre de travail, qualité du travail, capital social, aide informelle.

Classification JEL : J81, J22, J14, C35.

1. Introduction

According to the United Nations (2011), about one third of the European population will be 60 years old or more by 2050. The demographic prospects of Europe compelled the European Union (EU) to think of various possible ways to transform the perils of the silver revolution into opportunities. The designation of 2012 as the “European Year for Active Ageing and Solidarity between Generations” bears a decade of scientific debate as an epigraph. Walker (2008) summarises the paradigm shift from the idealistic “successful ageing” to the workforce-oriented “productive ageing” and eventually to “active ageing” that encourages older people to keep playing an active role in society through both market and non-market activities. Active ageing policies have so far been mainly devoted to the labour market via employment strategies dedicated to the older part of the population. The economic literature has indeed provided with extensive research on the incentives for seniors to participate in the labour market, but little is known about the motivations for employed seniors to complement labour with other forms of social participation.

Subjective well-being research has provided vast evidence that satisfaction with the work environment (i.e. job satisfaction) strongly influences individuals’ preferences (and thus their behaviour) – independently from earnings or working hours (Freeman, 1978; Akerlof *et al.*, 1988; Lévy-Garboua *et al.*, 2007). More recently, hedonic studies have highlighted the importance of both *intrinsic* and *extrinsic* aspects of jobs on workers’ preferences (measured by quits) (Clark, 2001). Theoretical aspects developed under the umbrella of “personnel economics” suggest that agents’ preferences are influenced by both *extrinsic* rewards (such as pay and advancement prospects), *intrinsic* motivations (such as autonomy), and the interaction between the two (Frey, 1997, Bénabou and Tirole, 2003). Intrinsic rewards in the work environment are especially believed to provide strong incentives as they generate social inclusion, motivation, and role integration (Wilensky, 1961) – what directly contribute to worker’s utility function through “identity utility” (Akerlof and Kranton, 2005). A rejoinder perspective could thus be drawn from the combination of the two approaches of the influence of workplace arrangements on market and non-market social activities.

The main hypothesis of this paper is that work environment may more generally influence workers’ overall motivation, including preference for social activities. The features of work environment could both positively and negatively influence the preference for such activities. On one hand, *intrinsic* rewards such as decision latitude or skill development, that enhance workers self-esteem and role perception, could increase the motivation to engage in non-market productive activities that provide similar forms of intrinsic satisfactions. On the other hand, *extrinsic* rewards, such as pay and advancement prospects, could reduce the preference for non-market activities by increasing the opportunity cost of leisure time.

However, this hypothesis has not yet been satisfactorily tested in the empirical literature. Although few studies in the field of social sciences have recently established that those among the workforce whom benefit from a favourable work environment have a higher propensity to take part in social activities (*cf.* Section 2), some specific evidence is lacking with regard to (i) the heterogeneity of social activities of the ageing population – in that perspective, informal care-giving is considered apart from formal social activities such as volunteering, etc. –; and (ii) the specific forms of work environment (i.e. *intrinsic vs. extrinsic* rewards) that affect workers’ preferences for these social activities.

The aim of the paper is to provide some new empirical elements filling the gap in the literature of the determinants of social participation with special attention to the population of older workers and the various work environments they evolve in. Using data from the second wave of the Survey on Health, Ageing and Retirement in Europe (SHARE, 2006), we provide a comprehensive approach based on a wide range of work environment measures that, to our knowledge, have not yet been mobilised to investigate workers' incentives to take part in social activities.

The paper is structured as follows: The next section displays the main findings in the scarce literature where the relationships between work environment and informal care-giving and formal social activities are considered. Section 3 presents the dataset and special attention is given to the description of the relationships between the various forms of activity of the older population in Europe. Section 4 details the econometric issues and the choice of work environment variables retained in the model specification. Results and interpretation are given in section 5 with a focus on gender and household issues due to specific time allocation. Conclusions and policy recommendations are drawn in the final section.

2. Survey of the literature

Although the influence of the work environment on the participation in non-market activities is still a largely unexplored issue, the related empirical literature suggests that the work environment matters in the decision of older workers to be active beyond of the labour market in both informal and formal social activities.

First, the decision for workers to engage in informal social support (i.e. informal care and help provision) seems to be largely facilitated by the availability for work-time arrangements. The current "senior" generation born during the Post-World War II baby boom, also referred to as a "pivot" or "sandwich" generation (Mooney *et al.*, 2002), is confronted to combine longer and more intense work lives with a higher need to provide informal care and help to elderly relatives or spouses due to a higher life-expectancy and longer dependency conditions. This trend of increasing care needs, combined to longer and more intense careers, can affect the ability of older workers to provide care in the absence of work arrangements. Therefore, similarly to parental care, arising care-giving responsibilities can lead to tensions between paid work and informal activities in the latter life course (Carmichael, Charles, 1998, Lumsdaine and Mitchell, 1999). This issue is mainly addressed through an abundant literature studying potential trade-offs between care and work. Empirical evidence suggests that trade-offs between care giving and working vary depending on the intensity of care (Crespo, 2007), the available family arrangements (Ettner, 1995, Pozzebbon and Mitchell, 1989), and the institutional context (Bolin *et al.*, 2008, Fontaine, 2009). The influence of the institutional context can reflect heterogeneous access to working arrangements between countries (such as temporary leaves or work-time flexibility) as well as heterogeneous access to formal care arrangements. However, care-givers do not necessarily opt out from either work or family responsibilities. In this case, a favourable work environment can alleviate the tensions between work and care and facilitate a higher investment in complementary activities. Recent studies using survey data on job quality and life satisfaction suggest indeed that high efforts at work (time pressure, stress and hard work) have a strong adverse effect on the perception of work-life balance (Drobnic and Guillen Rodriguez, 2011).

