

Declining autonomy at work in the EU and its  
effect on civic behaviour

Helena Lopes  
Teresa Calapez  
Sérgio Lagoa

December 2011

WP nº 2011/11

**DOCUMENTO DE TRABALHO**

**WORKING PAPER**





**DINAMIA'CET**

CENTRO DE ESTUDOS SOBRE A MUDANÇA  
SOCIOECONÓMICA E O TERRITÓRIO  
ISCTE-IUL

## Declining autonomy at work in the EU and its effect on civic behavior

Helena Lopes♣

Teresa Calapez♣♣

Sérgio Lagoa♣♣♣

WP n° 2011/11  
December 2011

|   |    |
|---|----|
| <b>ABSTRACT</b> .....   | 2  |
| <b>INTRODUCTION</b> .....   | 3  |
| The foundational role of autonomy for personal growth.....                        | 5  |
| From autonomy at work to civic behavior .....                                     | 7  |
| Empirical strategy and the measurement of autonomy .....                          | 9  |
| The trends of work autonomy and civic participation in 15 EU countries.....       | 11 |
| The relation between work autonomy and civic behavior – Econometric results ..... | 18 |
| <b>DISCUSSION AND CONCLUDING REMARKS</b> .....                                    | 22 |
| <b>REFERENCES</b> .....   | 25 |
| <b>APPENDIX</b> .....   | 29 |

♣ ISCTE – IUL and DINÂMIA'CET – IUL.

♣♣ ISCTE – IUL and Business Research Unit (Unide-IUL).

♣♣♣ ISCTE – IUL and DINÂMIA'CET – IUL.



## Declining autonomy at work in the EU and its effect on civic behavior

### **ABSTRACT:**

The aim of this paper is to show that social benefits may accrue from work environments that support autonomous forms of work. Based on social psychology, economics and philosophy approaches, we argue that autonomy is a basic human need which, when satisfied, enhances civic behavior. Using individual data from the EWCS, we find evidence of the positive effect of work autonomy on volunteer work and political/trade union activities. Overall, work autonomy has decreased over the last fifteen years for all skill levels in the EU, though there are substantial differences between countries. Organizational practices that promote autonomy should be deliberately stimulated if civic participation is to be furthered.

### **KEYWORDS:**

Work autonomy, civic behavior, work organization, welfare regimes.

*A man's character is moulded by his everyday work (Marshall, 1890/1997).*



## INTRODUCTION

Scholars from all social sciences have long since acknowledged the benefits of autonomy at work, notably for workers. Work autonomy has a positive influence on the workers' self-esteem, their work motivation, their personal satisfaction with working life, and their capacity for self-realization (Gagné and Deci, 2005; Ryan and Deci, 2000). The economic benefits of work autonomy are also well documented. Self-reports of autonomy are shown to be related to employee turnover and performance (Spector, 1986) and autonomy-supportive work environments are found to promote creativity and productivity (Falk and Kosfeld, 2006; Utman, 1997). Furthermore, autonomy at work may yield benefits for society as a whole. Alfred Marshall (1890/1997) and J. S. Mill (1848/1994) were convinced that by developing the workers' higher mental faculties, good working conditions improve the workers' behavior as citizens; moreover, Pateman (1970) argued that participation in decision-making at work is the starting point for a more participatory democracy.

Given such high stakes, one would therefore expect to see work autonomy increasing in all EU countries. This is not the case, however. As reported in the present paper, the scope for employees to exercise discretion in their work varies significantly in European countries and the average trend over the last fifteen years points to an overall decrease in work autonomy in the EU. It is disconcerting to find that so little attention has been paid to the individual and social implications of this structural shift in the world of work.

This paper endeavors to substantiate Alfred Marshall's claim that when workers experience good working conditions, they develop into better citizens, more actively involved in the life of their community. While there is a long tradition of literature arguing that work can have strong implications for political participation – autonomous and participative workplace environments would educate workers to develop more democratic norms which would breed participation in politics (Pateman, 1970; Schur, 2003; Godard, 2007) – the relationship between work-related variables and broad civic participation is far less examined.

The paper makes two contributions. Firstly, it establishes the importance of autonomy for personal growth and provides theoretical grounding to the argument that work autonomy may enhance civic behavior. The experience of work autonomy, defined as the degree of control and discretion that employees have over their work, fosters the workers' ability to be autonomous, i.e., to behave according to their own values and goals. Self-determination theorists have indeed shown that feeling internal assent regarding one's behavior, rather than feeling controlled or pressured, is powerfully related to self-esteem and proves essential for well-being and effective performance in social settings (Deci and Ryan, 2000). The capacity to be self-governing, "like

other faculties, tends to improve by practice, and becomes capable of a constantly wider sphere of practice” (Mill, 1848/1994:69). We argue that this capacity is (also) developed in the work sphere, which in turn leads to higher levels of voluntary participation in civic activities, a paramount instance of self-governed behavior.

Secondly, based on micro-data from four waves of the European Working Conditions Survey (1995, 2000, 2005, 2010), we analyze the association between work autonomy and civic behavior. We begin by building reliable indicators of autonomy at work and civic participation, being the latter measured as the actual participation in voluntary work and political/trade union activities. We then analyze the evolution of work autonomy and civic behavior in the last 15 years in 15 European countries and see whether they evolve in the same direction. Finally, we study the association between both indicators through an econometric analysis. Our hypothesis is that high levels of work autonomy are associated with high levels of participation in civic endeavors.

The results show that work autonomy decreased between 1995 and 2010 for all skill levels, and more particularly for low-skilled clerical workers. There are large discrepancies across countries though; Scandinavian countries fare much better than Mediterranean ones. A decline in civic behavior is also observed and there is a clear association between the levels and trends of work autonomy and civic behavior.

The paper is structured as follows. Based on self-determination theory, the next section explains why and how autonomy plays a key role in human development and growth. The third section further elucidates the processes that may relate autonomy at work to civic behavior. In the fourth section, the data and the empirical strategy are presented. A picture of the levels and trends in autonomy at work and civic behavior in 15 UE countries is provided in the fifth section, followed by the presentation of the econometric estimations relating work autonomy and civic behavior. The last section discusses the results and concludes.

## **The foundational role of autonomy for personal growth**

According to Self-Determination Theory (Deci and Ryan, 2000; Ryan and Deci, 2000), an established empirically-based social psychology approach, autonomy is a basic psychological need<sup>1</sup>. “Needs specify innate psychological nutrients that are essential for ongoing psychological growth, integrity and well-being” (Deci and Ryan, 2000:229). That is, the satisfaction of the need for autonomy is a necessary condition for a person’s growth and is hypothesized to be associated with healthy and effective functioning. Satisfying the need for autonomy involves feeling internal assent regarding one’s behavior rather than feeling controlled or pressured to behave in a given way.

Autonomy refers to behavioral regulation (or motivation), that is, to whether a given action is regulated/determined by the self or by external contingencies. Self-determination is a matter of degree that ranges from inherently autonomous behavior (behavior regulated by intrinsic motivation), to moderately autonomous behavior (regulated by goals and values that are external but important to the self and have hence been internalized), and ultimately to controlled behavior (regulated by extrinsic motivation) (Gagné and Deci, 2005). Intrinsic motivation involves engagement in behaviors driven by an interest or enjoyment in the task itself while extrinsic motivation involves engagement in behaviors in order to obtain rewards or avoid punishment. When people act out of coercion, pressure and control they are said to be extrinsically motivated; when they pursue activities spontaneously they are said to be intrinsically motivated.

Hundreds of studies, using different empirical methods in experimental and natural settings, have examined the importance of autonomy for human functioning and thriving. Autonomy is robustly shown to be related to well-being (both self-reported and medically assessed), enduring self-esteem, strong performance and creativity, and high quality of personal relationships (Ryan and Deci, 2006). Work environments that satisfy the need for autonomy are shown to enhance the workers’ intrinsic motivation and their identification with the organization’s goals, which in turn yield high performance (Akerlof and Kranton, 2008; Breugh, 1985). This is shown to be particularly the case for tasks requiring creativity, cognitive flexibility and conceptual understanding.

It has also been shown that in addition to the *origin* of motivation, whether intrinsic or extrinsic, the *kind* of motive is also important to personal growth. The independent effects of the

---

<sup>1</sup> According to Self-Determination Theory, people have innate psychological needs. These needs, namely the need for competence, relatedness and autonomy, are universal necessities seen in humanity across time, gender and culture. Humans’ natural growth toward positive motivation is thwarted if these needs are not fulfilled and nurtured by the social environment.



contents of peoples' goals on well-being are now well documented: well-being is affected by both *what* people pursue and *why* they pursue it (Sheldon et al., 2004). A – somewhat confusing – distinction has been established between intrinsic and extrinsic goal contents. Intrinsic goals are those for personal growth, emotional intimacy and community involvement, whereas extrinsic goals are those for financial success, image and fame. While the former type of goals directly satisfy the human need for autonomy, the latter may undermine it. Though the content of goals and the dynamic motives underlying them are distinct aspects of motivation, the content of intrinsic goals is shown to be significantly related to intrinsically motivated behavior. That is, a person behaving autonomously is more likely to pursue goals such as personal growth and community well-being.

