

## Gender Differences in European Volunteer Rates

### Abstract

The main goal of this research is to identify the reasons for gender differences in European volunteer rates in different types of voluntary organisations. To that end, we focus in volunteer rates at individual and national levels. We have drawn our data from the European Values Survey (EVS, 1999 and 2008). We have employed Logit models carrying out independent estimations for the individual likelihood of working as a volunteer for four categories: social awareness, professional, education and social justice. We have carried out independent estimations and we have also repeated estimations by gender subsamples. Our main result is that social factors might be even more relevant for decisions to volunteer than individual socio-economic factors. Specifying the peer group as much as possible allows better control of social variables. For example, studying the female volunteer rate is more relevant to control for the female national NGO membership rate than the total national rate. We also highlight important gender differences. For example, education is positively correlated with decisions to volunteer for both genders in all categories, but the educational effect is stronger for men in relation to professional activities and stronger for women in relation to social awareness and social justice activities.

**Keywords:** volunteering; volunteer women; gender motivation; context; volunteer activities.

## Introduction

Gender differences in volunteering have usually been analysed as a social construct (Gilligan, 1982; Hustinx & Lammertyn, 2003). The conceptual approach used is the theoretical framework of social learning (Bandura, 1969). The basic explanation is that people observe gender role models and imitate them. Appropriate gender behaviour is positively reinforced in society, and in the same way, gender misconduct is negatively reinforced (Eagly, 1987; Golombok & Fivush, 1994). Although the literature review shows that women are more likely to volunteer than men (Mesch et al., 2006; Wymer, 2011), this statement loses intensity when controlling for socio-economic determinants such as employment and family composition (Hook, 2004; Taniguchi, 2006). In some specific domains, such as corporate volunteering, men are more likely to volunteer than women (Gomez & Gunderson, 2003). Gender differences are also observed in volunteering intensity (Mesch et al., 2006; Rosenthal et al., 1998; Wymer & Samu, 2002), motivations for volunteering (Maslanka, 1993; Trudeau & Devlin, 1996), preferences for the type of non-profit organisation (Schlozman et al., 1994), and voluntary commitment (Lammers, 1991). However, empirical results on gender differences in volunteering are contradictory and little research has been conducted on the reasons that participation varies between men and women (Einolf, 2011; Fyall & Gazley, 2015).

Understanding the determinants of gender differences in volunteering is important because civic engagement has positive effects on society and, consequently, significance for social policies and social welfare (Taniguchi, 2006). Volunteering is a phenomenon that concerns culture; therefore, participation rates depend on how societies are structured and how social responsibility is assigned within them (Haski-Leventhal, 2009). Since volunteering is influenced by geographical location, even gender differences among countries depend on social backgrounds. In general, Nordic countries show the highest volunteer rates, while

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3 Mediterranean and Eastern European countries show the lowest (Gil-Lacruz & Marcuello,  
4 2013; Sardinha, 2010; Voicu & Voicu, 2009). Moreover, given that many voluntary  
5 organisations have an international dimension, they help to spread universal norms (Leung et  
6 al., 2005) and to promote the emergence of a global civil society that develops isomorphic  
7 behaviours (Dryzek, 2012).  
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13 This paper contributes to research on volunteers from a gender perspective. We identify some  
14 of the reasons behind the differences in participation rates between men and women, taking  
15 into account voluntary organisation types in European countries. For our comparisons to have  
16 significance, we have included Nordic countries (Sweden, Denmark and Finland), Anglo-  
17 Saxon countries (United Kingdom and Ireland), Continental countries (Austria, Germany,  
18 France and Hungary), Mediterranean countries (Greece, Italy, Spain and Portugal) and  
19 Eastern countries (Bulgaria, Czech Republic, Lithuania, Poland and Romania). With this  
20 background, our main goal is to describe the similarities and differences in volunteer rates at  
21 individual and national levels. We take into account how individual determinants (socio-  
22 demographic variables) and contextual factors (governmental expenditure on social matters)  
23 define decisions to volunteer. To that end, we have drawn data from the European Values  
24 Surveys (EVS, 1999 and 2008).  
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39 The paper is structured as follows. Section 2 is devoted to the theoretical framework. Section  
40 3 concentrates on the database and Section 4 on the empirical framework. Section 5 shows the  
41 results. And finally, Section 6 provides the **Theoretical framework**  
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#### 44 *Gender analysis*

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48 Gender studies on helping behaviours usually consider the concept of a social role as the  
49 theoretical framework (Belansky & Boggiano, 1994; Eagly, 1987; Erdle et al., 1992). Social  
50 roles are a set of interdependent functional relationships defined by societies and with  
51 important implications between the individual and the social circle (Znaniecki, 1980). Social  
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3 learning theories try to explain how educational processes can lead people to adopt behaviour  
4 patterns; thus, gender differences can be explained by gender roles (Riquelme et al., 2014).  
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6 The theory of the social role by Eagly (1987) defined the gender role as shared expectations  
7 of appropriate socially identified gender behaviour. It also noted that behavioural differences  
8 between men and women are determined by a tendency to behave consistently with their  
9 gender role and personal history so that these experiences allow people to define a personal  
10 repertoire of skills and attitudes (Eagly & Karau, 2002).

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12 Men often focus on roles that emphasise power, competence and authority, while women pay  
13 more attention to roles that highlight human interaction and social support (Eagly, 1987;  
14 Evans & Diekmann, 2009). These patterns are often transmitted by family and society (Walters  
15 et al., 1991) so that gender behavioural expectations are created and instrumentalised through  
16 attributes directed towards tasks and expressions of affection (Diaz-Loving et al., 2007). The  
17 female role is characterised by helping behaviours that are related to the community and care  
18 (Eagly, 1987). Women are also expected to be more sensitive to the needs of family and  
19 friends than men (Hollander et al., 2011).

### 20 *Contextual data*

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22 However, a more exhaustive gender analysis requires additional contextual variables (Studer  
23 & von Schnurbein, 2013). Since volunteering is a social and economic phenomenon,  
24 volunteer rates depend on how societies are structured and how social responsibility is  
25 allocated within them (Haski-Leventhal, 2009). Different national cultures cause volunteering  
26 to be perceived differently (Meijs et al., 2003). Against this background, a growing body of  
27 literature reviews include analyses on the differences in the level of volunteering among  
28 European countries (Curtis et al., 2001; Gil-Lacruz & Marcuello, 2013; Sardinha, 2010;  
29 Voicu & Voicu, 2009). For example, the research of Gil-Lacruz and Marcuello (2013) used  
30 data from the European Value Survey (2008) to show that Nordic countries, such as Denmark,  
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2 Norway or Sweden, have the highest volunteer rates (around 30%) in Europe, followed very  
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4 closely by Continental countries, such as France, Germany or Holland. Anglo-Saxon  
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6 countries (the United Kingdom and Ireland) are in third place with a percentage close to 20%,  
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8 and Mediterranean countries, such as Greece, Portugal and Spain, are in the fourth place with  
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10 a percentage of approximately 10%.