Second, concerning participation in formal social networks, several aspects of the work environment, and more globally job quality, seem to influence worker's decisions to engage in social networks. Organizational sociology suggests the existence of a causal process between education, job quality, and social community participation. Wilensky (1961) showed that aspects of the work organisation (such as work task discretion and stable career trajectories) strongly affect the attachment of individuals to the community and the motivation to participate in formal associations. Epidemiologic literature has also provided with empirical studies on the determinants of volunteering and engagement in formal social networks, as these activities can in turn affect health-related behaviours. Lindström (2006) for instance analysed the impact of exposure to straining working conditions on social participation of older workers. Using Swedish data from a cohort aged 45-69, he estimated the impact of working conditions on 13 items of participation in social activities through an implementation of the demand-control model (Karasek and Theorell, 1990). Results showed that compared to the "job strain" category, "active" and "relaxed" workers have higher odd ratios for most of the social participation items. Another recent study provided first evidence of long term effects of job quality on participation in voluntary work (Wahrendorf and Siegrist, 2010). This study used retrospective data (SHARELIFE) and synthetic indicators of effort-reward imbalance and several job quality dimensions (physical demands, psychological demands, social support, control, and reward). The results indicated that most of the stress indicators during the life course are associated with a lower likelihood of participation in voluntary work during retirement, even after controlling for health. These findings suggest that failed reciprocity in the work relation (i.e. low level of control or rewards) not only affect the labour supply of individuals but also their supply for unpaid activities beyond the labour market. However, as none of the studies analysing the effects of working conditions on social participation control for wages, it is not clear to what extent the effects reflect work environment motivations or capture (unobserved) income differences.

3. Data and initial results

3.1. Source

In order to further apprehend the role of work environment motivations on non-market productive activities this study investigated the effect of job characteristics and satisfaction towards several dimensions of job quality on the decision for older workers to engage in formal and informal productive activities. We used data from the Survey of Health, Ageing and Retirement in Europe (SHARE), which provides longitudinal micro-data for people aged over 50 in fourteen European countries (Austria, Belgium, Czech Republic, Denmark, Germany, Greece, France, Ireland, Israel, Italy, the Netherlands, Poland, Spain, Sweden, and Switzerland¹). The main advantage of this comparative dataset on ageing is the variety of topics in the questionnaire, which – besides socio-demographics, health, and income – also includes detailed data on job characteristics and satisfaction with job quality indicators, social activities, and care-giving activities of respondents and their partners. The analysis was based on the second wave of the survey, where a representative sample of individuals aged 50 and more (and their partners living in the household) was interviewed between 2006 and 2007.

1 Due to currently incomplete or incomparable data, Ireland, Israel and Greece are not considered in our analysis.

3.2. Sample

Due to the focus on job quality, the sample was restricted to working age individuals (between 50 and 65 years old) who were employed or self-employed. This restriction is necessary since job quality variables are only available for the present job (thus for employed or self-employed individuals), and as our aim is to analyse the behaviour of individuals that can face an arbitration between labour market participation and other activities (Berecki-Gisolf *et al.*, 2008). The initial sample of 50 to 65 old consists of 15,342 individuals among which 7,436 were employed or self-employed and constitute our sample².

3.3. Dependent variables

The estimation focuses on the determinants for older workers to invest time in productive activities in the society. We distinguish between formal and informal activities, which both constitute our dependent variables. At least two reasons motivate such a dichotomy. First, formal activities such as participation in voluntary associations are essential partners of government agencies in Europe, while informal activities are less tangible and are usually reached through indirect public policy (eg. labour market policy and family policy in the case of care provision). Second, the choice to consider formal and informal activities rests on the comparability of our results with the existing and forthcoming literature on social productivity. It has been established that formal and informal activities constitute different forms of productive engagement, mainly due to their respective degree of formalisation and to their respective degree of obligation (Wilson and Musick, 1997, Hank and Stuck, 2008)³.

The SHARE questionnaire contains a module on social participation, in which respondents are asked what type of activities they have done during the last month preceding the interview from a multiple choice list. To measure formal social participation, we adopt a definition of social participation in the strict sense which equates to “*doing an activity with others / collaborating to reach the same goal, and contributing to society*” (Levasseur *et al.*, 2010: 2146). Note that the concept of formal social participation encompasses both active membership and active voluntary work in formal associations. Thus, individuals are considered as socially active when they declared having done voluntary or charity work, attended an educational or training course, participated in a sport, social or other kind of club, or taken part in a religious, political or community related organisation. Herein, the scope of social participation is restricted to formal activities in the community: solitary activities are excluded, and sportive or religious activities are included as the question clearly refers to activities that are led within a social circle.