Self-Determination theorists have extensively examined the conditions that facilitate rather than undermine the development of autonomy and personal growth. Contextual and cultural factors in schools and workplaces continually influence the satisfaction of the need for autonomy, and it is because of their effect on need satisfaction that they, in turn, influence growth, integrity and well-being. Social controls, evaluative pressures, rewards and punishments can powerfully constrain behavior, sometimes outside awareness, and hence thwart the need for autonomy (Ryan and Deci, 2006). A wide array of studies, including in experimental and behavioral economics, has shown that contingent rewards and tight control may crowd-out intrinsic motivation and lead to low performance (Bénabou and Tirole 2002, 2003; Falk and Kosfeld, 2006; Frey and Jegen, 2001). The feeling that one's actions are controlled by external forces undermines inner motivation and can lead to weak self-esteem and alienation.

When the social context is excessively controlling or over-challenging, intrinsic motivation is supplanted by defensive or self-protective processes such as the tendency to withdraw concern for others and focus on oneself (Deci and Ryan, 2000). Also, when environmental conditions thwart need satisfaction, people are led to adhere to materialistic values and pursue extrinsic goals. For example, workers involved in autonomy-supportive environments appear more satisfied at work and less focused on pay and benefits (Sheldon et al., 2004). Controlling environments or compelling constraints obstruct people's ability to engage in self-regulated behavior. By removing the sense of self-confidence required for effective agency, oppressive social conditions threaten the ability to develop one's own system of values and goals.

Framed in dynamic terms, the arguments and findings described above lead to the following statement: the experience of autonomy, that is, the satisfaction of the need for autonomy, fosters self-esteem, which in turn is conducive to people behaving more autonomously and endorsing intrinsic goals. In other words, the extent to which people are able

to satisfy their need for autonomy influences both their ability to be self-determined and the type of goals they pursue. Thus, the more autonomy a person has enjoyed in the past, the more likely she/he is to be involved in volitional and social activities, namely pro-social activities.

The self-determination theory prediction that autonomy-supportive jobs enhance the workers' intrinsic motivation and involvement is now robustly documented. In this paper, and following Marshall's insight, we propose to extend the results found within work contexts to behavior outside of the work realm. The extent to which workers are able to satisfy their need for autonomy at work may influence their general ability to be intrinsically motivated and lead them to seek out activities that they value in out-of-work domains of life. We hence formulate the following conjecture: The more scope for autonomy a worker experiences in his/her job, the more he/she develops his/her ability to engage in autonomous and self-regulated activities.

### **From autonomy at work to civic behavior**

There are economic theories, outside psychology, which also support the suggestion that the experience of autonomy enhances individuals' ability and motivation to undertake pro-social behavior. Like self-determination theorists, Doyal and Gough (1991) posit the existence of basic human needs and identify universal preconditions that have to be met if a person is to live a healthy life and function satisfactorily in society. Autonomy is one of these universal preconditions. Autonomy of agency is defined as the "capacity to make informed choices about what should be done and how to go about doing it" (Gough 1994:28). Doyal and Gough's view of needs goes beyond the emphasis on psychology to encompass the broader socio-economic context. In their approach, autonomy is directly related to the critical participation in social and civic endeavors; autonomy enables people to pursue their vision of the good, whatever it is, and to act accordingly.

This notion of autonomy is very close to Sen's concept of agent and agency. An agent is defined as someone who acts and brings about change. Civic behavior is a paramount case of agency to the extent that it epitomizes the ability to bring about the goals that the agent values, goals that may extend beyond the advancement of personal well-being. In the capability approach, exercising individual agency means acting with a view to improving one's well-being *and* the well-being of others (Sen 2009). This is what self-determination theorists call intrinsically motivated behavior, defined above as behavior engaged out of interest for the activities themselves (intrinsic motivation) and oriented toward goals such as community involvement (intrinsic goals content).

To be fair, civic behavior may be driven by the expectation of future benefits rather than by pro-social motives and concerns. For instance, some economic models explain volunteering by the wish to get social approval or invest in human capital: volunteering would be undertaken for extrinsic reasons. There is however now robust evidence that intrinsic motivations are more important than extrinsic motivations in explaining the decision to volunteer (Degli Antoni 2009) and that individuals who volunteer for intrinsic motives are more satisfied with their life than both extrinsically motivated volunteers and non-volunteers (Meier and Stutzer, 2008). It may hence be assumed that engagement in civic behavior constitutes a prominent instance of reflected pro-social behavior, one essentially rooted in human autonomy.

In philosophy, autonomy refers to both an actual condition – i.e., the psychological ability to be self-governing – and an ideal of virtue. All philosophers agree that autonomy is a fundamental value, constitutive of human agency. “Autonomy ... is the means to our working out our projects in the world. In exercising it, in being self-directing we make our lives ... our own, and this is conducive to self-esteem” (Young, 1982:43). While some philosophers argue that an autonomous act must be congruent with one’s values but that nothing is to be said about the substance of autonomous acts (Thomas, 2006), other philosophers argue that an autonomous person is one whose acts conform to the moral law; acting autonomously would necessarily imply acting virtuously. We will obviously not enter into this debate here. Suffice it to say that, for philosophers, autonomy is constitutive of self-esteem and is the foundation of morality (Hill, 1991). It allows people to construct their own moral principles and then act in conformity with these self-imposed principles.

Following Rousseau and J. S. Mill, Pateman (1970) argues that participation in decision-making at work yields both psychological benefits and the gaining of practice in democratic and civic skills. Work autonomy contributes to developing the qualities required for responsible public action (self-confidence, public-spiritedness, disposition to cooperate) and results in enhanced political participation. The more control individuals exercise over their work life, the more equipped and inclined they are to participate in community life. Pateman’s thesis is supported by empirical evidence showing that the workers’ involvement in decision-making does increase their political participation outside of the workplace (see Schur, 2003 and Godard, 2007).

To sum up, philosophers, social psychologists and economists alike agree that the experience of autonomy is crucial for people’s self-esteem, personal growth and well-being. Autonomous behavior is regarded by these scholars as behavior oriented toward pro-social goals. Our hypothesis is that experiencing autonomy at work contributes to the development of

our autonomy and hence that workers who experience high levels of work autonomy are more likely to actively participate in the life of their community.

### **Empirical strategy and the measurement of autonomy**

Our empirical study draws on the 1995, 2000, 2005 and 2010 waves of the European Working Conditions Survey (EWCS)<sup>2</sup>, a cross-sectional dataset that provides unique and very detailed information on the quality of work in Europe. The EWCS is questionnaire-based, administered using face to face interviews with approximately 1000 individuals in their homes in each country. Every wave sample is representative of those aged 15 years and over who are in employment. In the 2010 EWCS sample, a multi-stage, stratified random sampling design was used in each country (Eurofound, 2012). In the 2005 sample, a multi-stage, stratified and clustered design with either a ‘random walk’ procedure for the selection of the respondents at the last stage or a phone register selection (in Belgium, Netherlands, Sweden and Switzerland) was adopted (Eurofound, 2007). Previous waves used a multi-stage, “random walk” procedure (Eurofound, 1997, 2001).

The data analysis follows various steps. The aim of the first step is to build a reliable indicator of work autonomy. The second step consists of describing and examining the trends in work autonomy and civic participation in the studied countries over the last 15 years (next section). The association between work autonomy and civic participation is studied in a third step (The relation between work autonomy and civic behavior – econometric results).

Work autonomy is far from being an unequivocal notion. Breugh (1985, 1999) proposed a conceptualization of autonomy as multi-dimensional. He hypothesized, and then documented, the existence of three facets of autonomy: work method autonomy refers to the degree of discretion individuals have regarding the procedures/methods to use in their work; work scheduling autonomy refers to the control workers have over the scheduling/sequencing of their tasks; and work criteria autonomy refers to the individuals’ ability to influence the criteria used to evaluate their performance. The psychometric properties of Breugh’s autonomy scales have been extensively validated.

In the EWCS, seven questions, present in all three waves, address the facets of work autonomy identified by Breugh (see Table 1 below and Table 1A in the Appendix). In all waves, answers to the seven questions are dichotomous (yes or no). Table 1 presents the means

---

<sup>2</sup> See <http://www.eurofound.europa.eu/surveys/ewcs/2010/index.htm>.

The 2010 survey covered 27 countries but as our aim was to cover the longest period of time possible, the analysis is restricted to the 15 countries for which data is available for all four waves. The self-employed have also been subtracted from the data base in order to keep the interpretation simple.

and number of valid cases for all seven variables in each wave (the means correspond to the proportions of “yes” answers).