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12 Differences in volunteer rates among countries are a consequence of several factors:  
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14 development and economic growth due to higher individual levels of education and income  
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16 (Curtis et al., 2001; Lipset, 1994), religious tradition due to its impact on civic attitudes  
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18 (Inglehart & Baker, 2000; Lipset, 1994; Verba et al., 1995); the type of democratic  
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20 organisation due to the formation of the welfare state (Esping-Andersen, 1998; Janoski,  
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22 1998), and stability and democratic continuity due to the degree of freedom of speech and  
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24 association (Inglehart & Baker, 2000; Lipset, 1994).  
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28 The welfare state promotes participation in voluntary organisations through its influence on  
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30 certain key individual variables, such as education and income (Verba et al., 1995). Regarding  
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32 the provision of public services, the relationship between the state and voluntary organisations  
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34 is complex, since the state plays an active role in developing and establishing them (Putnam  
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36 & Goss, 2003). Furthermore, some research has shown that voluntary groups of women have  
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38 a powerful influence in promoting welfare policies (Glenton et al., 2010; Sauer, 2015; Staab,  
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40 2010; Skocpol et al., 1993) and the development of public service structures (Scheer, 2002).  
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42 Women in voluntary organisations play an active role in solving social problems in their  
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44 communities (Kou et al., 2014). Consequently, a positive and significant relationship exists  
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46 between the empowerment of women, voluntary action and the strength of the non-profit  
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48 sector (Themudo, 2009).  
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### 51 52 *Voluntary sector*

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3 This research emphasises the idea that the voluntary sector is diverse and plural, rather than  
4 an isolated reality, and that multiple types of associative organisations are useful for different  
5 purposes. Therefore, citizen involvement stems from individual profiles and organisation  
6 characteristics. The effects that participation in different types of NGOs has on their  
7 members' abilities and civic virtues vary (Stolle & Rochon, 1998; Warren, 2001).  
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9 Consequently, there are both instrumental and expressive associations. In general, expressive  
10 organisations promote more homogeneous networks, while instrumental participation furthers  
11 diverse and more heterogeneous contacts (Bekkers et al., 2008). Instrumental organisations  
12 are positively related to political participation (Stolle & Rochon, 1998) since instrumental  
13 participation pursues goals outside the group. Volunteers present a certain social vocation that  
14 seeks to influence public behaviour, based on certain values or regulatory conditions rather  
15 than mere enjoyment arising from participation and the sociability of the activity. In contrast,  
16 expressive organisations exist essentially to allow their members to express themselves and to  
17 meet their needs; they are more homogeneous in their structure and goals (Glanville, 2004;  
18 Stoll, 2001). In addition, these organisations provide entertainment and seem to have a shorter  
19 impact on the attitude of their members (Glanville, 2004; Hanks, 1981; Stoll, 2001). In this  
20 research, we have identified social awareness and social justice NGOs as instrumental  
21 voluntary organisations, and professional and educational NGOs as expressive voluntary  
22 organisations.

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24 Some types of volunteering have strong gender norms, although gender differences are not  
25 relevant in other areas (Musick & Wilson, 2008). With North American data, empirical  
26 studies have shown that men are more likely to engage as volunteers in leisure and  
27 professional activities, while women are more likely to volunteer for issues related to human  
28 development and religion (Norris & Inglehart, 2006; Themudo, 2009). The gender role is

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2 transferred to voluntary organisations so that the expectations of participation in different  
3 groups vary between men and women (Marshall & Taniguchi, 2012).

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6 Citizen participation in voluntary organisations is a result of a series of factors that are not  
7 mutually exclusive (Verba et al., 1995). First, some factors affect the ability to participate,  
8 which is conditioned by socio-economic resources and the time available. Second, some  
9 factors account for the individual motivation to participate, which is based on the individual's  
10 integration in the community, attitudes and civic orientation. Third, individuals have  
11 incentives to participate. According to this scheme, three groups of variables are relevant:  
12 socio-economic variables, personality traits and contextual variables (Cnaan & Casio, 1999).  
13 Following this line of argument, three categories of variables can be used for studying gender  
14 differences in volunteering (Einolf, 2011): motivation (empathy, religion, generative concern,  
15 moral obligation, pro-social role and identity), resources (income, wealth, education and  
16 leisure) and social capital (trust and social networks).

### 30 ***Socio-economic variables***

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32 Regarding socio-demographic variables, some empirical evidence highlights that the  
33 relationship between voluntary participation and age shows an inverted U, which can change  
34 depending on the type of voluntary participation (Knoke & Thomson, 1977). Voluntary  
35 participation rates increase from adolescence to reach a peak in middle age and then decline  
36 (Selbee & Reed, 2000). Regarding gender differences, girls are more likely to volunteer in  
37 formal volunteering than boys (Roker et al., 1999; Sarre & Tarling, 2010). In general, girls  
38 exhibit more pro-social behaviour than boys (Inglés et al., 2009). Recent research has  
39 provided some evidence of gender differences among countries in terms of philanthropy and  
40 volunteering (Schwartz & Rubel, 2005; Themudo, 2009). Concerning household  
41 characteristics, some authors have argued that marriage promotes volunteering (Rossi, 2001),  
42 although this inference cannot be generalised (Curtis et al., 2001; Taniguchi, 2006). In a study  
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3 by Mesch et al. (2006), single women were more likely to volunteer and to volunteer for more  
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5 hours than single men. This result is consistent with the study by Andreoni and Vesterlund  
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7 (2001), who found that single women were more likely than single men to work unpaid in all  
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9 categories of voluntary institutions. Concerning the place of residence, volunteering in small  
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11 towns is more frequent than in big cities. This might be due to a lack of public services in  
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13 smaller communities and more social pressure as a consequence of increased social control. In  
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15 small towns, volunteers emphasise the benefits of solidarity and norms of reciprocity, while in  
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17 big cities, volunteers emphasise personal development (Wuthnow, 1998).

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20 Previous researchers have stated that socio-economic and educational levels are positively  
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22 correlated with volunteering (Verba et al., 1995; Wilson & Musick, 1997). In general,  
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24 researchers have found that people with more human capital have an increased likelihood to  
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26 volunteer (Bryant et al., 2003; Mesch et al., 2006). Education and income play a positive role  
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28 through involvement in voluntary associations as official members (Curtis et al., 2001;  
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30 Prouteau & Wolff, 2004; Verba et al., 1995; Wilson & Musick, 1997). Although working  
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32 hours can negatively affect the grade of involvement (Rossi, 2001; Wilson & Musick 1997),  
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34 there is gender asymmetry concerning volunteer work and unpaid family labour (Taniguchi,  
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36 2006).