Similarly to formal social participation, various definitions of informal social support can be found in the literature, depending on the type of support (for instance personal care, household help, help with paperwork, or financial support), the status of the receiver (within or outside of the household or family, ascending or descending relation), or the intensity of social support. As both care and help activities constitute productive informal activities, we include these two types of support activities in our analysis. Therefore, care givers are individuals who reported having provided “*care for a sick or disabled adult*” or “*help to family, friends or neighbours*”. We must note that in the SHARE

2 About 215 observations needed to be excluded due to non-response.

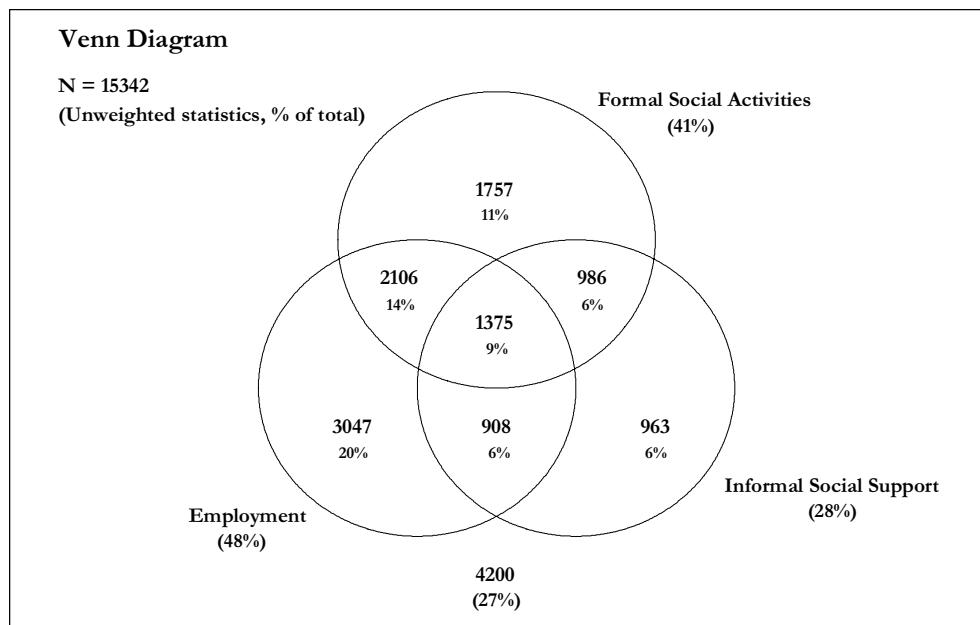
3 One main empirical implication is that whereas formal and informal volunteering (or help) are found to have different determinants (Wilson, Musick, 1997, Hank, Stuck, 2008), informal care and informal help on the other hand have very similar individual determinants (Hank, Stuck, 2008).

questionnaire, this question is preceded by a set of questions on daily care within the household. In addition, cohabitants may not perceive their household activities as care-giving and omit to declare them as such. Therefore, although the question doesn't explicitly state that the care receiver is a person that lives within or outside of the household, the context in which the question is framed leads us to interpret this variable as social care provision, similarly to Hank and Stuck (2008).

3.4. Social participation at a glance

The vast majority of seniors are active in the society: about two third of 50-65 year old Europeans participate in at least one type of activity (paid work, formal social activities, informal social support), and about one third of seniors are involved in at least two activities (fig. 1). Thus, different forms of participation in the society clearly overlap. For instance, the majority of employed seniors are also active beyond the labour market, by providing care and help to relatives or participating in social activities (or both).

Figure 1
Participation rates (50-65 year old)



Source: SHARE wave 2, 50-65 year old individuals

Participation in these three forms of productive activities varies substantially across country and gender. The cross-country comparison reveals a cumulated north-south gradient in participation rates: both formal and informal social participation rates of employed seniors follow a clear north-south gradient, similarly to the north-south gradient in employment rates (figures 2 and 3).

Figure 2
Participation rates of employed seniors by country (men)