**Table 1.** Means and number of valid cases for each autonomy question, by EWCS wave.

|   | 1995               | 2000               | 2005               | 2010               |
|---|--------------------|--------------------|--------------------|--------------------|
| Is your pace of work dependent on the direct control of your boss? (No=1)           | 0.596<br>(n=12378) | 0.626<br>(n=17667) | 0.606<br>(n=12136) | 0.611<br>(n=18305) |
| Does your main paid job involve: assessing the quality of your own work? (Yes=1)    | 0.778<br>(n=12220) | 0.739<br>(n=17586) | 0.711<br>(n=12089) | 0.732<br>(n=18387) |
| Does your main paid job involve: resolving unforeseen problems on your own? (Yes=1) | 0.833<br>(n=12384) | 0.810<br>(n=17733) | 0.803<br>(n=12278) | 0.815<br>(n=18561) |
| Does your main paid job involve: learning new things? (Yes=1)                       | 0.766<br>(n=12403) | 0.718<br>(n=17704) | 0.704<br>(n=12230) | 0.691<br>(n=18542) |
| Are you able to choose or change the order of your tasks? (Yes=1)                   | 0.623<br>(n=12449) | 0.607<br>(n=17786) | 0.598<br>(n=12238) | 0.630<br>(n=18507) |
| Are you able to choose or change your methods of work? (Yes=1)                      | 0.693<br>(n=12424) | 0.672<br>(n=17815) | 0.649<br>(n=12238) | 0.647<br>(n=18565) |
| Are you able to choose or change your speed or rate of work? (Yes=1)                | 0.698<br>(n=12391) | 0.670<br>(n=17747) | 0.653<br>(n=12180) | 0.656<br>(n=18545) |

Following Jolliffe (2002:339)’s argument that Principal Components Analysis (PCA) provides a plausible low-dimensional representation over binary variables, we used (PCA) as a dimension reducing strategy, retaining the factors with eigenvalues larger than one. Varimax rotation was also applied in order to improve interpretation. As the structure obtained with the pooled data leads to the same interpretation as that of each wave separately, our analysis is based on the (rotated) factor scores for the pooled dataset.

**Table 2.** *PCA loadings matrix<sup>(a)</sup> – pooled dataset.*

|   | F1 –<br>WMSA | F2 –<br>WCA |
|---|--------------|-------------|
| Are you able to choose or change your methods of work? (Yes=1)                      | 0.792        |             |
| Are you able to choose or change the order of your tasks? (Yes=1)                   | 0.767        |             |
| Are you able to choose or change your speed or rate of work? (Yes=1)                | 0.772        |             |
| Is your pace of work dependent on the direct control of your boss? (No=1)           | 0.459        |             |
| Does your main paid job involve: assessing the quality of your own work? (Yes=1)    |              | 0.745       |
| Does your main paid job involve: learning new things? (Yes=1)                       |              | 0.677       |
| Does your main paid job involve: resolving unforeseen problems on your own? (Yes=1) |              | 0.670       |
| Sum of squared loadings   | 2.086        | 1.672       |
| % explained variance  | 29.8         | 23.9        |

(a) Absolute loadings below 0.3 were omitted

WMSA – Working Method and Scheduling Autonomy

WCA – Work Criteria Autonomy

It can be inferred from Table 2 that the first factor covers what Breugh identifies as work method and scheduling autonomy (WMSA) and the second factor may be interpreted as capturing features of work criteria autonomy (WCA). While WMSA refers to the degree of control workers perceive is being exerted over their work, WCA is more related to the scope of responsibility workers have at work.

### **The trends of work autonomy and civic participation in 15 EU countries**

It is recognized that workers in higher occupational classes, with higher levels of skills, tend to enjoy greater autonomy in their job than those lower in the skill hierarchy. The scholars who assume that the advent of the knowledge-based economy leads to a steady increase in skills hence anticipate a general improvement of the workers' discretion over their work activity. In contrast, other scholars consider that a process of skill polarization is underway, accompanied by a long-term decline in job autonomy for the workers in less skilled jobs. For the former scholars, a general increase in work autonomy is to be expected while the latter foresee a polarization in work autonomy. These considerations show that the sole observation of the general trend might conceal significant divergences between workers as the trends in work autonomy may be evolving differently for different categories of workers.

Therefore, to distinguish between groups of workers, we use the Eurofond's classification of the occupational classes of the workers' jobs into four levels of skill: High Skill Clerical – HSC; Low Skill Clerical – LSC; High Skill Manual – HSM; and Low Skill Manual – LSM (see Table 1A in the Appendix). Autonomy scores by skill level have been computed based on this classification.

**Table 3.** *Autonomy scores over time. All countries pooled.*

|              | WMSA - work method and scheduling autonomy |                    |                     |                     |           | WCA - work criteria autonomy |                     |                     |                     |           |
|--------------|--|--------------------|---------------------|---------------------|-----------|------------------------------|---------------------|---------------------|---------------------|-----------|
|              | 1995                                       | 2000               | 2005                | 2010                | 2010–1995 | 1995                         | 2000                | 2005                | 2010                | 2010–1995 |
| <b>HSC</b>   | 0.423<br>(n=2326)                          | 0.478<br>(n=3308)  | 0.342<br>(n=2597)   | 0.378<br>(n=3834)   | -0.048*   | 0.372<br>(n=2326)            | 0.289<br>(n=3308)   | 0,312<br>(n=2597)   | 0.368<br>(n=3834)   | -0.004    |
| <b>LSC</b>   | 0.134<br>(n=5627)                          | 0.095<br>(n=8111)  | 0.032<br>(n=5364)   | 0.014<br>(n=8742)   | -0.123**  | 0.164<br>(n=5627)            | -0.015<br>(n=8111)  | -0,052<br>(n=5364)  | -0.037<br>(n=8742)  | -0.201**  |
| <b>HSM</b>   | -0.294<br>(n=2133)                         | -0.274<br>(n=2905) | -0.347<br>(n=1667)  | -0.293<br>(n=2508)  | -0.008    | 0.113<br>(n=2133)            | 0.113<br>(n=2905)   | 0,035<br>(n=1667)   | 0.045<br>(n=2508)   | -0.068*   |
| <b>LSM</b>   | -0.365<br>(n=2430)                         | -0.409<br>(n=3557) | -0.331<br>(n=2621)  | -0.279<br>(n=3514)  | 0.077**   | -0.236<br>(n=2430)           | -0.389<br>(n=3557)  | -0,475<br>(n=2621)  | -0.501<br>(n=3514)  | -0.265**  |
| <b>Total</b> | 0.023<br>(n=12517)                         | 0.011<br>(n=17880) | -0.028<br>(n=12249) | -0,008<br>(n=18598) | -0.031**  | 0.116<br>(n=12517)           | -0.012<br>(n=17880) | -0,054<br>(n=12249) | -0.030<br>(n=18598) | -0.146**  |

\* Significant difference at the 0.05 level

\*\* Significant difference at the 0.01 level

Note: the 0.00 score corresponds to the average level of autonomy of all workers for all waves; a negative score means below average autonomy, while a positive score means above average autonomy.

WMSA – Working Method and Scheduling Autonomy; WCA – Work Criteria Autonomy

HSC – High-skill clerical workers; LSC – Low-skill clerical workers; HSM – High-skill manual workers; LSM – Low-skill manual workers

Table 3 shows that the level of work autonomy is substantially lower for low-skill and manual occupations, which comes as no surprise. What is actually surprising is that, contrary to all expectations, there has been an overall decline in work autonomy for all skill levels over the period. However, the evolution is not the same for all skill levels. High-skill clerical workers have undergone a decrease in WMSA but no significant change is observed for WCA whereas low-skill clerical workers have seen both dimensions of work autonomy declining significantly. WMS autonomy has increased for low-skilled manual workers. Aggregate figures thus reveal a marked polarization process in work autonomy between high skilled and low skilled clerical jobs but no substantial polarization between clerical and manual jobs. Criteria autonomy declined significantly for all skill levels but high-skilled clerical workers. Overall, the well documented up-skilling of the European workforce is not being accompanied by an increase in their perceived autonomy at work. On the contrary, and in contradiction with dominant

managerial discourses, our results suggest that the changes in the organization of work of the last two decades lead to a decline in the workers' influence on when and how to do their work.

Although all countries face similar competitive demands and economic constraints, national institutional settings and cultural specificities may strongly impact on the levels and trends of work-related variables. We expect the countries belonging to the Scandinavian welfare regime, with their more egalitarian rationale, higher trade union membership and labor-oriented policies, to display higher levels of work autonomy and less difference between high skill and low skill workers. Countries belonging to the South European welfare regime are expected to fare worse in terms both of work autonomy levels and polarization trends, while Continental and Anglo-Saxon countries would display average positions.