### 37 38 39 *Values and attitudes*

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41 Participation in religious institutions and voluntary service-oriented organisations is linked to  
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43 individuals' social networks supporting certain standards shared by the members in these  
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45 institutions. Even if network members feel little internal motivation to give money or time to  
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47 a cause, they are constrained by external pressure to behave in a certain way (Lee et al.,  
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49 1999). People with large social networks are more likely to be asked to participate as  
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51 volunteers than people with poor social networks (Uslaner, 2002). In addition, people who  
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53 have a strong sense of confidence feel solidarity with others and are inclined to help (Brown  
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2 & Ferris, 2007; Wilson, 2000). Consequently, the level of confidence and the level of  
3 participation in various social networks are important predictors of volunteering. Trust and  
4 social networks encourage volunteering in many ways (Brown & Ferris 2007; Musick &  
5 Wilson, 2008; Wilson & Musick, 1997). Affective and emotional ties to the community  
6 encourage civic participation and volunteering (Fireman & Gamson, 1979). Some studies  
7 have also suggested that helping friends informally reinforces the likelihood of volunteering;  
8 thus, both formal and informal forms of altruism are mutually reinforcing (Fiorillo & Nappo,  
9 2014; Gallagher, 1994).

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11 Concerning values and attitudes, certain empirical evidence suggests that voluntary  
12 commitment is higher among active practitioners of religions as a result of religious teaching  
13 that encourages people to help strangers (Paxton, Reith and Glanville, 2014). However, no  
14 conclusive and significant relationship was observed between religious engagement and  
15 volunteering in other studies (Cnaan et al., 1993). Other studies have noted that this  
16 relationship is contingent on the organisation type (Littlepage et al., 2005; Park & Smith,  
17 2004; Yeung, 2004). However, a wealth of literature has observed gender differences in  
18 altruism, empathy, pro-social values and other reasons for helping behaviours (Kou et al.,  
19 2014). Many studies have found that women are more disinterested and generous and exhibit  
20 stronger pro-social behaviour than men (among others, Andreoni & Vesterland, 2001; Einolf,  
21 2011; Mesch et al., 2011). Women score higher levels on agreeableness, religion, moral  
22 obligation and the identity of the pro-social role (Einolf, 2011).

#### 23 **Database: European Value Survey and OECD Health Data**

24 We combined data on individuals with contextual information to conduct a cross-sectional  
25 study. The sample comprises 33,476 individuals (15,673 observations for men and 17,803 for  
26 women) from 18 to 80 years old living in 20 European countries for the years 1999 and 2008.  
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2 The micro data were obtained from the European Values Survey<sup>1</sup> (EVS: 1999 and 2008). For  
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4 the macro data, we used OECD Health Data (2008). The OECD Health Data<sup>2</sup> provided us  
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6 with national statistics and indicators for the European countries we studied for 1998 and  
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8 2008.  
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10 Following the criterion of prior research (Esping-Andersen, 1998; Sardinha, 2010), we  
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12 grouped the European countries into five welfare categories: 1) **Nordic**: Denmark, Iceland,  
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14 Finland and Sweden; 2) **Anglo-Saxon**: Ireland and United Kingdom; 3) **Continental**:  
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16 Germany, Austria, Belgium, France and Holland; 4) **Mediterranean**: Spain, Italy and  
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18 Portugal; and 5) **Eastern**: Bulgaria, Czech Republic, Lithuania, Poland and Romania.  
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20 The European Values Survey considers voluntary participation in 14 volunteer activities. To  
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22 simplify matters, we aggregated volunteering into four groups (Sardinha, 2010): 1) **Social**  
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24 **awareness**: local political actions, human rights, pacifist movements, environmental  
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26 conservation or animal rights; 2) **Professional**: trade unions, political parties or professional  
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28 associations; 3) **Education**: activities related to education, culture, youth employment, sport  
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30 or leisure; 4) **Social justice**: welfare services for vulnerable population groups, the church,  
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32 women's groups or health centres. Volunteers in social justice or social awareness issues are  
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34 thought to be motivated by helping others, so these are instrumental organisations, while  
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36 volunteers in professional and education areas could have motives that are more intrinsic to  
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38 their personality; in other words, they are expressive organisations.  
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48 <sup>1</sup> The European Values Survey is a large-scale, cross-national longitudinal survey research program on basic  
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50 human values. Respondents are interviewed face to face for approximately one hour. In each country, the master  
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52 questionnaire was translated in each language spoken by at least 5% of the population. The national effective  
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54 sample size is 1200 for countries with a population over 2 million and 1000 for countries with a population  
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56 above 2 million. Random samples give full coverage of the target population (persons 18 years and older  
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58 resident in private households, regardless of nationality or language). Further information is available at  
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60 <http://www.europeanvaluesstudy.eu/>

<sup>2</sup> The OECD Health Data is an essential tool to carry out comparative analyses and draw lessons from  
international comparisons of diverse welfare systems. Further information is available at  
<http://www.oecd.org/els/health-systems/health-data.htm>.

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3 Among men (figure 1), educational activities are the most frequent volunteering category,  
4 with a percentage of 17%, followed by activities concerning social justice (9%), professional  
5 issues (7%) and social awareness (5%). Important differences by geographical context have  
6 also been observed. Men from Continental and Nordic countries are the most likely to  
7 volunteer in all categories along with men from Anglo-Saxon countries for unpaid work in  
8 social justice and social awareness issues.

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11 Among women (figure 1), social justice is the most frequent category of volunteer work, with  
12 a percentage of 13%, followed by activities concerning education (11%), social awareness  
13 (5%) and professional activities (4%). Again, important differences are apparent by  
14 geographical context, as women from Continental and Nordic countries are the most likely to  
15 volunteer in all categories.

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18 (Figure 1 and Table 1 near here)

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21 We have considered the following explanatory variables from the EVS (table 1): socio-  
22 demographic (age, gender, marital status, employment status, educational level, place of  
23 residence and population size); membership in a non-governmental association; and values  
24 and attitudes (how important family, friends, leisure, politics, work and religion are; the  
25 extent to which the individual trusts the church, the health system, the education system and  
26 social security).<sup>3</sup>

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29 Concerning the first descriptive statistics, the means for these explanatory variables are quite  
30 similar for men and women, but employment rates are higher for men (88%) than for women  
31 (73%). Membership rates for professional and political issues and for educational and leisure  
32 activities are also higher for men than for women. However, the membership rate for social

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<sup>3</sup> The individual information provided by the EVS has been transformed into dummy variables (1: yes and 0: no). In the case of questions that have a closed list of potential answers, such as marital status, we have built a dummy variable for each category (married, single, divorced and widow). In the case of variables linked to the values and attitudes (reported on a scale from 1: Very important to 5: not important at all), the corresponding dummy variables take the value 1 if the individual reported values of 1 or 2, and 0 otherwise. The questionnaires are available at <http://www.europeanvaluesstudy.eu/>.

justice issues is higher for women than for men. Consequently, politics is considered more important by men (41%) than by women (35%), whereas religion is considered more important by women (50%) than by men (38%).

Regarding macro data (table 2), Nordic, Anglo-Saxon and Continental countries generate the highest annual GDP per capita (over \$30,000), followed by Mediterranean countries (around \$22,000) and Eastern European countries (around \$18,000). The biggest GDP growth is for Eastern European countries (39%), while European countries have the lowest (7%). The main point of concern is that public expenditure grows at higher rates than economic growth. In fact, Eastern European countries also have the largest increase in public expenditure.