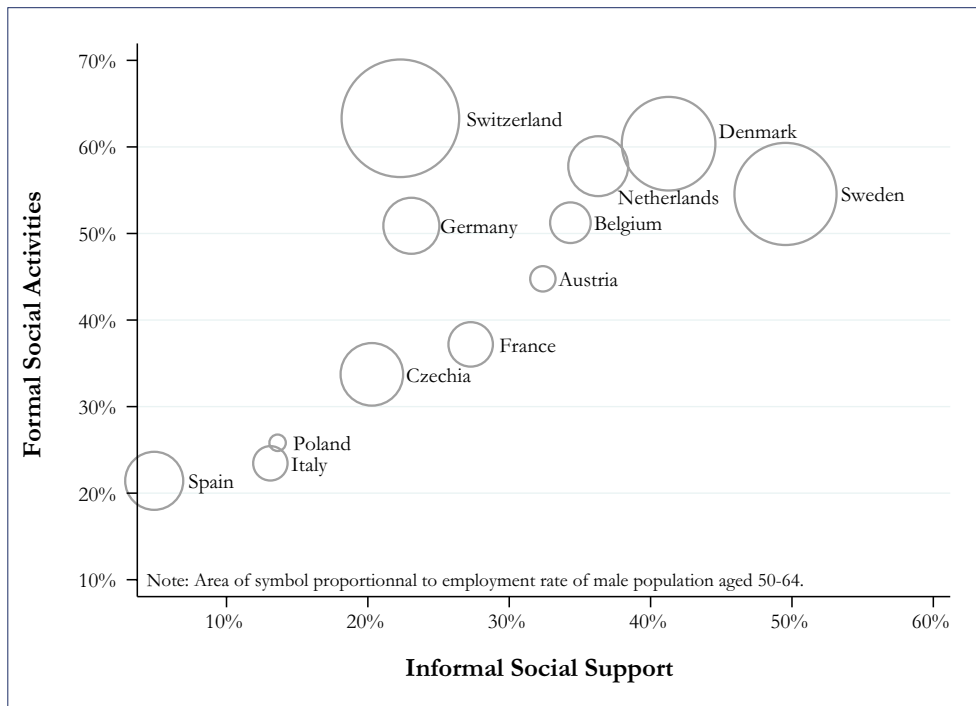
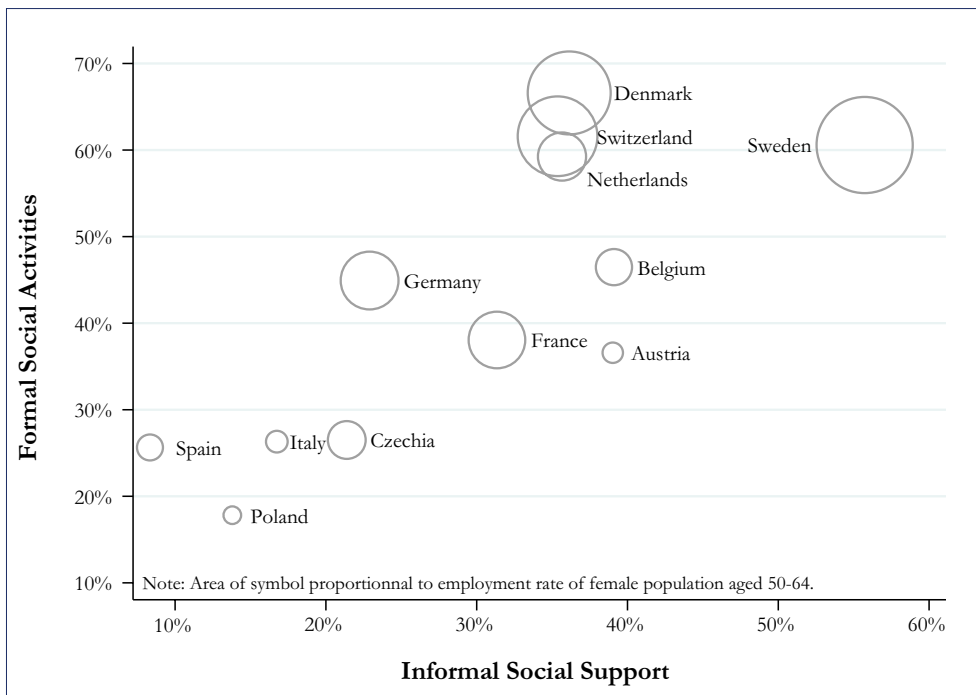


Figure 3
Participation rates of employed seniors by country (women)



The comparison of participation rates for men and women shows that the strongest gender gap concerns labour market participation. Indeed, employment rates are lower for women in all countries, especially in Mediterranean and central European countries. Concerning formal social participation on the other hand, female and male workers seem almost equally involved in formal social activities at the aggregate level, and gender gaps are modest at the country level. Finally, the provision of care and help appears as a gendered activity in Mediterranean countries and Switzerland, but no substantial gap is observed in countries with high participation rates.

Hence, in terms of country and gender differences, informal social support provision and formal social participation seem to have quite similar characteristics. The country ranking is not surprising, given that contrary to domestic care which relates to “bonding” (or exclusive) social capital, social support is closely related to the level of “bridging” (or inclusive) social capital (Kaarinainen and Lehtonen, 2006). In addition, the positive correlation between formal and formal social participation and employment rates of seniors clearly indicates that productive activities are “linked” at older ages (for further evidence, see Hank and Stuck, 2008). In terms of policy, these first results go along with the “Active Ageing” orientations, in the sense that fostering market and non-market productive activities appears as complementary rather than opposing policy strategies.

4. Empirical strategy

4.1. Estimation

The main purpose of our empirical strategy is to estimate the effect of the work environment in worker’s motivations to invest time in non-market social activities. Given the two binary outcomes, the estimation can be written as follows:

$$\begin{cases} Y_1^* = JQ\alpha + X\beta + W\gamma + Z_1\delta + \varepsilon_1 \\ Y_2^* = JQ\alpha + X\beta + W\gamma + Z_2\delta + \varepsilon_2 \end{cases}$$

Where for $m = 1,2$ the observed variable Y_m is the decision for individuals to participate in formal social activities (Y_1) and informal social support (Y_2), and the latent variable is given by

$$Y_m = 1 \text{ if } Y_m^* > 0 \text{ and } 0 \text{ otherwise}$$

α , β , γ , and δ are the set of parameters to estimate of the effect of job characteristics (JQ) and a set of control variables from individual characteristics (X) and household characteristics (W).

The parameters are estimated using maximum-likelihood with a standard bivariate probit routine. Although multivariate choice models don’t require exclusion restrictions to be identified, their identification is fragile in the absence of exclusion variables (Keane, 1992). Following the recommendations of this author, exogenous variables (Z_m) which respect the exclusion conditions (i.e. they significantly affect ΔY_m but are independent from the other outcome) are added to improve the identification of the model.