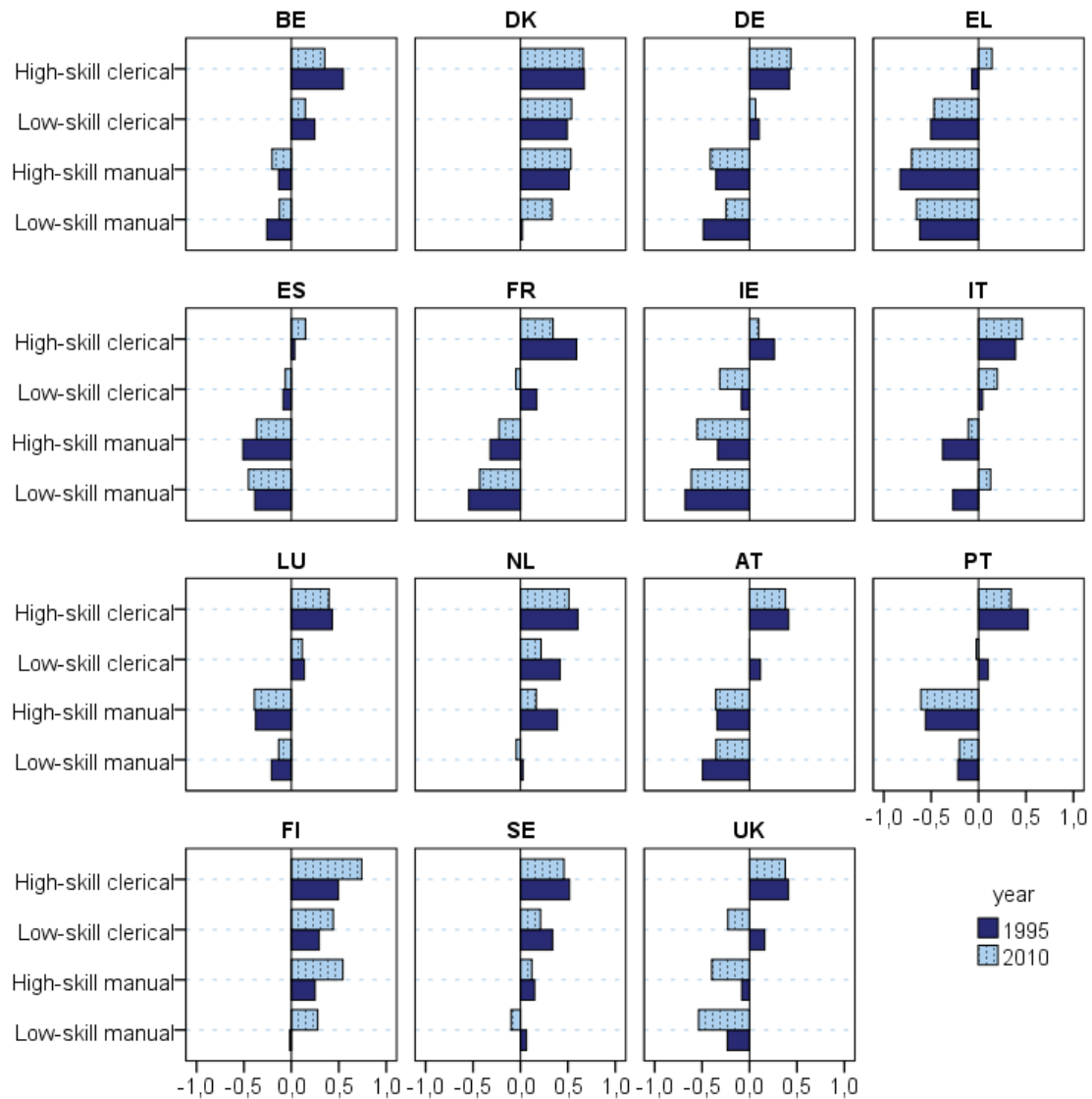
Figures 1 and 2 portray the relative positions of the 15 countries for method and scheduling autonomy (WMSA) and criteria autonomy (WCA) for the four categories of workers. Work autonomy is clearly lower in Greece and Portugal and higher in Denmark, Finland, the Netherlands<sup>3</sup> and Sweden. Both WMSA and WCA are clearly above the global average for all skill levels in all the latter four countries. This result confirms our expectation that the Scandinavian more egalitarian regime displays higher autonomy levels and much less differences across workers than other welfare regimes, where manual workers systematically suffer from below average work autonomy. Even Germany, characterized by a high-technology manufacturing sector and co-management practices, exhibits large differences in work autonomy between clerical and manual workers. The analysis by skill levels allows us inferring that differences in work autonomy across countries are not only due to compositional effects but also to institutional/societal effects. Our results thus do not confirm Gallie (2003)'s claim that the higher level of work autonomy in Scandinavian countries is due to compositional effects.

---

<sup>3</sup> In what concerns work autonomy, as is the case in general for Job quality indicators (Davoine et al, 2008), the Netherlands is closer to the Scandinavian than to the Continental welfare regime.

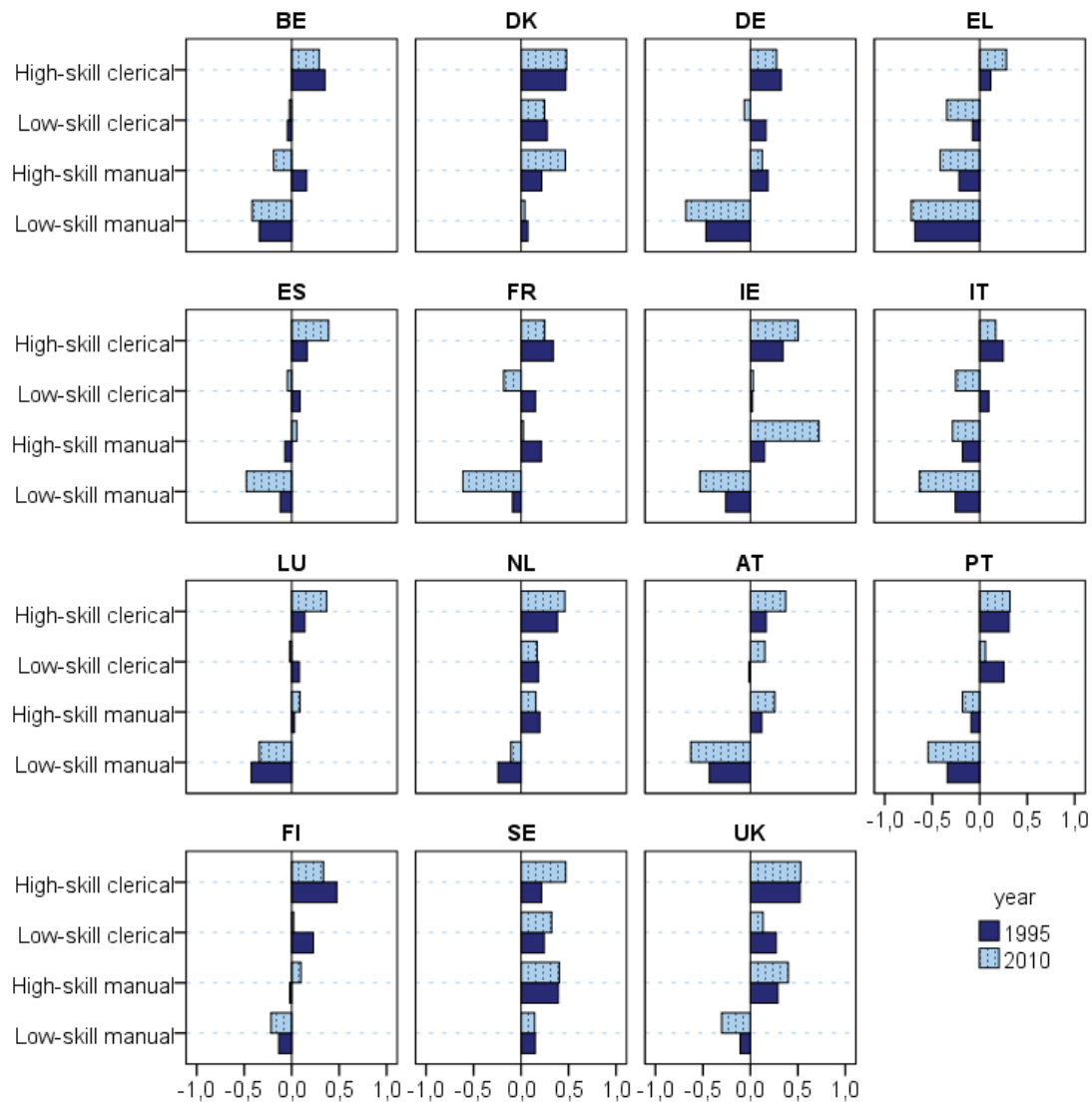


**Figure 1.** Levels and trends of Work Method and Scheduling Autonomy (standardized scores): a comparison of 15 EU countries.



**Note:** Each bar represents the average Work method and scheduling autonomy (WMSA), per country and skill level. Due to the standardization of Global WMSA, a positive value represents an average autonomy level for the corresponding country, skill level and year above the global average, whereas a negative one represents an average autonomy level below the global average. For instance, in Belgium, WMSA is above the global average in 1995 and 2010 for high and low skill clerical workers but has decreased during the period; WMSA has also decreased for high skill manual workers.

**Figure 2.** Levels and trends of work criteria autonomy (standardized scores): a comparison of 15 EU countries.



**Note:** Each bar represents the average Work criteria autonomy (WCA), per country and skill level. Due to the standardization of Global WCA, a positive value represents an average autonomy level for the corresponding country, skill level and year above the global average, whereas a negative one represents an average autonomy level below the global average. For instance, in Belgium and for high-skilled clerical workers, WCA is above the global average in 1995 and 2010 but has decreased over time; in BE, WCA has decreased for all manual workers.