(Table 2 near here)

Along with geographical dummy variables, which identify countries and welfare systems, we also defined time dummy variables for each wave to calculate the fixed regional and time effects.

### **Empirical Framework**

The first approximation of the problem comprises independent estimations on the individual likelihood of working as a volunteer for each of the categories (social awareness, professional, education and social justice). Therefore, the dependent variables are dichotomous, adopting the value 1 (if there is volunteer activity) and 0 (if there is none). We employed Logit models for the estimation method, which comprise a discrete non-linear response model. We used tables to show the data valued in terms of elasticity (measurement of how responsive the dependent variable is to a change in an explanatory variable) so that the estimated parameters can inform us of both the meaning and intensity of the effects of independent variables.

$$P(\text{SocialAwareness} = 1 | x) = G(x\beta_1) \quad 1)$$

$$P(\text{Professional} = 1 | x) = G(x\beta_2) \quad 2)$$

$$P(\text{Education} = 1 | x) = G(x\beta_3) \quad 3)$$

$$P(\text{SocialJustice} = 1 | x) = G(x\beta_4) \quad 4)$$

where  $x$  represents the set of independent variables and  $\beta$  its associated parameters. The challenge consists of estimating  $\beta$  as realistically as possible. The variables we included are socio-demographic (age, gender, marital status, employment status, educational level, place of residence and population size), membership in a non-governmental association, values and attitudes (how important family, friends, leisure, politics, work and religion are to individuals; the extent to which the individual trusts the church, the health system, the education system and social security), geographical contextual variables of the various welfare areas (Anglo-Saxon, Continental, East and Mediterranean compared with Nordic) and time contextual variables (2008 compared with 1999). We carried out estimations by subsamples of men and women. Consequently, if the estimated  $\beta$  differs by gender, explanatory variables might have different effects (sense and/or intensity) for men and women. The variables for being a member of non-governmental groups and values and attitudes could introduce technical problems of endogeneity, for example, that the individual decides to become a member of an association and volunteer at the same time or that the variables determining the decision to volunteer also condition belonging to that group, among other casuistry. Instead of considering individual variables, we took into account national averages of individuals (Model 1), but as we also assume gender social pressure, we repeated estimations. Controlling for gender social pressure, we want to highlight that, for example, studying social pressure on female behaviours might be more relevant to observe the aggregate of what other women in the same country do than the national aggregate of what men and women do. We, therefore, used the means of female observations for female estimations and the means of male observations for male estimations (Model 2). Following this line of argument, exploring

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2 whether the membership rate of professional and political activities for both genders is as  
3 relevant as the corresponding female rate for women and/or the corresponding male rate for  
4 men might be possible. The main novelties of this paper are to repeat estimations by gender  
5 and to consider social pressure by national averages for men and women for each case.  
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## 10 **Results**

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12 Table 3 shows estimations of the probability of volunteering, taking into account national  
13 averages of social variables for men and women, and Table 4 shows estimations of the same  
14 probabilities, but considering specific gender national averages for each subsample. The  
15 results are reported in terms of elasticities.  
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21 Men from 46 to 65 years old are the most likely to volunteer in social awareness and  
22 professional activities, whereas men younger than 30 years old are the most likely to  
23 volunteer for educational issues and men over 66 years old for social justice issues. Age  
24 differences are smoother for women; women over 46 are the most likely to volunteer for  
25 organisations related to social awareness and social justice, whereas women from 31 to 45  
26 years old are the most likely to volunteer for educational activities. Much as men, women at a  
27 working active age are the most likely to volunteer for issues related to professional activities.  
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31 Being married (versus divorced) reinforces decisions to volunteer for activities related to  
32 education and social justice for men and women, as does taking part in professional activities  
33 for men. Housewives are more likely to volunteer concerning social justice activities than  
34 workers, but in general, being a housewife or unemployed (versus a worker) reduces  
35 volunteering engagement. Education is positively correlated with decisions to volunteer for  
36 both genders in all categories, but in the case of professional activities, the effect of education  
37 is stronger for men than for women, and for social awareness and social justice activities, the  
38 effect of education is stronger for women than for men.  
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2 Living in a city with more than 500,000 citizens (versus smaller communities) reduces  
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4 volunteer participation in areas concerning education and social justice. For men, the national  
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6 membership rate for social awareness activities reinforces their decisions to volunteer  
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8 regarding these activities. For women, the national membership rate in different volunteering  
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10 categories reinforces their decisions to volunteer for those activities except for the case of  
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12 education. The mean related to the importance of friends and religion seems to reduce  
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14 participation in different volunteering categories, whereas the mean related to the importance  
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16 of work seems to reinforce decisions to volunteer. National confidence in the church seems to  
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18 reinforce decisions to volunteer, whereas national confidence in the health system reduces  
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20 volunteer rates for educational activities. The effects of confidence in the education system  
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22 and social security are mixed by categories.  
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26 Higher GDP per capita reduces voluntary participation in social awareness activities for both  
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28 genders and in professional issues for women. The effect is positive for social justice  
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30 activities among men. The public labour budget per capita is negatively correlated with  
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32 volunteer activities, whereas other public budgets are positively correlated.  
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35 (Table 3 near here)

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37 The Model 2 estimations provide similar results and highlight the most important differences  
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39 in the estimated coefficients of social variables. In Model 1, we have considered national  
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41 averages of social variables, and in Model 2, we have considered the corresponding means of  
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43 women for women and the corresponding means of men for men. The estimated parameters  
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45 of social variables are greater in magnitude and more frequently statistically significant in  
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47 Model 2 than in Model 1. In addition, social variables by gender have stronger effects and are  
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49 more frequently statistically significant than individual socio-economic and macro data  
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51 variables.  
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2 Regarding membership rates, we confirm the direct effects of membership in a non-  
3 governmental association and volunteering work (except for the case of males volunteering  
4 for professional associations). The indirect effects are also interesting. For example, the male  
5 membership rate in educational associations is positively correlated with voluntary  
6 participation in social awareness and professional activities among men, whereas the female  
7 membership rate in professional associations is positively correlated with voluntary  
8 participation in social awareness and social justice activities among women. For both genders,  
9 the more important they consider the family, the less likely they are to become volunteers;  
10 however, the more important they consider work, the more likely they are to volunteer. The  
11 importance of leisure and the importance of politics by gender are positively correlated for  
12 male volunteering, but negatively correlated for female volunteering. Confidence in various  
13 institutions seems to reinforce decisions to volunteer, except for the cases of female  
14 confidence in health and education systems and male confidence in the social security system.

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30 (Table 4 near here)

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32 Finally, according to the goodness-of-fit tests, Model 2 generates better estimations than  
33 Model 1. According to the t-student test, more estimated parameters are statistically  
34 significant for each category in Model 2 than in Model 1. As mentioned above, the main  
35 differences are observed for social variables. The  $R^2$  reveals that the variables considered in  
36 Model 2 explain the rates for volunteering work slightly better, whereas scarcely any  
37 differences in estimated rates for volunteer rates among models are noted.