In the bivariate equation model, the error terms ε_m are assumed to be normally distributed, each with a mean of zero, and a correlation term ρ :

$$\begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \end{pmatrix} \rightarrow N(0, V) \text{ where } V = \begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix}$$

The bivariate probit provides more consistent estimates than independent probit regressions if the error terms are correlated ($\rho \neq 0$). This is found out to be the case. Estimating the two equations simultaneously therefore accounts for the fact that the same unobserved characteristics or events may influence several participation outcomes. For instance, an “extroverted” or “altruistic” person may be more likely to participate in any type of activities than an “introverted” or “egoistic” person. This method also takes into account that the volume of available time is limited and that decisions of social participation are interdependent (for example, a person may stop being an informal care-giver and simultaneously decide to use his or her free time to engage in formal social activities).

4.2. Model specification

a. Work environment variables

To capture the role of work environment motivations, we successively estimate the effect of several job quality indicators on the social participation outcomes. The job quality variables are provided by a detailed questionnaire, in which workers are proposed several statements on their working conditions and asked if they strongly agree, agree, disagree, or strongly disagree with each of them. Each variable is binary coded because the tendency to choose extreme versus moderate response items may vary depending on the language and country of respondents. In a first step (M1, M2), we test for the effect of job satisfaction: this variable can be understood as a measure of “match quality” (Clark, 2001) which results from job characteristics, individual characteristics, and the match between personal preferences and the intrinsic aspects of the job. In line with “happiness” labour economics, job satisfaction is theoretically expected to be positively associated with the volume of labour supply. The effect of job satisfaction on productive activities in the leisure time is undetermined: as discussed above, job satisfaction can either decrease the volume of leisure time (due to a higher relative preference for labour) or increase leisure time devoted to social participation (due to similar intrinsic satisfactions provided by productive social activities).

In order to apprehend the work environment (or job quality), job satisfaction is a limited tool. Indeed, job satisfaction is a weighted sum of satisfaction with sub-domains of a job (Sousa-Poza and Sousa-Poza, 2000), but the effect of the work environment on productive activities may be divergent, if not opposed, for different aspects of job quality. For instance, high earnings can be expected to increase the opportunity cost for social support and therefore foster substitution of informal care with formal care. On the other hand, on-the-job training opportunities or decision latitude could increase motivation for productive activities, positively affecting labour supply as well as unpaid productive participation. Therefore, in line with the “quality of life” framework developed by Green (2006: 9) in which job quality is understood as “*the set of work features which foster the well-being of workers*”, a multidimensional set of job quality indicators is introduced in a second step (M3-M5). The set of job quality indicators includes items on demands (physical and psychological demands), intrinsic rewards (decision

latitude, training opportunities, social support), and extrinsic rewards (recognition, pay, advancement prospects, and job security). These dimensions of job quality reflect “work quality”, that is the activity of work itself and the conditions under which it takes place that can affect the well-being (Munoz de Bustillo *et al.*, 2011). The indicators are self-reported and therefore capture the level of satisfaction towards the work environment.

b Control and exclusion variables

The main advantage of self-reported job quality indicators is that they capture how workers are affected by the work environment. However, such variables impose certain precautions, in particular because self-reported working conditions may partly reflect differences in employment status. To isolate the effect of the work environment, we control for standard job characteristics (X): employment status (employee, self-employed, or civil servant), type of contract (permanent or fixed-term), effective working time (log of weekly working hours), and wages (log of annual gross individual earnings from employment or self-employment). Other individual characteristics include socio-demographics (age, gender, and level of education⁴), and the level of health measured by a binary indicator of self-reported health.

The context is taken into account through variables capturing both the institutional context (country dummies), and the family context (household income and spouses activities). Beyond the individual income from work (which can affect participation due to the opportunity costs of leisure time), the economic status of the household must also be accounted for. Indeed, similarly to the labour supply of spouses, participation in social activities can also be influenced by other sources of income in the household: the partner’s income can influence the supply of social participation (as social participation implies direct and indirect costs), and of social support (as higher incomes can facilitate the substitution of informal care with formal care)⁵. Finally, we introduce variables on the spouse’s activities to test for a multiplier effect of participation within the household, or, inversely, substitution of activities between spouses. In the SHARE sampling, partners living in the household are asked to respond to the same questionnaire. Therefore, we can include variables on the spouses’ participation in formal social activities (equation 1) and in informal social support (equation 2), measuring whether he or she is socially active, not active, or has not responded to the questionnaire (the reference group being single workers).

Finally, exclusion variables are added to improve the identification of the model. For the participation in social activities, the exclusion variable (Z_1) is the level of trust, which is considered in the sociological literature as one main aspect of social capital that fosters volunteering (Wilson and Musick, 1997, Smith, 1994, Choi, 2003). For the estimation of care-giving, the exclusion variable (Z_2) is having at least one parent still alive. As the main care and help receivers of seniors are their elderly parents, this exogenous variable should be associated to the volume of informal care supply. The statistical justification for using these variables is verified 1) by the explanatory power of each exclusion variable on the outcome of the equation, and 2) the absence of correlation with other outcomes.

4 Highest certificate or degree obtained (including further education) applying the International Standard Classification of Education (ISCED-97) coding, with three categories (primary, secondary, and tertiary education).

5 The variable capturing the household’s income is the log of the annual gross income of the household excluding individual earned income, adjusted for purchasing-power and consumption unit.