The analysis of the evolution of work autonomy confirms the country differences identified above: looking at both autonomy indicators, we observe an increase in work autonomy in Finland, the Netherlands, Sweden and Denmark while all other countries undergo smaller increases or larger decreases. In what concerns the evolution of work autonomy by skill level, the major systematic pattern is the increase of WCA for high skill clerical workers (10 countries) associated to its decrease for low-skill manual workers (13 countries) and low-skill clerical workers (12 countries). The polarization process seems hence to be mainly due to the evolution of WCA, that is, of the influence over the content of work. While perceived discretion over work methods and schedules (WMSA) diminished for all but low-skill manual workers, only high-skill workers faced an increase in learning new things, assessing the quality and solving problems at work.

Turning now to the analysis of the levels and trends in civic behavior, the EWCS only provides data on involvement in voluntary/charitable activities and political/trade union activities from the 2000 waves onwards. As the two items have a highly skewed distribution, we decided to combine the variables, forming only one dichotomous indicator; this takes the value one when the individual was involved in voluntary activities and/or political activities, and the value zero when she/he was not involved in either activity.

It can be seen in Table 4 that clerical workers display higher levels of civic behavior than manual workers and that high skill clerical workers are by far those who engage more in civic endeavors. This is consistent with the findings reported in the literature, which all point to a significant positive association between education level and civic behavior<sup>4</sup>. A decrease in civic behavior is observed for all categories of workers over the period, and this is particularly marked for manual workers. However, civic behavior has slightly increased between 2005 and 2010, a period marked by a relative stabilization in work autonomy levels.

---

<sup>4</sup> There is quite extensive literature in economics that attempts to identify the determinants of volunteer work. Of the different variables studied (age, gender, income level, urban vs rural habitat, number of hours worked, number of children, marital status, etc.), only education level systematically proves to be significantly and positively related with volunteering. As there is no information about education level in most of the ECWS waves, the skill level is here used as a proxy for education.

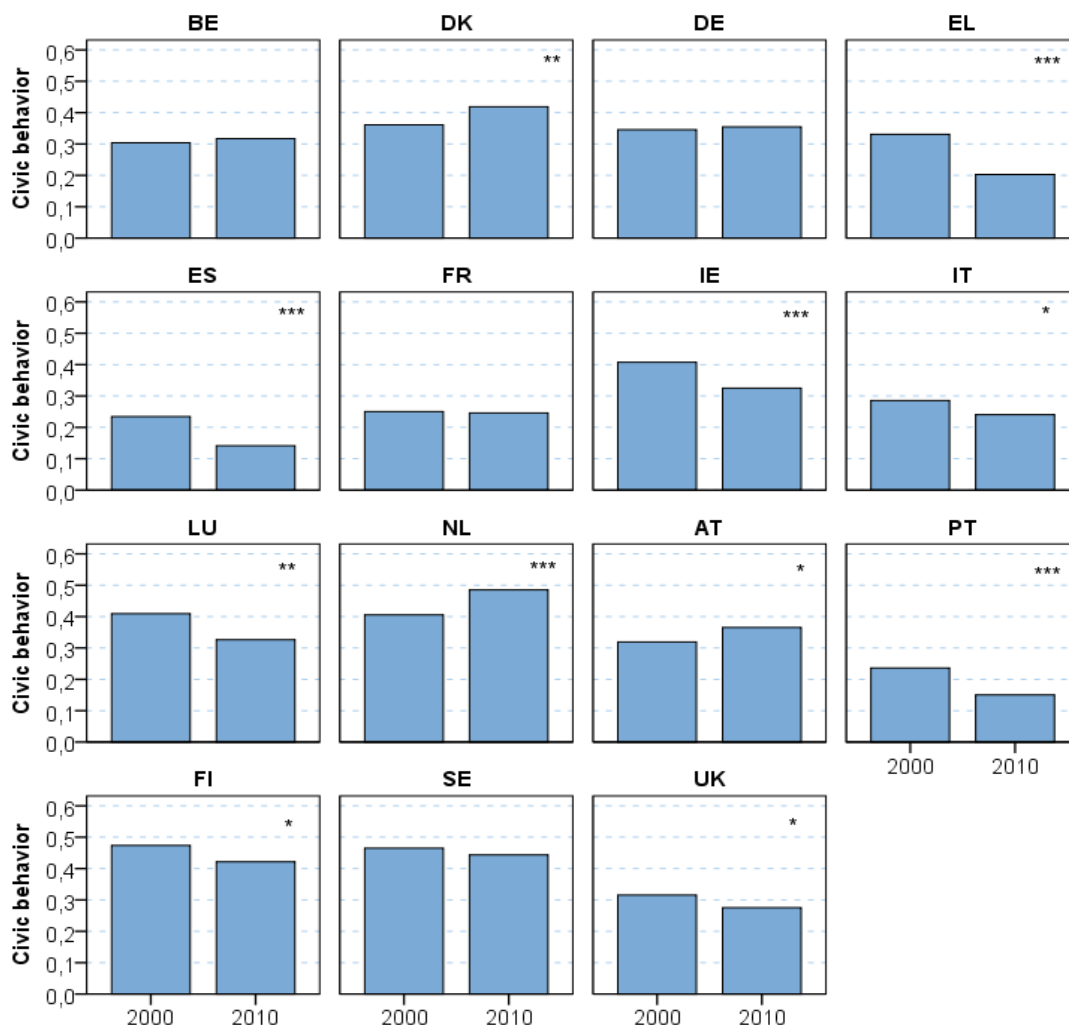
**Table 4.** Proportion of respondents that have any kind of civic behavior over time. All countries pooled.

|                            | 1995 | 2000                             | 2005                             | 2010                             | 2010-2000        |              |
|----------------------------|------|----------------------------------|----------------------------------|----------------------------------|------------------|--------------|
|                            |      |                                  |                                  |                                  | Absolute         | Relative     |
| <b>High-skill clerical</b> |      | 0.434<br>(n=3239)                | 0.388<br>(n=2458)                | 0.400<br>(n=3835)                | -0.035**         | -7.8%        |
| <b>Low-skill clerical</b>  |      | 0.313<br>(n=7905)                | 0.282<br>(n=5023)                | 0.293<br>(n=8732)                | -0,020**         | -6.4%        |
| <b>High-skill manual</b>   |      | 0.254<br>(n=2807)                | 0.195<br>(n=1534)                | 0.224<br>(n=2487)                | -0,030*          | -11.8%       |
| <b>Low-skill manual</b>    |      | 0.244<br>(n=3492)                | 0.194<br>(n=2449)                | 0.205<br>(n=3502)                | -0.040***        | -16.0%       |
| <b>Total</b>               |      | <b>0.312</b><br><b>(n=17443)</b> | <b>0.274</b><br><b>(n=11465)</b> | <b>0.289</b><br><b>(n=18556)</b> | <b>-0.023***</b> | <b>-7.4%</b> |

\* Significant difference at the 0.05 level

\*\* Significant difference at the 0.01 level

\*\*\* Significant difference at the 0.001 level

**Figure 3.** The levels and trends of civic behavior: a comparison of 15 EU countries

Each bar represents the proportion of respondents that had any kind of civic participation (either voluntary/charitable or political/trade union), per country and year. Within each country, the existence of significant differences between years (t-test) is signaled by asterisks: \* Significant difference at the 0.05 level; \*\* Significant difference at the 0.01 level; and \*\*\* Significant difference at the 0.001 level.

The analysis of Figure 3 reveals that there is a wide variation in the level of civic behavior across countries. The positioning of the various countries for the different skill levels is quite similar to the one observed for work autonomy. Thus, in Finland, Sweden and the Netherlands the level of civic behavior is patently higher than in Italy, Spain, France and Portugal. Again, the contrast between Scandinavian and South European countries is manifest. These results suggest the existence of a strong country effect on civic behavior. Over time, civic behavior has decreased in all countries but Denmark, the Netherlands and Austria, where civic behavior has significantly increased.

The evolution of civic participation and work autonomy over time, across countries and skill levels, indicates that both variables have some degree of association. In the next section, we undertake a more complete analysis, controlling for several determinants of civic behavior.

### **The relation between work autonomy and civic behavior – Econometric results**

Following Marshall and Mill's insights, the major aim of our empirical study is to inquire whether autonomy at work "elevates the workers' character" and is consequently associated to higher standards of citizenship. We thereby expect to illustrate empirically that important social benefits may ensue from working conditions that promote the workers' well-being. More specifically, the aim is to provide evidence of the relevance of work autonomy by documenting its association with civic participation. Our hypothesis is that individuals who experience high levels of autonomy at work are more likely to exhibit high levels of civic behavior.

Civic participation is measured using a multi-level scale, where zero indicates no civic participation, and one to five indicates degrees of participation that go from once or twice a year to one hour or more every day (Table 1A, in the Appendix). With a natural ordering of alternatives, the use of an ordered logit is a sensible choice. Making use of a logistic distribution, the regression model explains the probability of a given level of civic participation using a set of regressors.