### 38 39 40 41 42 43 44 45 **Discussion**

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47 Our main contribution is to add further empirical evidence to the limited review of the  
48 literature on the international gender analysis of volunteer rates in different types of voluntary  
49 organisations.  
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2 Our main result is that it is more relevant to consider means of social variables by gender for  
3 the corresponding subsamples of men and women than national averages for both men and  
4 women to study decisions to volunteer. Once social variables are valued by gender for gender  
5 subsamples, social variables have stronger effects and are more frequently statistically  
6 significant than individual socio-economic and macro data variables. In fact, a recent study  
7 observed that both formal volunteering and informal helping have been in decline in the  
8 United Kingdom since 2008, the decline being more salient in regions that experienced a  
9 higher level of unemployment during the recession. The authors blame the detrimental drop in  
10 volunteering rates on community-level factors, such as civic organisational infrastructure and  
11 cultural norms of trust and engagement, rather than on personal economic problems (Lim &  
12 Laurence, 2015). Against this background, we conclude that it is important to pay attention to  
13 the formation of human capital achieved in a society, but also to take care of social  
14 institutions that promote positive behaviours for the individual and the society.

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30 Regarding individual characteristics, volunteer rates increase from adolescence and are  
31 associated with the life cycle (Selbee & Reed, 2001). However, our results also show that  
32 older people are more likely to volunteer for instrumental organisations. This is consistent  
33 with recent studies showing the potential value of volunteering to improve the quality of life  
34 (Pozzi et al., 2014) and life satisfaction (Kahana et al., 2013) of older people. It is also  
35 interesting to note that the effects of explanatory variables are similar between men and  
36 women in this age group. As a consequence, the role of gender identity might disappear in old  
37 age.

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47 In general, marriage promotes volunteering (Rossi, 2001). In the case of single people, men  
48 and women are less likely to volunteer for social justice activities, and single men are less  
49 likely to volunteer for professional and educational activities. These results corroborate those  
50 found by Mesch et al. (2006), which indicate that single men are less likely to volunteer than  
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3 single women. Divorced individuals are less likely to participate in education and social  
4 justice activities, and divorced males are also less likely to do so in institutions of a  
5 professional nature. Widows are in general less likely to volunteer than married women.  
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9 Education and volunteer activities are positively correlated; thus, the higher an individual's  
10 level of education, the stronger the association (Brady et al., 1999; Freeman, 1997). In  
11 addition, we observed that the effect of education on volunteering is stronger for women than  
12 for men concerning social awareness and social justice activities, which is also consistent with  
13 the role identity theory.  
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17 The unemployed are less likely to volunteer than workers (Rossi, 2001; Wilson & Musick,  
18 1997). Female students have a positive probability of volunteering for the latter activity. In  
19 the case of housewives, women are more likely to volunteer for social justice activities and  
20 less likely to volunteer for professional activities (Fyall & Gazley, 2015).  
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24 The size of the place of residence is statistically significant for voluntary education and social  
25 justice activities. Our results show that if people live in a large city (over 500,000  
26 inhabitants), they are less likely to volunteer than people living in smaller communities. Since  
27 the size of communities might influence access to and use of certain services, the endowment  
28 is covered by voluntary organisations in small communities (Wuthnow, 1989).  
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32 Women members of organisations are more likely to volunteer for the same activities and  
33 even others. This is consistent with other research indicating the possibility of outside  
34 pressure to participate in volunteering (Lee et al., 1999), and members of organisations are  
35 more likely to be offered the opportunity to volunteer (Uslaner, 2002). For men, being a  
36 member of an educational organisation is positively correlated with working unpaid in these  
37 activities and others, but for the other cases, being a member of an organisation might reduce  
38 the probability of participating in other activity types.  
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2 Regarding social capital variables, national confidence in the church seems to reinforce  
3 decisions to volunteer, whereas national confidence in the health system reduces volunteer  
4 rates for educational activities among men and women. Although our data show important  
5 gender differences, our results corroborate previous studies indicating that a sense of trust  
6 promotes volunteering (Brown & Ferris, 2007; Musick & Wilson, 2008; Wilson & Musick,  
7 1997).

8  
9 People who consider family very important are less likely to volunteer, while people who  
10 consider work and friendship very important are more likely to volunteer. Informal help from  
11 friends and acquaintances reinforces the likelihood of volunteering, and the two forms of aid  
12 are positively reinforced (Fiorillo & Nappo, 2014; Gallagher, 1994). Our results show that  
13 volunteering for professional and educational organisations among women is negatively  
14 affected by the importance of religion. This result supports other studies that have addressed  
15 the importance of religion in volunteering and found a contingent relation depending on the  
16 type of organisation concerned (Littlepage et al., 2005; Park & Smith, 2000; Yeung, 2004).  
17 The importance of leisure and the importance of politics variables have positive statistical  
18 significance for men in all types of organisations. In the case of women, these variables have  
19 no effect or a negative effect, respectively. However, we believe that the results are consistent  
20 with previous studies and that the existence of affective and emotional ties to the community  
21 encourages participation and volunteering (Fireman & Gamson, 1979).

22  
23 The descriptive statistics offer a first glimpse suggesting that both men and women from  
24 Continental and Nordic countries are the most likely to volunteer in all categories. Regional  
25 differences in volunteering rates remain when controlled for explanatory variables, which  
26 refer to regional differences in population distribution (e.g. by educational levels) do not  
27 justify regional gaps in volunteering rates to a great extent. Unobserved variables play an  
28 important role in defining behaviours. For instance, in countries with a positive signalling

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3 value of volunteering on résumé building, volunteering rates among young people are  
4 significantly higher (Handy et al., 2010).

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7 As for variables related to the welfare state and its impact on volunteering, GDP per capita  
8 negatively affects volunteering for almost all activities among women and positively for  
9 social justice activities among men. Higher public expenditure on unemployment issues  
10 encourages men to volunteer for all types of entities, while it only encourages women to  
11 participate in social justice activities. However, when public expenditure is intended to affect  
12 work, it discourages volunteering in both men and women. These results might suggest that  
13 when public expenditure is made on unemployment, it affects the resources available to  
14 citizens, and the available resources affect citizen volunteering (Verba et al., 1995).

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16 To conclude, we would like to point out the relevance of findings to gender studies. The  
17 reasons for volunteering are diverse, and repeating estimations for men and women show that  
18 men are more likely to volunteer in activities that benefit them directly, whereas female  
19 volunteerism is more oriented to others. There is no doubt that social variables play an  
20 important role in determining behaviours, but analysing how women internalise what other  
21 women do is more relevant than looking at social variables in general. Under this background,  
22 policy makers should not underestimate the influence of role models in promoting social  
23 behaviours. For future research, we encourage policy makers to establish rich data sets with  
24 information about volunteers, including the time devoted to volunteerism and duration, along  
25 with information about organisations that recruit volunteers and their results. On one hand,  
26 this information is crucial for researchers to explore questions about volunteer recruitment,  
27 and on the other, it is crucial for society to promote the visibility of volunteers' work.