5. Results

5.1. Baseline results on individual and contextual factors

The results on the effect of individual characteristics on participation in productive activities generally concur with usual findings in the literature. First, they confirm that social background clearly matters: high levels of education and household incomes appear both as factors of social investment in formal social activities and informal social support. This confirms that human capital is a common factor of social integration (Wilson and Musick, 1997), and that social inequalities remain beyond the labour market since around retirement age, richer and more educated workers are more willing and/or more able to get involved in non-market activities.

On the other hand, contrary to labour market participation, health, age and gender are not found to significantly affect social participation outcomes. Health, usually found to be positively associated to formal social activities (Prouteau and Wolff, 2007) and negatively related to informal care (Fontaine, 2009), is probably independent of these outcomes due to the healthy worker effect that characterises the employed population. Similarly, the effect of age is either statistically non-significant (on formal social participation) or negligible in terms of size (on informal support), which is probably mainly due to relatively homogeneous sample in terms of generation (50-65 years old). No significant gender differences appear in the likelihood to complement work with other productive activities. This indicates that although informal care within the household or the family is still a highly gendered activity, older men provide a significant amount of other forms of care through informal help and assistance to people outside the household (such as relatives, friends and neighbours). Moreover, it is rather the intensity of care than the decision to provide some amount of care in itself that varies significantly between men and women (Fontaine, 2009)⁶.

Decisions of participation are found to be clearly complementary at the household level, as they are influenced by both the marital status and the partners' activity. Concerning formal social participation and as well as informal care-giving, the results give an indication of a multiplier effect within the household: both men and women tend to be more active when they live with a partner, and they adopt similar participation behaviours as their spouse. Separate regressions on gender sub-samples (details not shown) provide no indication that these household configurations may affect men and women differently.

Country differences within Europe are striking and persist after controlling for composition effects. Concerning participation in formal networks, the country groups are perfectly in line with social capital typologies and the results confirm the high level of formal social capital in Scandinavian countries and the Netherlands (Pichler and Wallace, 2007). The country effects in the estimation of care-giving are quite similar. This result, which doesn't reflect the lower level of formal care facilities and the strength of family ties in Southern countries, seems to confirm the major role played by bridging social capital on informal social support.

Finally, the correlation of residuals from both equations is significant and positive, meaning that unobserved individual characteristics foster simultaneously participation in formal and informal social activities. Drawing on the social capital literature (Smith, 1994), potential candidates amongst these unobserved characteristics are personality traits or attitude such as altruism.

⁶ Further analyses performed on unpooled samples (details not shown) showed that individual, household, and contextual variables had very similar effects on men and women's behaviour.

5.2. Intrinsic rewards increase social participation

The main focus of this analysis was to investigate the role of the work environment on participation in formal and informal productive activities by testing the effect of several job quality variables. The results confirm our hypothesis of a dual effect of job satisfaction on leisure activities. On the one hand, job satisfaction is independent from informal social support activities. Indeed, if job satisfaction is the match between job characteristics and personal aspirations, it is coherent that people who are satisfied with their jobs have an incentive to maintain their labour supply, but have a low incentive to invest in other forms of unpaid labour, such as care provision. On the other hand, satisfied workers are found to be highly motivated to invest time in formal social activities. This gives an indication that the intrinsic and extrinsic satisfactions in the work environment may be closely related to preferences for other compensating activities in the leisure time.

Although job satisfaction is a powerful synthetic variable to explain labour market participation, it is not sufficient to precisely measure the work environment motivations which could affect other forms of productive activities. Moreover, usual job quality indicators, such as wages, working hours, or type of contract do not seem accurate neither to identify work related motivations for activities outside of the labour market as they are unrelated to social participation outcomes. Only the employment status matters greatly: civil servants in particular tend to be more socially active than employees or self-employed. This finding is a stylised fact (for example see Lee, 2012, Clerkin *et al.*, 2010, Wilson and Musick, 1997) and can be explained by the motivational similarities between public and non-profit organizations: the higher preference for intrinsic and prosocial motivations of public sector employees (Lee, 2012, Georgellis *et al.*, 2011) could explain their higher engagement in voluntary work.

The focus on precise working condition variables shows that the work environment plays an important role in the behaviour of older employees including outside the labour market. First, most intrinsic rewards at work are found to significantly encourage seniors to combine work with social participation. Decision latitude in particular (or freedom in the job) strongly favours both participation outcomes. A certain level of latitude may be associated with lower schedule constraints and thus facilitate the combination of work with other activities. In addition, lack of decision latitude can be a factor of social isolation (Vézina *et al.*, 2004) and therefore lead to weaker formal and informal social ties. The ability to develop skills in the workplace also positively and significantly affects social participation outcomes. This indicates that education, social background, but also lifelong learning, are factors of empowerment and motivation beyond the labour market.

The ability and motivation to be active outside of the labour market is also related to demands, and especially to the direct hardship of labour: seniors with physically demanding jobs are less likely to choose to complement work with formal social activities. Psychological demands on the other hand are not associated to lower participation levels. Therefore, a potential “respite effect” cannot fully be excluded: workers who are under pressure can to some extent compensate for their stressful work environment by investing in social relations and family. It seems however that physical hardship breaks the motivation to invest time in other activities.