The WMSA and WCA scores obtained in Section 4 are used as independent variables for work autonomy. Additionally, and following the literature on the determinants of civic participation, several controls were introduced: demographic variables and individual features (gender, age and skill level as a proxy of education); variables related to life outside work (number of people living in the house, doing housework, and leisure) and work-related features other than autonomy (time to commute to work, income, satisfaction at work, fit between work and life outside work, task complexity, whether the worker is a supervisor, whether the worker deals with people at work other than co-workers, whether the worker's activities are done at

high speed, flexibility of working hours, and the type of work contract). Country dummies were also introduced to capture differences in cultural and institutional contexts across countries.

We used data for the years 2000, 2005 and 2010. The year 1995 was not used because civic behavior's questions are not available for that year. The definition of variables and descriptive statistics can be found in Table 1A and Table 2A in the Appendix. The first model in Table 5 includes only country and time dummies. The significance of the country dummies shows that civic participation has an important country-specific dimension. As for the negative and significant coefficients of the time dummies, they indicate that there was a decline in civic participation from 2000 to 2005, and an increase from 2005 to 2010, as we saw in the previous section.

We then introduced the two autonomy variables and the other control variables (Model 2, Table 5). We observe that autonomy is positively and significantly related to workers' civic participation, confirming the hypothesis formulated in Section 3. An increase of one unit in WMSA increases the odds of a higher level of civic participation compared to a lower level by a factor of 0.083, and a unitary increase in WCA increases the odds ratio by a factor of 0.109.<sup>5</sup>

**Table 5** – The determinants of the intensity of civic participation.

|             | Model 1 – Ordered Logit |       |           | Model 2 – Ordered Logit |       |           |
|-------------|-------------------------|-------|-----------|-------------------------|-------|-----------|
|             | Coef.                   | S.E.  | t         | Coef.                   | S.E.  | t         |
| WMSA        |                         |       |           | 0.083                   | 0.021 | 3.85 ***  |
| WCA         |                         |       |           | 0.109                   | 0.022 | 4.82 ***  |
| Austria     | 0.293                   | 0.064 | 4.52 ***  | 0.433                   | 0.083 | 5.18 ***  |
| Belgium     | 0.145                   | 0.056 | 2.59 ***  | 0.132                   | 0.070 | 1.88 *    |
| Denmark     | 0.406                   | 0.058 | 6.97 ***  | 0.275                   | 0.071 | 3.84 ***  |
| Finland     | 0.559                   | 0.054 | 10.24 *** | 0.389                   | 0.068 | 5.66 ***  |
| France      | -0.169                  | 0.060 | -2.81 *** | -0.101                  | 0.073 | -1.38     |
| Germany     | 0.270                   | 0.057 | 4.69 ***  | 0.337                   | 0.072 | 4.66 ***  |
| Greece      | -0.120                  | 0.067 | -1.79 *   | 0.156                   | 0.085 | 1.84 *    |
| Ireland     | 0.301                   | 0.061 | 4.91 ***  | 0.230                   | 0.079 | 2.89 ***  |
| Italy       | -0.152                  | 0.067 | -2.26 **  | 0.005                   | 0.088 | 0.06      |
| Luxembourg  | 0.307                   | 0.072 | 4.22 ***  | 0.273                   | 0.092 | 2.95 ***  |
| Netherlands | 0.800                   | 0.062 | 12.88 *** | 0.680                   | 0.075 | 8.99 ***  |
| Portugal    | -0.570                  | 0.074 | -8.09 *** | -0.352                  | 0.089 | -3.92 *** |
| Spain       | -0.726                  | 0.079 | -9.12 *** | -0.511                  | 0.103 | -4.95 *** |
| Sweden      | 0.810                   | 0.059 | 13.60 *** | 0.702                   | 0.073 | 9.61 ***  |
| Year 2005   | -0.173                  | 0.044 | -3.94 *** | -0.050                  | 0.053 | -0.96     |

<sup>5</sup> The odds ratio measures the probability of a higher level of civic participation relative to the probability of the immediately lower level of civic participation. For example, it compares the probability of an individual being engaged in civic participation once or twice a month (level 2 of civic participation) divided by the probability of an individual participating once or twice a year in those activities (level 1 of civic participation).

## Declining autonomy at work in the EU and its effect on civic behavior

|                   |        |       |          |          |        |           |
|-------------------|--------|-------|----------|----------|--------|-----------|
| Year 2010         | -0.088 | 0.036 | -2.42 ** | 0.054    | 0.044  | 1.21      |
| LSC               |        |       |          | -0.109   | 0.053  | -2.05 **  |
| HSM               |        |       |          | -0.434   | 0.077  | -5.59 *** |
| LSM               |        |       |          | -0.340   | 0.073  | -4.65 *** |
| Age               |        |       |          | 0.028    | 0.012  | 2.33 **   |
| Age <sup>2</sup>  |        |       |          | -0.00005 | 0.0001 | -0.35     |
| Income            |        |       |          | 0.065    | 0.017  | 3.67 ***  |
| Hours of work     |        |       |          | -0.007   | 0.002  | -3.46 *** |
| Time to work      |        |       |          | -0.001   | 0.0005 | -3.32 *** |
| Working hours fit |        |       |          | -0.011   | 0.027  | -0.42     |
| Nb obs            | 47868  |       |          | 36815    |        |           |
| Pseudo-R2         | 0.0321 |       |          | 0.0902   |        |           |

**Note:** the dependent variable is Civic participation Other control variables were also included: Sex, Hours of work, High speed, People in house, Housework, Leisure, Satisfaction, Task complexity, People at work, Same hours, Contract, Teamwork and Supervision. \* – significant at 10% level of significance, \*\* – significant at 5%, and \*\*\* – significant at 1%.

In order to assess the size of the effect of work autonomy on civic participation, we compare its quantitative impact with that of other variables. Let us start by seeing the effect of a one standard deviation change in WMSA or WCA, which is usually considered a medium-size change in a variable. This change has an effect on the relative probability of a higher level of civic participation similar to the effect of a worker changing from a low skill clerical job to a high skill clerical job, and an effect larger than if a worker moves up one quartile in the income distribution.

Alternatively, take as an example two workers that are equal in every respect, but one has high criteria autonomy (for example WCA=1) while the other has low criteria autonomy (for example WCA=-2). In this case, relative probability of a high level of civic participation would be 33% greater for the high autonomy worker than the low autonomy worker. Roughly the same occurs with WMSA. It can hence be concluded that the autonomy variables have an important quantitative role on the odds of civic participation.

The skill level, considered here as a proxy of education, is a particularly important variable since it is the only factor that is systematically reported in the literature to be statistically and positively related to volunteer work (Cappellari and Turati, 2004; European Commission, 2010). Our results, in which high skill clerical workers (the base line skill category) exhibit a much higher level of civic participation, are thus consistent with the literature. They further show that clerical workers have a greater propensity to participate in civic activities than manual workers. As a robustness check, we estimated Model 2 with the ten original occupations rather than aggregating the occupations in the four skill levels, but the sign and significance of the autonomy variables remained the same (results available on request).

Most country dummies are significant at 5% level of significance, with the exception of Belgium, France, Greece and Italy. This means that in these four countries the country-specific characteristics affecting civic participation have an impact similar to the UK, which was chosen as the reference country. In turn, Austria, Denmark, Finland, Germany, Ireland, Luxembourg, the Netherlands, and Sweden tend to display higher levels of civic behaviour than the UK, while workers in Portugal and Spain are less prone to engage in civic activities.

Finally, the coefficients of the time dummies are not statistically significant in Model 2, indicating that after controlling for the variables that may affect civic participation, there is no significant residual trend unexplained.

The econometric results of the models and data used do not establish causality. In the case in hand, it is possible that personal characteristics, for example autonomy orientation, affect civic behavior as well as work autonomy through self-selection while choosing the job. Indeed, autonomy orientation has been shown to influence the autonomy need satisfaction (Gagné and Deci, 2005) and therefore also pro-social behavior. As a result, autonomy and civic participation may be simultaneously determined, giving rise to reverse causation problems. In other words, our model may suffer from endogeneity.

To test if endogeneity is really a problem, we used a linear probability model estimated with instrumental variables (2SLS). Finding appropriate instruments is often problematic. In our analysis they have to be related with the worker's autonomy, but not independently related with his/her civic behavior. We choose four instruments that measure whether the job involves i) working to tight deadlines; ii) repetitive tasks and iii) a pace of work dependent on a machine or movement of a product. Although all these variables are job-related, they proved insignificant in explaining civic participation in regression 2. In the same direction, the test of overidentifying restrictions indicates that the instruments are not correlated with the error term.<sup>6</sup> The chosen instruments have shown also a strong explanatory power in the first stage regression: the F-statistic for the null that they are zero is much higher than the usual rule of thumb of 10, with the F-statistics for the first stage regressions of WMSA and WCA being 262.9 and 126.0, respectively. Indeed the formal test rejects that instruments are weak.<sup>7</sup> In sum, the four instruments seem to be adequate. After estimating the 2SLS model, we performed a test of endogeneity, which indicates that the autonomy variables are not endogenous.<sup>8</sup> This means that the original results of the ordered logit are valid (Model 2, Table 5).