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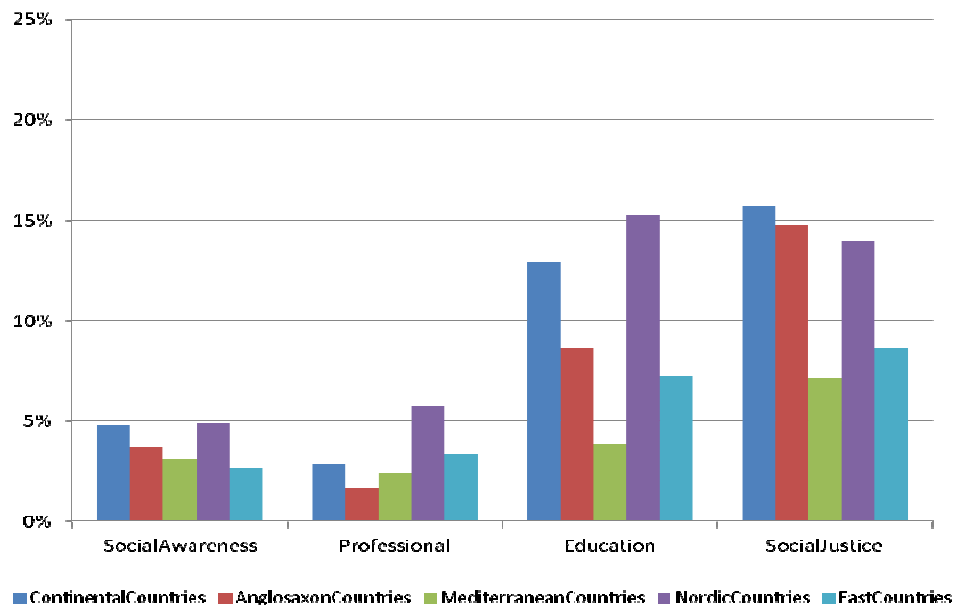
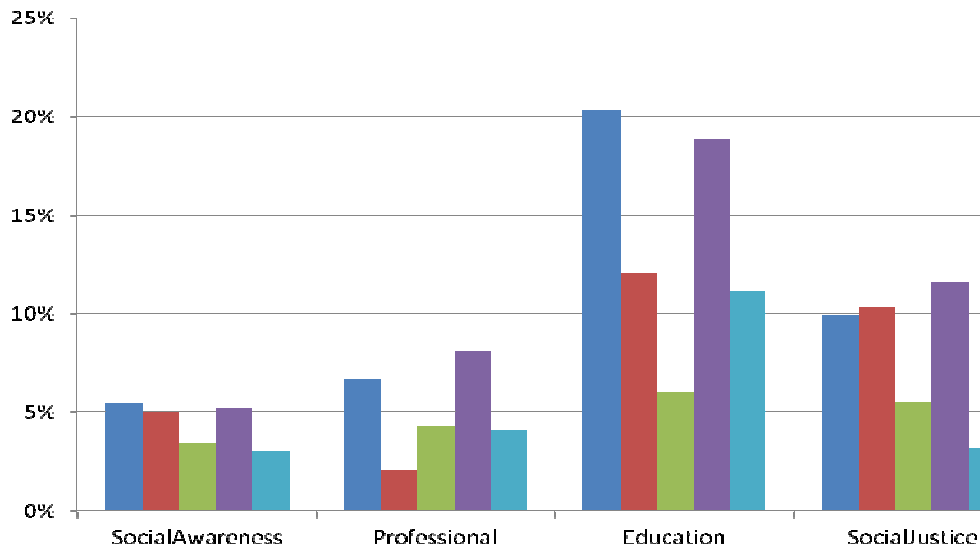
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Figure 1. European volunteering rates by categories of unpaid work and gender.



Source: EUROPEAN VALUE SURVEY, own production.

**Table 1. Descriptive statistics (15,673 observations for men and 17,803 for women).**

	Description	Gender	
		Men	Women
<i>VolunteeringWorkSocialAwareness</i>	Volunteer in social conscience issues	0.05	0.05
<i>VolunteeringWorkProfessional</i>	Volunteer in political and professional issues	0.07	0.04
<i>VolunteeringWorkEducation</i>	Volunteer in educational, sport and leisure issues	0.17	0.11
<i>VolunteeringWorkSocialJustice</i>	Volunteer in social justice issues	0.09	0.13
<i>Age:18-30</i>	18-30 years old	0.22	0.20
<i>Age:31-45</i>	31-45 years old	0.28	0.29
<i>Age:46-65</i>	46-65 years old	0.34	0.34
<i>Age:66-80</i>	66-80 years old	0.16	0.16
<i>Married</i>	Married	0.60	0.56
<i>Single</i>	Single	0.28	0.22
<i>Divorced</i>	Divorced	0.08	0.11
<i>Widow</i>	Widow	0.04	0.11
<i>Worker</i>	Worker	0.88	0.73
<i>Housewife</i>	Housewife	0.00	0.16
<i>Student</i>	Student	0.06	0.05
<i>Unemployed</i>	Unemployed	0.06	0.06
<i>Primary</i>	Primary education	0.28	0.29
<i>Secondary</i>	Secondary education	0.50	0.50
<i>Tertiary</i>	University studies	0.22	0.21
<i>Población &gt;= 500.000</i>	Residence in a place with more than 500,000 inhabitants	0.12	0.13
<i>MemberSocialAwareness<sup>a</sup></i>	Members of a non-governmental association engaged in social conscience issues	0.13	0.14
<i>MemberProfessional<sup>a</sup></i>	Member of a non-governmental association engaged in professional and political issues	0.27	0.19
<i>MemberEducation<sup>a</sup></i>	Member of a non-governmental association engaged in educational, sport and leisure issues	0.33	0.25
<i>MemberSocialJustice<sup>a</sup></i>	Member of a non-governmental association engaged in social justice issues	0.21	0.27
<i>ImportantFamily<sup>a</sup></i>	Considering family as an important aspect of life	0.96	0.98
<i>ImportantFriends<sup>a</sup></i>	Considering friends as an important aspect of life	0.92	0.93
<i>ImportantLeisure<sup>a</sup></i>	Considering leisure as an important aspect of life	0.86	0.86
<i>ImportantPolitics<sup>a</sup></i>	Considering politics as an important aspect of life	0.41	0.35
<i>ImportantWork<sup>a</sup></i>	Considering work as an important aspect of life	0.89	0.87
<i>ImportantReligion<sup>a</sup></i>	Considering religion as an important aspect of life	0.38	0.50
<i>ConfidenceChurch<sup>a</sup></i>	Trusting the Church	0.41	0.49
<i>ConfidenceHealthSystem<sup>a</sup></i>	Trusting the health system	0.64	0.61
<i>ConfidenceEducationSystem<sup>a</sup></i>	Trusting the educational system	0.67	0.69
<i>ConfidenceSocialSecurity<sup>a</sup></i>	Trusting the social security system	0.52	0.51

<sup>a</sup> Variables measured in national means by gender, we have also consider the national mean for total population. For the report of descriptive statistics we consider it is more interesting the mean by gender than the general mean.