Finally, the results indicate that contrary to intrinsic rewards, extrinsic rewards are largely independent from social activities. Advancement perspectives have a rather negative effect on social activities: good professional opportunities may indeed form an incentive for a higher work investment, and therefore reduce the possibilities to invest in

other time-consuming activities. Job security is not associated with social participation outcomes: neither the subjective perception of job security, nor the objective measure of job stability (term of contract) affect social participation when other working conditions were controlled for. This is also the case for earnings: neither satisfaction with pay, nor the objective level of wage plays a significant role in motivating individuals for non-market activities in formal networks once controlling for the household income. Satisfaction with pay even rather negatively affects the decision to provide informal care.

6. Conclusion

Alongside the objectives of “Active Ageing” strategies, which aim to foster participation of ageing people in productive activities, this article explored the motivations for seniors to complement paid work with unpaid productive activities in the society.

The European comparison revealed a cumulated north-south gradient in participation rates, which provided a clear indication that employment, informal social support, and formal social participation are linked activities around retirement age. Our estimations confirmed that beyond individual characteristics and personality traits, the socioeconomic background as well as the institutional context mattered greatly in peoples’ preferences for social activities. These findings imply that promoting unpaid productive activities can be a ground for public policy, and that fostering employment, formal social participation and informal social support are complementary rather than competing purposes.

Furthermore, we explored the potential of improving job quality as a policy strategy to increase social participation beyond the labour market. We showed that the work environment formed one common motivational factor for seniors to complement work with unpaid productive activities. In the detail, we empirically estimated the motivational role of intrinsic and extrinsic rewards on activities beyond the labour market. Our results provided first evidence that whereas extrinsic rewards at work seem largely independent from unpaid outcomes, intrinsic rewards (such as skill development opportunities and decision latitude) are closely related to the preference for both formal and informal social activities.

While these findings bring new insights on work related motivations for productive activities, further research may be necessary to fully understand the relationship between the quality of the work environment and the participation in formal and informal productive activities. On a theoretical note, it is yet unclear whether the work environment can be fully treated as an exogenous variable which affects the utility of work and other productive activities, or if the preferences for certain working conditions contribute in explaining labour market choices. This issue could have important empirical implications, for instance for the quantification of the potential impact of a job quality oriented policy on social participation.

Table 1
Work related determinants of older workers' social activities

	M1		M2		M3 (Stepwise)		M4		M5	
	Y1 (SP)	Y2 (Care)	Y1 (SP)	Y2 (Care)	Y1 (SP)	Y2 (Care)	Y1 (SP)	Y2 (Care)	Y1 (SP)	Y2 (Care)
Job satisfaction	0,144**	0,026	0,133**	0,014						
	(0,046)	(0,065)	(0,044)	(0,065)						
Work environment										
Skill development					0,227***	0,163***	0,203***	0,164***	0,203***	0,172***
					(0,039)	(0,037)	(0,034)	(0,038)	(0,037)	(0,039)
Support					0,069*	-0,009	0,029	-0,034	0,034	-0,035
					(0,036)	(0,047)	(0,032)	(0,050)	(0,030)	(0,048)
Recognition					0,029	-0,007	-0,033	0,004	-0,034	0,004
					(0,039)	(0,035)	(0,033)	(0,043)	(0,034)	(0,044)
Pay					0,026	-0,055**	-0,001	-0,058	-0,004	-0,0620*
					(0,033)	(0,025)	(0,026)	(0,030)	(0,026)	(0,030)
Not physically demanding					0,128***	-0,012	0,0981***	-0,023	0,0896***	-0,020
					(0,016)	(0,035)	(0,016)	(0,039)	(0,017)	(0,041)
No constant time pressure					0,041	0,007	0,011	0,011	0,020	0,000
					(0,034)	(0,038)	(0,036)	(0,038)	(0,040)	(0,038)
Freedom					0,240***	0,143***	0,198***	0,128**	0,193***	0,122**
					(0,048)	(0,046)	(0,055)	(0,047)	(0,055)	(0,047)
Advancement prospects					-0,041	-0,065**	-0,0915**	-0,0862*	-0,0952**	-0,0842*
					(0,039)	(0,033)	(0,029)	(0,036)	(0,030)	(0,036)
Job security					0,093*	0,049	0,070	0,051	0,050	0,053
					(0,053)	(0,046)	(0,052)	(0,046)	(0,051)	(0,053)
Job characteristics										
Worktime (log)			0,006	-0,070					0,002	-0,0813*
			(0,037)	(0,036)					(0,042)	(0,037)
Wages (log)			0,015	0,006					0,013	0,006
			(0,009)	(0,008)					(0,009)	(0,009)
Contract										
Ref: Permanent										
Fixed-term			-0,161*	-0,064					-0,121	-0,034
			(0,067)	(0,055)					(0,065)	(0,071)
Empl. Status										
Ref: Employee										
Civil servant			0,158**	0,000					0,142**	-0,006
			(0,044)	(0,032)					(0,045)	(0,030)
Selfemployed			0,029	0,031					0,031	0,019
			(0,054)	(0,045)					(0,049)	(0,048)
Controls	Yes	Yes			Yes	Yes			Yes	
Country dummies	Yes	Yes			Yes	Yes			Yes	
Exclusion variables	Yes	Yes			Yes	Yes			Yes	

Note: Significance is given by *p<0.05, **p<0.01, ***p<0.001

Table 2
Individual and contextual determinants of older workers' social activities