---

<sup>6</sup> The null hypothesis of the validity of the instruments has a score chi-squared statistic with a p-value of 0.1213.

<sup>7</sup> The minimum eigenvalue statistic for the null that the instruments are weak is 44.41 (for a 10% critical value of 13.43).

<sup>8</sup> The null hypothesis that variables are exogenous has a score chi-squared statistic with a p-value of 0.47.



## DISCUSSION AND CONCLUDING REMARKS

Based on social psychology theories and findings, but also on economics and philosophy approaches, this paper argues that autonomy is a basic human need whose satisfaction enhances civic behavior. On the one hand, autonomy has an intrinsic value for individuals; it directly fosters self-esteem and enables humans to flourish. As human flourishing naturally yields “virtuous action”, as upheld by Aristotle more than two thousand years ago, on the other hand, autonomy has a derived value for society; in expanding people’s ability for self-government, it fosters pro-social behavior which in turn enhances social well-being.

Our aim was to show that social benefits may accrue from work environments that support autonomous forms of work. An autonomy supportive context is one in which authority figures set policy and relate to employees in ways that consider their perspective and are responsive to their needs. This involves consultation and participation in decision-making, encouraging self-initiation, providing meaningful rationales and feedback and using a style of communication that is encouraging (Gagné and Deci, 2005; Ryan and Deci, 2000). In other words, autonomy supportive conditions imply extending the control that workers have over the workplace rather than having their activities tightly determined by external forces.

The fact that autonomy at work decreased in all but the Scandinavian countries over the last fifteen years unquestionably shows that the observed trends go against the desired evolution. Work autonomy decreased in low skill clerical and low skill manual jobs, which suggests a polarization trend between skill levels rather than between clerical and manual workers. The well-documented increase in the average skill level of the workforce has not been accompanied by an increase in the levels of work autonomy. However, the situation in the countries adopting the so-called Scandinavian welfare regime is much better. In Denmark, Finland, the Netherlands and Sweden, all groups of workers benefit from greater autonomy at work. Furthermore, work autonomy decreased much less, or not at all, in these countries between 1995 and 2010, which suggest a divergence process in job quality in the EU.

The levels and trends of civic participation closely follow those of work autonomy. Hence, in the Scandinavian countries civic participation is high, whereas Greece, Italy, Spain and Portugal exhibit lower civic behavior. The econometric results also show a significant country effect on civic participation. These results clearly indicate that institutional environments are of great importance both for work-related outcomes and for civic participation.

As pointed out by Gallie (2007), it does not seem to be the level of economic development that decisively affects work autonomy but rather factors such as organizational forms, the strength of trade unions and the public policy commitment to work life quality. It

seems that the Scandinavian countries have managed to establish a socio-economic system that proves to be relatively more able to satisfy the human psychological needs – that of autonomy, in the case in hand, with the ensuing benefits for society as a whole. Marshall, Mill and Pateman appear to be right: the social and political institutions affect the worker's character; more egalitarian societies influence individual attitudes and civic behavior. Our results show that work autonomy still has an autonomous impact on civic behavior after controlling for societal effects. They then suggest that the pro-social norms that drive civic behavior might have been generated by the patterns of work organization prevailing over time, and in particular from the extent in which the latter promote autonomy and participation at work.

Future research should be dedicated to investigating the reasons that explain the observed overall decrease in work autonomy. The pressure on management brought about by growing international competition emerges as a first possible reason. But the management literature advocates the adoption of “high-performance” work practices, such as motivation and involvement through employee participation, to foster organizational efficiency. It might be that the academic results showing that such practices enhance organizational performance are too general and hence inaccurate. In effect, Gagné and Deci (2005) show that there appears to be no performance advantage to autonomous motivation when a job involves only mundane and low-skilled tasks. Pursuing efficiency would then lead managers to discriminating between workers, which may explain the observed polarization between high and low skill workers, with low-skill workers facing a decrease in their responsibility over work – what we called work criteria autonomy. The decrease in work method and scheduling autonomy may be explained by the expansion of individual assessment practices and new technological devices that increase the workers' perception of being controlled. Only public policies committed to promote job quality and unions' action are likely to keep in check the deterioration of work life observed in most EU countries.

The results of the econometric analysis indicate that autonomy at work does positively relate with volunteer work and political/trade union activities. They then suggest that policies encouraging self-determination at work may have positive consequences that extend beyond their primary objectives. Thus, in our view, workplace policy needs to adopt a more interventionist stance. Organizational practices that promote autonomy-supportive work environments must be deliberately stimulated if civic participation and a more humane society are to be furthered.

One of the limitations of our study resides in our indicator of autonomy, which captures relevant aspects of work autonomy but does not cover the extent in which the workers participate in the decision-making processes (Busck et al, 2010). Such information is

unfortunately not available in the former waves of the EWCS. However, we may conjecture that the differences in work autonomy across countries and workers would be even greater if a broader notion of autonomy were used. Also, everything suggests that the association between a more comprehensive measure of work autonomy and civic behavior would prove to be even stronger (Godard, 2007).

If work can generate incredibly high personal and social costs, it can also generate some of the best possible outcomes if properly reformed. We finish this paper as we began, with one of Marshall's famously optimistic statements: "No doubt men, even now, are capable of much more unselfish service than they generally render: and the supreme aim of the economist is to discover how this latent social asset can be developed most quickly, and turned to account most wisely" (Marshall, 1890/1997:9).

### **Acknowledgements**

The European Working Conditions Surveys are sponsored and owned by the European Foundation for the Improvement of Living and Working Conditions and distributed by UK Data Archive, University of Essex. These institutions bear no responsibility for the present analysis and interpretation of the data.

### **Funding**

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

## REFERENCES

Akerlof G and Kranton R (2008) Identity, supervision and work groups. *American Economic Review* 98(2): 212–217.

Bénabou R and Tirole J (2002) Self-Confidence and Personal Motivation. *Quarterly Journal of Economics* 117(3):871–915.

Bénabou R and Tirole J (2003) Intrinsic and Extrinsic Motivation. *Review of Economic Studies*, 70(3): 489–520.

Breaugh J (1985) The measurement of autonomy. *Human Relations* 38(6): 551–574.

Breaugh J (1999) Further investigation of the work autonomy scale. *Journal of Business and Psychology* 13(3): 357–373.

Busck O, Knudsen H and Lind J (2010) The transformation of employee participation: consequences for the work environment. *Economic and Industrial Democracy* 31(3): 285-307.

Cappellari L and Turati G (2004) Volunteer labour supply: the role of workers' motivations. *Annals of Public and Cooperative Economics* 75(4): 619–643.

Davoine L, Ehrel C and Guergoat-Larivière M (2008) Monitoring quality in work. *International Labour Review* 147 (2-3): 163-198.

Deci E and Ryan R (2000) The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry* 11(4): 227–268.

Degli Antoni G (2009) Intrinsic vs. Extrinsic motivations to volunteer and social capital formation. *Kyklos* 62(3):359–370.

Doyal L and Gough I (1991) *A Theory of Human Needs*. London: MacMillan.

European Commission (2010) Volunteering in the European Union. Report, available at: <http://europa.eu/volunteering/en/press-media/resources/all/32?page=2> (accessed 28 March 2011).

Eurofound (1995) European Working Conditions Survey (computer file). Colchester, Essex: UK Data Archive [distributor], March 2007. SN: 5286, DOI: 10.5255/UKDA-SN-5286-1.

Eurofound (1997) *Second European survey on working conditions*. Final report, Luxembourg: Office for Official Publications of the European Communities.

Eurofound (2000) European Working Conditions Survey (computer file). Colchester, Essex: UK Data Archive [distributor], March 2007. SN: 5604, DOI: 10.5255/UKDA-SN-5604-1.

Eurofound (2001) *Third European survey on working conditions 2000*. Final report, Luxembourg: Office for Official Publications of the European Communities.

Eurofound (2005) European Working Conditions Survey (computer file). Colchester, Essex: UK Data Archive [distributor], May 2007. SN: 5639. DOI: 10.5255/UKDA-SN-5639-1.

Eurofound (2007) *Fourth European Working Conditions Survey*. Final report, Luxembourg: Office for Official Publications of the European Communities.

Eurofound (2010) European Working Conditions Survey (computer file). Colchester, Essex: UK Data Archive [distributor], February 2012. SN: 6971, DOI: 10.5255/UKDA-SN-6971-1.

Eurofound (2012) *Fifth European Working Conditions Survey*. Overview report, Luxembourg: Publications Office of the European Union.

Falk A and Kosfeld M (2006) The hidden costs of control. *American Economic Review* 96(5): 1611–1630.

Frey B and Jegen R (2001) Motivation crowding theory: A survey of empirical evidence. *Journal of Economic Surveys* 15(5): 589–611.

Gagné M and Deci E (2005) Self-determination theory and work motivation. *Journal of Organizational Behavior* 26(4): 331–362.

Gallie D (2003) The quality of working life. Is Scandinavia different? *European Sociological Review* 19(1):61-79.

Gallie D (2007) Task discretion and job quality. In: Gallie D (ed) *Employment Regimes and the Quality of Work*. Oxford: Oxford University Press, pp.105–136.