We have also included Macro Variables (GDPpc, PublicBudgetLabourpc, PublicBudgetUnemploymentpc and PublicBudgetOtherpc in Naperian logarithms), Regional Dummy Variables (Nordic: Denmark, Iceland, Finland and Sweden; Mediterranean: Spain, Italy and Portugal; Anglo-Saxon: Ireland and Great Britain; Continental: Germany, Austria, Belgium, France and Holland; Eastern: Bulgaria, Czech Republic, Lithuania, Poland and Romania) and Time Dummy Variables (1999Wave and 2008Wave)

**Source:** EUROPEAN VALUE SURVEY, own production

**Table 2. Economic variable descriptors based on geographical context.**

	<i>GDPpc</i>			<i>Public Expenditure pc</i>								
				<i>Labour</i>			<i>Unemployment</i>			<i>Other</i>		
	<b>1999</b>	<b>2008</b>	<b>Change (%)</b>	<b>1999</b>	<b>2008</b>	<b>Change (%)</b>	<b>1999</b>	<b>2008</b>	<b>Change (%)</b>	<b>1999</b>	<b>2008</b>	<b>Change (%)</b>
<i>ContinentalCountries</i>	26,308	30,374	15%	276	274	-1%	475	472	-1%	5,941	6,831	15%
<i>AnglosaxonCountries</i>	26,057	32,094	23%	191	163	-15%	209	207	-1%	3,248	5,683	75%
<i>MediterraneanCountries</i>	21,366	22,812	7%	109	130	19%	274	269	-2%	3,996	4,929	23%
<i>NordicCountries</i>	26,816	32,339	21%	350	297	-15%	534	385	-28%	5,442	7,146	31%
<i>EastCountries</i>	12,888	17,924	39%	27	60	123%	66	85	29%	2,384	3,197	34%

Variables measured in dollars (constant prices adjusted to purchasing power in 2000) and in per capita terms.

Source: OECD HEALTH DATA, own production



Table 3. Estimations of volunteering work by categories (Model 1. Logit, margins dydx)

	SocialAwareness		Professional		Education		SocialJustice	
	Men	Women	Men	Women	Men	Women	Men	Women
Age:18-30	-0.013**	-0.007	-0.025***	-0.013***	0.027***	-0.019***	-0.009	-0.041***
Age:31-45 <sup>a</sup>	--	--	--	--	--	--	--	--
Age:46-65	0.016***	0.013***	0.012**	0.008**	-0.003	-0.028***	0.043***	0.052***
Age:66-80	0.014**	0.014**	-0.009	-0.009*	-0.054***	-0.074***	0.073***	0.072***
Single	0.003	0.004	-0.028***	0.002	-0.029***	0.000	-0.022***	-0.016**
Married <sup>a</sup>	--	--	--	--	--	--	--	--
Divorced	-0.007	0.001	-0.028***	-0.005	-0.047***	-0.018**	-0.039***	-0.030***
Widow	-0.004	-0.016***	-0.003	-0.013**	-0.074***	-0.033***	-0.017	-0.006
Worker <sup>a</sup>	--	--	--	--	--	--	--	--
Housewife	-0.050*	-0.006	--	-0.039***	-0.130***	-0.010	-0.040	0.016**
Student	0.021**	0.009	-0.024**	-0.008	0.053***	0.036***	0.036**	0.018
Unemployed	-0.026***	-0.002	-0.044***	-0.012**	-0.082***	-0.026***	-0.032***	-0.023*
Primary <sup>a</sup>	--	--	--	--	--	--	--	--
Secondary	0.011**	0.025***	0.023***	0.012***	0.074***	0.058***	0.016***	0.049***
Tertiary	0.042***	0.053***	0.060***	0.033***	0.124***	0.101***	0.059***	0.083***
Población >= 500.000	0.006	-0.005	-0.006	-0.002	-0.044***	-0.039***	-0.012	-0.032***
MemberSocialAwareness  <sub>mean</sub>	0.197**	0.264***	-0.015	0.121	0.222	0.298**	0.025	-0.180
MemberProfessional  <sub>mean</sub>	0.142	0.089	0.066	0.176**	0.054	0.102	-0.244*	-0.177
MemberEducation  <sub>mean</sub>	-0.024	-0.107	0.077	-0.140*	0.258	0.052	0.092	0.150
MemberSocialJustice  <sub>mean</sub>	-0.035	0.015	0.025	0.051**	0.085	0.133***	0.110	0.219***
ImportantFamily  <sub>mean</sub>	-1.326***	-0.929***	-0.727	-1.151***	0.453	-0.295	-0.834**	-1.884***
ImportantFriends  <sub>mean</sub>	-0.333*	0.245	0.107	-0.171	-0.293	0.695**	-0.262	0.463
ImportantLeisure  <sub>mean</sub>	0.183	0.003	0.146	0.167	-0.203	-0.233	0.508***	0.483**
ImportantPolitics  <sub>mean</sub>	-0.075	-0.158*	0.034	-0.062	-0.262	-0.206	0.282*	0.310**
ImportantWork  <sub>mean</sub>	0.582***	0.434***	0.321**	0.502***	0.276	0.561***	0.454***	0.251
ImportantReligion  <sub>mean</sub>	-0.132*	-0.103*	0.071	-0.216***	-0.070	-0.330***	-0.074	0.110
ConfidenceChurch  <sub>mean</sub>	0.211***	0.180***	0.023	0.226***	-0.070	0.229***	0.194**	0.104
ConfidenceHealth  <sub>mean</sub>	0.065	0.008	-0.051	-0.023	-0.384***	-0.205**	0.127**	0.070
ConfidenceEducation  <sub>mean</sub>	-0.012	-0.096*	0.064	0.057	-0.076	0.126*	0.235***	0.068
Confidence.SocialSecurity  <sub>mean</sub>	-0.183**	0.010	-0.084	-0.075	0.441***	0.071	-0.473***	-0.222*
GDPpc  <sub>mean</sub> <sup>b</sup>	-0.107***	-0.050*	-0.057	-0.049**	-0.028	-0.004	0.079*	-0.069
PublicBudgetLabourpc  <sub>mean</sub> <sup>b</sup>	-0.024*	-0.029**	-0.031*	-0.010	0.006	-0.022	-0.046**	-0.072***
PublicBudgetUnemploymentpc  <sub>mean</sub> <sup>b</sup>	0.045**	0.032*	0.055**	0.018	-0.050	0.019	0.093***	0.114***
PublicBudgetOtherpc  <sub>mean</sub> <sup>b</sup>	0.119***	0.109***	0.140***	0.092***	0.114***	0.168***	0.073***	0.215***
NordicCountries <sup>a</sup>	--	--	--	--	--	--	--	--
MediterraneanCountries	0.063	0.048	0.040	0.092*	-0.097*	0.118*	0.059	0.079
AnglosaxonCountries	0.277***	0.202***	0.114	0.234***	0.105	0.277***	0.133	0.178*
ContinentalCountries	0.047	0.035	-0.015	0.062*	-0.028	0.093*	-0.025	-0.029
EastCountries	0.093	0.100*	0.107	0.134**	-0.071	0.200***	0.102	0.207***
Wave1999 <sup>a</sup>	--	--	--	--	--	--	--	--
Wave2008	0.024***	-0.001	-0.021*	0.003	-0.041**	-0.026**	-0.023*	-0.048***
<b>R<sup>2</sup> (%)</b>	6.4	6.5	6.1	7.9	6.6	9.3	6.9	6.1
<b>Estimated Probabilities (%)</b>	4.1	3.5	6.2	2.6	16.0	8.8	8.0	12.0

<sup>a</sup> reference variable. <sup>b</sup> variables in neperian logarithm.