		M2		M5	
		Y1 (SP)	Y2 (Care)	Y1 (SP)	Y2 (Care)
Individual characteristics					
Age	(years)	-0,006 (0,005)	-0,0126** (0,005)	-0,006 (0,006)	-0,0126** (0,004)
Gender	Female	-0,043 (0,054)	0,014 (0,060)	-0,040 (0,056)	0,010 (0,062)
Education	Ref: Primary				
	Secondary	0,212*** (0,045)	0,113** (0,041)	0,173*** (0,045)	0,0940* (0,045)
	Tertiary	0,540*** (0,060)	0,126** (0,049)	0,463*** (0,060)	0,088 (0,052)
Reported health	Ref: Very good/Excellent				
	Good or less	-0,074 (0,041)	-0,005 (0,048)	-0,061 (0,040)	-0,001 (0,050)
Exclusion variables					
Trust	(0 low-10 high)	0,0317*** (0,009)		0,0280** (0,009)	
Parent alive	(yes)		0,15*** (0,035)		0,154*** (0,035)
Household characteristics					
HH unearned income	(log)	0,0254*** (0,006)	0,0148* (0,007)	0,0213*** (0,006)	0,013 (0,007)
Spouses activities	Ref: No spouse				
	Spouse socially active	0,220*** (0,050)	0,208* (0,095)	0,226*** (0,052)	0,212* (0,094)
	Spouse not active	-0,421*** (0,046)	-0,473*** (0,065)	-0,398*** (0,044)	-0,465*** (0,062)
	Spouse: missing	-0,039 (0,035)	-0,106 (0,070)	-0,026 (0,037)	-0,100 (0,070)
Country dummies					
Country	Ref: Germany				
	Austria	-0,133*** (0,008)	0,350*** (0,009)	-0,0983*** (0,009)	0,375*** (0,010)
	Sweden	0,222*** (0,028)	0,751*** (0,030)	0,164*** (0,026)	0,713*** (0,032)
	Netherlands	0,273*** (0,018)	0,341*** (0,013)	0,237*** (0,020)	0,336*** (0,018)
	Spain	-0,440*** (0,020)	-0,687*** (0,024)	-0,456*** (0,019)	-0,695*** (0,027)
	Italy	-0,389*** (0,016)	-0,250*** (0,017)	-0,402*** (0,020)	-0,254*** (0,017)
	France	-0,149*** (0,020)	0,170*** (0,014)	-0,162*** (0,028)	0,182*** (0,021)
	Denmark	0,163*** (0,036)	0,395*** (0,034)	0,137*** (0,034)	0,378*** (0,035)
	Switzerland	0,290*** (0,019)	0,102*** (0,017)	0,301*** (0,016)	0,123*** (0,021)
	Belgium	0,0504** (0,019)	0,346*** (0,014)	0,0637** (0,020)	0,375*** (0,019)
	Poland	-0,520*** (0,014)	-0,350*** (0,024)	-0,465*** (0,022)	-0,314*** (0,029)
	Czech Republic	-0,222*** (0,027)	0,015 (0,013)	-0,212*** (0,024)	0,026 (0,014)
Constant		-0,559 (0,351)	0,038 (0,293)	-0,673 (0,378)	-0,032 (0,305)
Number of obs		7436		7436	
Log pseudolikelihood		-8556,2		-8499,9	
Rho		0,186***		0,178***	
Chi2		38,848		36,649	
Prob>chi2		0,000		0,000	

Note: Significance is given by *p<0.05, **p<0.01, ***p<0.001

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Active Ageing Beyond the Labour Market: Evidence on Work Environment Motivations

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“Active Ageing” strategies aim to foster the participation of seniors in the society. Although economic literature has extensively studied the incentives for seniors to increase their labour supply, little is known about the motivations for older people to complement labour with other forms of social participation. Using data from the Survey of Health, Ageing and Retirement in Europe, this article provides empirical evidence of the motivational role of the work environment in the supply of formal and informal productive activities of 50 to 65 year old workers. The results show that intrinsic rewards received at work, such as skill development opportunities and decision latitude, form an incentive for older workers to invest time in social activities outside the labour market. Extrinsic rewards on the other hand, like advancement perspectives, job security and pay, appear independent from non-market outcomes. Therefore, the opportunity for work time arrangements but also intrinsic rewards in the work environment should be developed if one aims to foster participation of older workers in the society.

Le vieillissement actif au-delà du marché du travail : le rôle de l'environnement de travail sur la participation sociale des seniors

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Les stratégies de « vieillissement actif » visent à promouvoir la participation des seniors dans la société. Alors qu'une littérature économique abondante a été consacrée aux facteurs incitatifs de l'offre de travail des seniors, on connaît mal les motivations qui encouragent les travailleurs à compléter leur activité professionnelle par d'autres activités sociales. En utilisant les données de l'enquête SHARE, cet article apporte des éléments empiriques sur le rôle de l'environnement de travail dans l'offre d'activités productives formelles et informelles des travailleurs âgés de 50 à 65 ans. Les résultats montrent que les récompenses intrinsèques au travail, telles que le développement des compétences et la latitude décisionnelle, constituent une incitation pour les seniors de s'investir dans des activités sociales en dehors du marché du travail. En revanche, les récompenses extrinsèques, telles que les perspectives d'avancement, la sécurité de l'emploi et le salaire, affectent peu les décisions prises en dehors de la sphère marchande. Par conséquent, les motivations intrinsèques dans l'environnement de travail devraient être favorisées si l'on souhaite promouvoir la participation sociale des travailleurs seniors.