Godard J (2007) Is good work good for democracy? Work, change at work and political participation in Canada and England. *British Journal of Industrial Relations* 45(4):760–790.

Gough I (1994) Economic Institutions and the satisfaction of Human needs. *Journal of Economic Issues* 28(1):25–66.

Hill T (1991) *Autonomy and self-respect*. Cambridge: Cambridge University Press.

Jolliffe IT (2002) *Principal Component Analysis* 2<sup>nd</sup> edition. New York: Springer-Verlag.

Marshall A (1890/1997) *Principles of Economics*. New York: Prometheus Books.

Meier S and Stutzer A (2008) Is Volunteering Rewarding in Itself? *Economica* 75(297):39–59.

Mill JS (1848/1994) *Principles of Political Economy*. Oxford: Oxford University Press.

Pateman C (1970) *Participation and democratic theory*. Cambridge: Cambridge University Press.

Ryan R and Deci E (2000) Self-determination Theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist* 55(1): 68–78.

Ryan R and Deci E (2006) Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination and will? *Journal of Personality* 74(6):1557–1585.

Schur L (2003) Employment and the creation of an active citizenry. *British Journal of Industrial Relations* 41(4):751-771.

Sen A (2009) *The idea of Justice*. Cambridge, MA: Belknap Press of Harvard University Press.

Sheldon K, Ryan R, Deci E and Kasser T (2004) The independent effects of goal contents and motives on well-being: It's both What you pursue and Why you pursue it. *Personality and Social Psychology Bulletin* 30(4):475–486.

Spector P (1986) Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations* 39(11):1005–1016.

Thomas L (2006) Autonomy, moral behavior and the self, manuscript.

Young R (1982) The value of autonomy. *Philosophical Quarterly* 32: 35–44.

Utman CH (1997) Performance effects of motivational state: A meta-analysis. *Personality and Social Psychology Review* 1(2): 170–182.

## APPENDIX

**Table 1A.** *Definition of Variables*

---

### **WMSA – Work Method and Schedule Autonomy**

---

Is the respondent able to choose or change his method of work? 1 – yes; 0 – no.

Is the respondent able to choose or change his speed or rate of work? 1 – yes; 0 – no.

Is the respondent able to choose or change his order of tasks? 1 – yes; 0 – no.

Is the respondent's pace of work dependent on the direct control of his boss? 1 – yes; 0 – no.

---

### **WCA – Work Criteria Autonomy**

---

Does the respondent's main paid job involve assessing the quality of his own work? 1 – yes; 0 – no.

Does the respondent's main paid job involve learning new things? 1 – yes; 0 – no.

Does the respondent's main paid job involve resolving unforeseen problems on his own? 1 – yes; 0 – no.

---

### **Classification of occupations into skill levels**

---

|                       |   |
|-----------------------|---|
| High-Skilled Clerical | Isco1 – Legislators, senior officials and managers        |
|                       | Isco2 – Professionals                                     |
| Low-Skilled Clerical  | Isco3 – Technicians and associate professionals           |
|                       | Isco4 – Clerks  |
|                       | Isco5 – Service workers and shop and market sales workers |
| High-Skilled Manual   | Isco6 – Skilled agricultural and fishery workers          |
|                       | Isco7 – Craft and related trades workers                  |
| Low-Skilled Manual    | Isco8 – Plant and machine operators and assemblers        |
|                       | Isco9 – Elementary occupations                            |
|                       | Isco10 – Armed forces                                     |

---

### **Other variables**

---

**Sex:** 1 – women and 0 – men.

**Age:** age of the respondent in years.

**Year 2005:** 1 – 2005 and 0 – 2000.



**LSC:** 1 if the respondent's job is low skill clerical and 0 otherwise.

**HSM:** 1 if the respondent's job is high skill manual and 0 otherwise.

**LSM:** 1 if the respondent's job is low skill manual and 0 otherwise.

**Hours of work:** Number of hours the respondent works per week in his main paid job.

**People in house:** number of people living in the household.

**Housework:** How often is the respondent involved in cooking and housework? 0 – never, 1 – once or twice a year, 2 – once or twice a month, 3 – once or twice a week, 4 – everyday or every second day for less than 1 hour, 5 – everyday for 1 hour or more.

**Leisure:** How often is the respondent involved in sporting, cultural or leisure activity outside his/her home? Same scale as housework.

**Voluntary:** How often is the respondent involved in voluntary or charitable activity? Same scale as housework.

**Political:** How often is the respondent involved in political/trade union activity? Same scale as housework.

**Civic Participation 1:** 1 if the respondent participates in voluntary or charitable activity, or in political/trade union activity, and 0 if she/he never participates in such activities. Used in the descriptive analysis of Section 4 and 5.

**Civic Participation 2:** is the highest value declared by the respondent relative to the frequency of her/his participation in Voluntary or Political activities. Used in Section 6.

**Time to work:** number of minutes per day the respondent normally spends travelling from home to work and back.

**Income:** This question is related to the respondent's average net monthly income, after income tax and social security contributions, from his/her main paid job. This variable is organized in income bands, which differ from country to country. They correspond to a partition of the labor income distribution for each country in four groups. The first group contains the 25% of workers with the lowest income in each country and the fourth group includes the 25% of workers with the highest income.

**Satisfaction:** Is the respondent satisfied with working conditions in his main paid job? 1– not at all, 2 –

not very, 3 – satisfied, 4 – very satisfied.

**Working hours fit:** Do the respondent's working hours fit his/her family or social commitments outside work? 0 – not at all well, 1 – not very well, 2 – well, 3 – very well.

**Machine:** Is the respondent's pace of work dependent on automatic speed of a machine or movement of a product? 1 – yes and 0 – no.

**Task complexity:** Does the respondent's main paid job involve complex tasks? 1 – yes and 0 – no.

**Deadlines:** Does the respondent's job involve working to tight deadlines? 0 - never, 1 - almost never, 2 – around ¼ of the time, 3 – around half of the time, 4 – around ¾ of the time, 5 – almost all of the time, 6 - all of the time.

**High speed:** Does your job involve working at very high speed? The same scale as Deadlines.

**Repetitive tasks:** Does your job involve short repetitive tasks of less than 10 minutes? 1 – yes and 0 – no.

**People at work:** Does your main paid job involve dealing directly with people who are not employees at your workplace? The same scale as Deadlines.

**Same hours:** Do you work the same number of hours every day? 1 – yes and 0 – no.

**Contract:** 1 if the worker has an indefinite contract and 0 otherwise.

**Teamwork:** Does your job involve doing all or part of your work in a team? 1 – yes and 0 – no.

**Supervision:** 1 – if the worker supervises at least one worker and 0 if he/she does not supervise any worker at all.

---

**Table 2A** – Variables: Summary statistics

| Variable              | Obs.  | Mean   | Std. Dev. | Min    | Max   |
|-----------------------|-------|--------|-----------|--------|-------|
| WMSA                  | 36815 | -0.011 | 1.001     | -2.049 | 1.447 |
| WCA                   | 36815 | -0.024 | 1.012     | -2.667 | 1.177 |
| Civic Participation 2 | 36815 | 0.601  | 1.091     | 0      | 5     |
| Year 2005             | 36815 | 0.245  | 0.430     | 0      | 1     |
| Year 2010             | 36815 | 0.414  | 0.492     | 0      | 1     |
| Female                | 36815 | 0.472  | 0.499     | 0      | 1     |
| LSC                   | 36815 | 0.460  | 0.498     | 0      | 1     |
| HSM                   | 36815 | 0.144  | 0.351     | 0      | 1     |
| LSM                   | 36815 | 0.200  | 0.400     | 0      | 1     |
| Hours of work         | 36815 | 36.00  | 10.66     | 1      | 168   |
| Age                   | 36815 | 39.00  | 11.58     | 15     | 70    |
| People in house       | 36815 | 2.986  | 1.265     | 1      | 13    |
| Housework             | 36815 | 3.590  | 1.760     | 0      | 5     |
| Leisure               | 36815 | 2.245  | 1.578     | 0      | 5     |
| Income                | 36815 | 2.441  | 1.082     | 1      | 4     |
| Time to work          | 36815 | 41.472 | 33.804    | 0      | 360   |
| Satisfaction          | 36815 | 3.064  | 0.708     | 1      | 4     |
| Working hours fit     | 36815 | 3.115  | 0.788     | 0      | 4     |
| Task Complexity       | 36815 | 0.569  | 0.495     | 0      | 1     |
| People at work        | 36815 | 3.180  | 2.457     | 0      | 6     |
| Same hours            | 36815 | 0.624  | 0.484     | 0      | 1     |
| Contract              | 36815 | 0.804  | 0.396     | 0      | 1     |
| Supervision           | 36815 | 0.156  | 0.362     | 0      | 1     |
| High speed            | 36815 | 2.568  | 2.040     | 0      | 6     |
| Machine               | 36815 | 0.190  | 0.392     | 0      | 1     |
| Deadlines             | 36815 | 2.716  | 2.084     | 0      | 6     |
| Repetitive            | 36815 | 0.452  | 0.497     | 0      | 1     |