\*\*\*, \*\* and \* indicate that the explanatory variables are significant at 1%, 5% and 10%.

Table 4. Estimations of volunteering work by categories and gender (Model 2. Logit, margins dydx)

	SocialAwareness		Professional		Education		SocialJustice	
	Men	Women	Men	Women	Men	Women	Men	Women
Age:18-30	-0.013**	-0.007	-0.026***	-0.013***	0.026***	-0.019***	-0.010	-0.041***
Age:31-45 <sup>a</sup>	--	--	--	--	--	--	--	--
Age:46-65	0.016***	0.013***	0.012***	0.007**	-0.003	-0.029***	0.043***	0.052***
Age:66-80	0.014**	0.013**	-0.009	-0.009*	-0.055***	-0.075***	0.073***	0.071***
Single	0.004	0.005	-0.027***	0.002	-0.027***	0.001	-0.021***	-0.014*
Married <sup>a</sup>	--	--	--	--	--	--	--	--
Divorced	-0.007	0.001	-0.028***	-0.005***	-0.047***	-0.018***	-0.038***	-0.030***
Widow	-0.004	-0.015***	-0.004	-0.013	-0.075***	-0.033***	-0.017	-0.006
Worker	--	--	--	--	--	--	--	--
Housewife	-0.047	-0.006	--	-0.038***	-0.128***	-0.010	-0.036	0.017**
Student	0.020*	0.008	-0.025**	-0.009	0.052***	0.035***	0.035***	0.016
Unemployed	-0.025***	-0.001	-0.043***	-0.012**	-0.081***	-0.026***	-0.031***	-0.023*
Primary <sup>a</sup>	--	--	--	--	--	--	--	--
Secondary	0.011**	0.026***	0.022***	0.012***	0.070***	0.058***	0.017***	0.049***
Tertiary	0.044***	0.053***	0.061***	0.033***	0.124***	0.102***	0.062***	0.084***
Población >= 500.000	0.003	-0.005	-0.006	-0.003	-0.045***	-0.040***	-0.014*	-0.033***
MemberSocialAwareness  <sub>mean by gender</sub>	0.121	0.152***	-0.184*	0.064	-0.070	0.225***	0.106	-0.037
MemberProfessional  <sub>mean by gender</sub>	-0.203***	0.291***	-0.204***	0.244***	-0.457***	0.042	-0.299***	0.414***
MemberEducation  <sub>mean by gender</sub>	0.150**	-0.039	0.258**	-0.050	0.616***	0.164**	0.132	-0.104
MemberSocialJustice  <sub>mean by gender</sub>	-0.092***	-0.028	-0.034	0.010	-0.058	0.086**	0.070	0.189***
ImportantFamily  <sub>mean by gender</sub>	-1.246***	-1.729***	-1.241***	-1.218***	-0.722	-0.059	-0.243	-3.009***
ImportantFriends  <sub>mean by gender</sub>	-0.702***	0.443***	-0.056	0.105	-0.580*	0.889***	-0.129	0.818***
ImportantLeisure  <sub>mean by gender</sub>	0.630***	-0.088	0.625***	0.038	0.739***	-0.244**	0.467***	0.066
ImportantPolitics  <sub>mean by gender</sub>	0.236***	-0.248***	0.364***	-0.111*	0.420***	-0.159	0.282***	-0.124
ImportantWork  <sub>mean by gender</sub>	0.746***	0.410***	0.554***	0.319***	0.512**	0.455***	0.418***	0.443***
ImportantReligion  <sub>mean by gender</sub>	-0.089	-0.029	0.133	-0.092**	0.036	-0.244***	0.045	0.042
ConfidenceChurch  <sub>mean by gender</sub>	0.274***	0.122***	0.103	0.119***	0.088	0.200***	0.064	0.033
ConfidenceHealth  <sub>mean by gender</sub>	0.222***	-0.021	0.126*	-0.060***	-0.120	-0.183***	0.113*	-0.078*
ConfidenceEducation  <sub>mean by gender</sub>	0.075	-0.159***	0.128***	0.031	0.122	0.116	0.202***	-0.049
ConfidenceSocialSecurity  <sub>mean by gender</sub>	-0.458***	0.107*	-0.371***	0.007	-0.091	0.058	-0.407***	0.053
GDPpc  <sub>mean</sub> <sup>b</sup>	-0.054	-0.075***	-0.041	-0.056**	0.061	0.025	0.086*	-0.111**
PublicBudgetLabourpc  <sub>mean</sub> <sup>b</sup>	-0.052***	-0.022**	-0.071***	-0.011	-0.072***	-0.032**	-0.047***	-0.028**
PublicBudgetUnemploymentpc  <sub>mean</sub> <sup>b</sup>	0.091***	0.019	0.116***	0.011	0.064*	0.024	0.086***	0.044**
PublicBudgetOtherpc  <sub>mean</sub> <sup>b</sup>	0.107***	0.132***	0.146***	0.099***	0.138***	0.158***	0.073***	0.228***
NordicCountries <sup>a</sup>	--	--	--	--	--	--	--	--
MediterraneanCountries	-0.002	0.106**	-0.009	0.099*	-0.167***	0.116*	0.001	0.215***
AnglosaxonCountries	0.146*	0.270***	0.033	0.211***	-0.049	0.225**	0.042	0.399***
ContinentalCountries	-0.057**	0.092***	-0.110***	0.074**	-0.197***	0.082*	-0.072**	0.156***
EastCountries	0.034	0.159***	0.074	0.138**	-0.081	0.198***	0.038	0.312***
Wave1999 <sup>a</sup>	--	--	--	--	--	--	--	--
Wave2008	0.008	-0.002	-0.029***	-0.002	-0.069***	-0.038***	-0.032	-0.035***
<b>R<sup>2</sup> (%)</b>	6.7	6.6	6.3	7.8	6.7	9.3	6.9	6.1
<b>Estimated Probabilities (%)</b>	4.0	3.5	6.2	2.6	15.9	8.8	8.0	12.0

<sup>a</sup> reference variable. <sup>b</sup> variables in neperian logarithm.

\*\*\*, \*\* and \* indicate that the explanatory variables are significant at 1%, 5% and 10%.